

Mission:

To protect, promote & improve the health of all people in Florida through integrated state, county & community efforts.



Rick Scott
Governor

John H. Armstrong, MD, FACS
State Surgeon General & Secretary

Vision: To be the Healthiest State in the Nation

JULY 31, 2015

ELECTRONIC CORRESPONDENCE

michael.oneill@pw.utc.com

NOTICE OF TITLE V AIR OPERATION PERMIT REVISION

PERMITTEE:

United Technologies Corporation
17900 Beeline Highway (SR-710)
Jupiter, FL 33478

Responsible Official:

Michael O'Neill, Manager
Assembly, Instrumentation & Test Operations

ARMS No.:	0990021
Permit No:	0990021-042-AV
Issue Date:	07/31/2015
Effective Date	07/23/2015
Expiration Date:	02/03/2016

Dear Mr. O'Neill:

Enclosed is Air Permit No. 0990021-042-AV for the operation of a source of air pollution located in Palm Beach County. This permit is issued pursuant to Chapter 403.087 of the Florida Statutes (F.S.) and Chapters 62-4, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code.

The purpose of this permit is to revise the Title V Air Operation Permit no. 0990021-036-AV in order to incorporate the conditions of the permits 0990021-037-AC and 0990021-039-AC. This permit revision adds the applicability of 40 CFR 63 Subpart GG to the emissions units 070, 071 and 073. This permit revision also modifies the emissions unit 088 – Jet Engine Parts Coating Process by incorporating a new coating process step to add a second coating, which produces minimal volatile organic compounds.

Any party to this Order (Permit) has the right to seek judicial review pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure with the Health Department at the address listed below and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Order (Permit) is filed with the Clerk of the Health Department.

Executed in West Palm Beach, Florida
PALM BEACH COUNTY HEALTH DEPARTMENT

For any questions, contact:


Timothy E. Mayer, RS, MPH, Director
Division of Environmental Public Health

Laxmana Tallam, P.E.
Air & Waste Section
Department of Health Palm Beach County
P.O. Box 29 (800 Clematis Street)
West Palm Beach, Florida, 33402-0029

Florida Department of Health

Palm Beach County, Division of Environmental Public Health
P.O. Box 29, 800 Clematis Street, West Palm Beach, FL 33402
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TWITTER: HealthyFLA
FACEBOOK: FLDepartmentofHealth
YOUTUBE: fldoh

CERTIFICATE OF SERVICE

The undersigned duly designated agency clerk hereby certifies that the Notice of Permit and the Final Permit were sent by electronic mail (with received receipt) before the close of business on 07/31/2015 to the persons listed.

Michael O'Neill, UTC	email	michael.oneill@pw.utc.com
Dean Gee, UTC-PW	email	Shau.Gee@pwr.utc.com
Diane Pupa, DEP/SED	email	Diane.Pupa@dep.state.fl.us
Philip Cobb, Ph.D., P.E., Golder Associates	email	pcobb@golder.com
Barbara Friday, FDEP/BAR (for posting with Region 4, U.S. EPA)	Email	barbara.friday@dep.state.fl.us

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), F.S., with the designated agency Clerk, receipt of which is hereby acknowledged.

Capriana Tallam
(Clerk)

07/31/2015
(Date)

I. Public Notice.

The “INTENT TO ISSUE TITLE V AIR OPERATION PERMIT REVISION” for United Technologies Corporation located at 17900 Beeline Highway (SR-710), Jupiter, in Palm Beach County, Florida, was clerked on **02/19/2015**.

The “INTENT TO ISSUE TITLE V AIR OPERATION PERMIT REVISION” was published in the PALM BEACH POST on **04/19/2015**. The DRAFT TITLE V AIR OPERATION PERMIT REVISION was available for public inspection at the Department of Health Palm Beach County in West Palm Beach. Proof of publication of the “PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT REVISION” was received on **05/04/2015**.

II. Public Comment(s).

No comments were received during the 30 (thirty) day public comment period. Since no comments were received, the DRAFT Title V Permit becomes the PROPOSED Title V Permit.

III. EPA comments

Proposed permit was issued **05/28/2015**. No comments were received from the US EPA related to the proposed permit.

IV. Conclusion

Since there were no comments received from the US EPA, the permitting authority hereby issues the FINAL Title V Permit.

UNITED TECHNOLOGIES CORPORATION

Facility ID No.: 0990021

Palm Beach County, Florida

FINAL

Title V Air Operation Permit Revision

Permit No: 0990021-042-AV

Permitting & Compliance Authority:

Air & Waste Section

Department of Health Palm Beach County

P.O. Box 29 (800 Clematis Street)

West Palm Beach, FL 33402-0029

Telephone: (561) 837-5900

Fax: (561) 837-5925

Title V Air Operation Permit Revision

FINAL

Permit No: 0990021-042-AV

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Appendix ICE: Requirements for Internal Combustion Engines.	
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PERMITTEE

United Technologies Corporation
P.O. Box 109600
West Palm Beach, FL 33410-09600

Permit No.: 0990021-042-AV

Facility ARMS ID No.: 0990021

SIC No.: 8062

Project: Title V Air Operation Permit Revision

Responsible Official:

MICHAEL O'NEILL, MANAGER
Assembly, Instrumentation, & Test Operations

Effective Date: July 23, 2015

Renewal Application Due Date: June 22, 2015

Expiration Date: February 03, 2016

The purpose of this permit is to revise the Title V Air Operation Permit no. 0990021-036-AV in order to incorporate the conditions of the permits 0990021-037-AC and 0990021-039-AC. This permit revision adds the applicability of 40 CFR 63 Subpart GG to the emissions units 070, 071 and 073. This permit revision also modifies the emissions unit 088 – Jet Engine Parts Coating Process by incorporating a new coating process step to add a second coating, which produces minimal volatile organic compounds.

Project Location: 17900 Beeline Highway (SR 710), Jupiter, FL 33478

UTM Coordinates: Zone 17; 564.9 km E; 2977.3 km N

Latitude: 26° 54' 59" North / **Longitude:** 80° 20' 47" West

This Title V Air Operation Permit Revision is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210 and 62-213. The above named permittee is hereby authorized to operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Referenced attachments made a part of this permit:

Appendix D: Air Pollutant Emission Factors – FIT Center

Appendix E: Compliance Procedures – FIT Center

Appendix F: Emissions Factors For NO_x And CO at Various Loads During Testing Of FT 4000 Gas Turbines (EU 090)

APPENDIX TV: TITLE V CONDITIONS version dated 02/16/2012

Appendix TR: Facility-wide testing requirements

Appendix RR: Facility-wide reporting requirements

Appendix ICE: Requirements for Internal Combustion Engines

Appendix HHHHHH: National Emission Standard for Hazardous Air Pollutants for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources [40 CFR 63 Subpart HHHHHH]

Appendix GG: National Emission standards for Hazardous Air Pollutants for Aerospace Manufacturing and Rework Facilities

Timothy E. Mayer, RS, MPH; Director
Division of Environmental Public Health

Florida Department of Health

Palm Beach County, Division of Environmental Public Health
P.O. Box 29, 800 Clematis Street, West Palm Beach, FL 33402
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SECTION I. FACILITY INFORMATION

Subsection A. Facility Description

Pratt & Whitney (P&W), a division of United Technologies Corporation (UTC); Sikorsky Aircraft Corporation (SAC), a subsidiary of UTC; and Fire Innovation Test (FIT) Center; operate adjacent facilities located on a combined 7,000-acre site in rural northwest Palm Beach County, Florida. Pratt & Whitney West Palm Beach is the company's principal jet engine test facility, primarily dedicated to research and development. P&W has over 50 test stands specifically designed to perform evaluations of rocket engines, jet engines, as well as individual components for each type of engine. Jet engines are tested for research and development programs. No jet engine manufacturing is performed at West Palm Beach.

Health Department issued a Title V air operation permit to P&W on July 17, 2004 (FDEP Permit No. 0990021-006-AV), and the facility was designated as a major source of criteria pollutants, including nitrogen oxides (NOx), volatile organic compounds (VOCs), and carbon monoxide (CO).

SAC, which is located on the same campus but in wholly separate buildings, operates the Development Flight Center (DFC), which is the company's site for helicopter development testing. SAC also operates the Florida Assembly Flight Operation (FAFO), which assembles helicopters from parts delivered to the facility (in space rented from P&W). SAC was issued a Federally Enforceable State Operating Permit (FESOP) by Health Department on February 2, 2007 (FDEP Permit No. 0990185-004-AF) and is designated as a synthetic minor source for hazardous air pollutants (HAPs).

Pursuant to permit nos. 0990021-013-AV, issued on February 03, 2011, P&W and SAC were combined into one permit.

The Fire, Innovation & Testing (FIT) center began operations on February 15, 2012 at UTC campus. The FIT center is intended to provide UTC Fire & Security (UTCFS) the ability to test current and future fire suppression products. The Health Department issued an air construction permit no. 0990021-027-AC in December 2010 for this project. Indoor fire testing is performed in an approximately 70 ft x 70 ft enclosed building with a 50 ft high ceiling. The test fuel packages will consist of variety of materials such as wood, plastics, heptane, fuel oil (Number 2), vegetable oil, isopropyl alcohol, acetone, methane, propane, and other hydrocarbon fuels.

The Title V permit revision (0990021-029-AV) was issued on January 30, 2013 that included the FIT center in UTC's Title V permit. The Title V permit renewal (0990021-036-AV) was issued on March 11, 2014.

Based on the permit application, this facility **is not** a major source of hazardous air pollutants (HAPs).

PROJECT DESCRIPTION:

This Title V permit revision incorporates the conditions of the permits 0990021-037-AC and 0990021-039-AC. Permit No. 0990021-039-AC is an extended permit to Permit No. 0990021-031-AC, which authorized construction of a Hot Acoustic Rig (HAR, EU 089) at the existing B-6 test stand at P&W. Permit No. 0990021-037-AC is a modified permit to Permit No. 0990021-032-AC, which authorized testing of FT4000 (EU 090) using natural gas and operation of Reciprocating Internal Combustion Engines (RICE, EU 091) at A-4 test stand. AC Permit No. 0990021-037-AC reduces the number of hours of the FT4000 and RICE testing.

This permit revision adds the applicability of 40 CFR 63 Subpart GG to the emissions units 070, 071 and 073, since the permittee determined that these emissions units still support the jet engine manufacturing, although the engines are not assembled at the site. Although, the facility's status is changed from 'major' to 'synthetic minor' for hazardous air pollutants pursuant to permit no. 0990021-020-AC, the regulations of 40 CFR 63 Subpart GG still apply because of the NESHAP policy of 'once in always in.'

This permit revision also modifies the emissions unit 088 – Jet Engine Parts Coating Process by incorporating a new coating process step to add a second coating, which produces minimal volatile organic compounds.

In addition, This Title V permit revision changes to testing requirements for fourteen Detroit Diesel RICE engines (EUs 092-105), pursuant to the approval from the Department of Environmental Protection (FDEP) issued on October 2, 2014. This approval allows the permittee to test two engines, instead of all 14 engines, during each performance test. Also, the conditions C-41 to C-43 for these generators are removed since these conditions apply only till May 3, 2014.

Subsection B. Summary of Emissions Unit ID Nos and Brief Descriptions

FOLLOWING IS THE LIST OF EMISSION UNITS AT THE FACILITY.

EU No.	R / U*/I**	Brief Description
<i>Following emission units are located at Pratt & Whitney Rocketdyne (except as noted)</i>		
009	U	Diesel storage tanks
010	U	Jet fuel storage tanks
012	R	Jet fuel storage tank (F-8-CFF)
014	R	Paint spray booth (PS-1-TMC) used for refinishing support equipment
015	I	Closed-loop flush cleaning (BF-1-RL-10) using Vertrel MCA <i>[This emissions unit is sold and is removed per applicants' request]</i>
016	I	Boiler (BO-12-E6) fired by natural gas – 42 MMBTU/hr Heat Input <i>[This emissions unit is sold and is removed per applicants' request]</i>
018	I	Acid gas scrubbing system (AS-2-MPL) for plating operations <i>[This emissions unit is sold and is removed per applicants' request]</i>
022	I	Boilers (BO-1-MBH, BO-2-MBH) fired by natural gas – 54 MMBTU/hr Heat Input per Boiler. <i>[This EU is demolished and is removed per applicant's request]</i>
031	U	Diesel storage tanks (DL-19-SEGF and DL-20-SEGF)
037	U	AST Gasoline storage tanks
040	I	Heat treatment furnaces (FU-3-MHT and FU-4-MHT) fired by natural gas <i>[This emissions unit is sold and is removed per applicants' request]</i>
045	U	Water evaporator (EV-1-MW)
049	U	Plasma spray booths
059	U	Air and fuel heaters fired with natural gas
064	R	Paint spray booth (PSB-1-RTF)
065	U	Diesel engines powering fire protection pumps and cooling water pumps during rocket engine testing and emergency electrical generators
066	I	Boiler (BO-14-E8) fired by propane subject – 6.7 MMBTU/Hr Heat Input <i>[This emissions unit is sold and is removed per applicants' request]</i>
068	I	Emergency electrical generating facility <i>*The emissions Unit (EU 068) is split into different emissions units – one for each engine. Originally, these emissions unit consisted of 8 generators (2 engines per each generator). But, one of the generators is shut down indefinitely. Hence, 14 new EUs are created for 14 engines (7 generators).</i>
069	U	JP-8 Fueled Jet engine test stands – Test Area A/C
070	R	Aerospace hand-wiping operations
071	R	Aerospace spray gun cleaning operations
072	U	Aerospace flush cleaning operations
073	R	Aerospace primer and topcoat application operations (PS – 2 – MM)
074	U	Aerospace waste storage and handling operations
077	R	Combustion turbine test stands – Fired by Natural Gas
078	I	Vertrel Vapor Degreaser <i>[This EU is demolished and is removed per applicant's request]</i>
079	R	Two JP8 fired Turbine Engines powering air compressors used for jet engine tests (also known as RAM Test Facility)
080	I	E-8 Rocket Engine Test Stand – Methane Fuel Operations <i>[This emissions unit is sold and is removed per applicants' request]</i>

EU No.	R / U*/I**	Brief Description
088	U	Engine Parts Coating Process
089	U	Hot Acoustic Rig (HAR) at Test Stand B-6. The HAR utilizes propane, air and water in evaluating design and performance of aircraft components at the B-6 test area. The EU consists of two propane burners, three propane storage tanks, with a capacity of 1000 gallons each. SCC # 1-02-010-02: 1000 gallons of propane burned
090	R	FT4000 Gas Turbine Testing at Test Stand A4
091	R	FT4000 Compressor Reciprocating Internal Combustion Engine (RICE)
092	R	2100 hp Detroit Diesel Engine (Generator 1A)
093	R	2100 hp Detroit Diesel Engine (Generator 1B)
094	R	2100 hp Detroit Diesel Engine (Generator 2A)
095	R	2100 hp Detroit Diesel Engine (Generator 2B)
096	R	2100 hp Detroit Diesel Engine (Generator 3A)
097	R	2100 hp Detroit Diesel Engine (Generator 3B)
098	R	2100 hp Detroit Diesel Engine (Generator 4A)
099	R	2100 hp Detroit Diesel Engine (Generator 4B)
100	R	2100 hp Detroit Diesel Engine (Generator 5A)
101	R	2100 hp Detroit Diesel Engine (Generator 5B)
102	R	2100 hp Detroit Diesel Engine (Generator 6A)
103	R	2100 hp Detroit Diesel Engine (Generator 6B)
104	R	2100 hp Detroit Diesel Engine (Generator 7A)
105	R	2100 hp Detroit Diesel Engine (Generator 7B)
Following emission units are located at Sikorsky Aircraft Corporation		
081	R	SYK - Spray Booth (PS-14-SIK) for aerospace coating operations [Previously EU 006 in Sikorsky permit]
082	R	SYK - Spray Booth (PS-16-SIK) for aerospace coating operations [Previously EU 008 in Sikorsky permit]
083	R	SYK - Boiler (BO-4-SIK)] fired by natural gas– 2.93 MMBTU/Hr Heat Input [Previously EU 009 in Sikorsky permit]
084	U	Alodine tank – about 10 gallon capacity
Following emission unit is used to track VOC emissions from miscellaneous activities at P&W and Sikorsky		
085	U	Miscellaneous VOC/HAP Emissions Sources
Following emission units are located at the FIT Center		
086	R	Fire Innovation and Test Center
087	R	810 KW Diesel Generator – [see Appendix ICE]

* (R)egulated and (U)nregulated: An unregulated emissions unit is an emissions unit which emits no “emissions-limited pollutant” and which is subject to no unit-specific work practice standard, though it may be subject to regulations applied on a facility-wide basis (e.g., unconfined emissions, odor, general opacity) or to regulations that require only that it be able to prove exemption from unit-specific emissions or work practice standards. Such emissions units and/or activities are neither “regulated nor exempt.

** I = Inactive

Please reference the Permit No., Facility ID No., and appropriate Emissions Unit(s) ID No(s). on all correspondence, test report submittals, applications, etc.

Subsection C. Relevant Documents

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action.

These documents are provided to the permittee for information purposes only:

Appendix A, Abbreviations, Acronyms, Citations, and Identification Numbers

Appendix H, Permit History

Statement of Basis

These documents are on file with the permitting authority:

Application for Title V permit revision (0990021-042-AV) received	12/12/2014
Intent to Issue and the Draft permit issued	02/19/2015
Public notice published	04/19/2015
Proposed permit issued	05/28/2015

Subsection C. Applicable Regulations

Based on the revision application received 06/16/2013, this facility is NOT a major source of hazardous air pollutants (HAP). The existing facility is a PSD major source of air pollutants in accordance with Rule 62-212.400, F.A.C.

A summary of applicable regulations is shown below.

Chapter 62-4, F.A.C.	- Permits.
<i>Rule 62-4.160, F.A.C.</i>	- <i>General Permit Conditions</i>
Chapter 62-204, F.A.C.	- Air Pollution Control - General Provisions
Chapter 62-210, F.A.C.	- Stationary Sources - General Requirements
<i>Rule 62-210.300, F.A.C.</i>	- <i>Permits Required.</i>
<i>Rule 62-210.350, F.A.C.</i>	- <i>Public Notice and Comment.</i>
<i>Rule 62-210.370, F.A.C.</i>	- <i>Reports.</i>
<i>Rule 62-210.650, F.A.C.</i>	- <i>Circumvention.</i>
<i>Rule 62-210.700, F.A.C.</i>	- <i>Excess Emissions.</i>
Chapter 62-212, F.A.C.	- Stationary Sources - Preconstruction Review
<i>Rule 62-212.300, F.A.C.</i>	- <i>General Preconstruction Review Requirements</i>
Chapter 62-296, F.A.C.	- Stationary Sources - Emissions Standards
<i>Rule 62-296.320, F.A.C.</i>	- <i>General Pollutant Emission Limiting Standards.</i>
Chapter 62-297, F.A.C.	- Stationary Sources - Emissions Monitoring
<i>Rule 62-297.310, F.A.C.</i>	- <i>General Test Requirements.</i>
<i>Rule 62-297.400, F.A.C.</i>	- <i>EPA Test Methods Adopted by Reference</i>

Code of Federal Regulations

The generators are subject to **40 CFR Part 63 Subpart ZZZZ** “National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.”

The painting and stripping operations are subject to the requirements of **40 CFR Part 63 Subpart HHHHHH**, “National Emission Standard for Hazardous Air Pollutants for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources.”

Some of the reciprocating internal combustion engines (RICE) – such as EU 091 – are subject to the regulations of **40 CFR Part 60 Subpart JJJJ** “*New Source Performance Standards for Spark Ignition (SI) Engines.*” *A few newer generators are subject to the regulations of 40 CFR Part 60 Subpart IIII “New Source Performance for Stationary Internal Combustion Engines.” Appendix ICE contains the details of the generators and the applicable regulations.*

Two paint spray booths (EUs 081 and 082) are subject to **40 CFR 63 Subpart HHHHHH** “National Emission Standard for Hazardous Air Pollutants for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources.”

In the Title V permit renewal, It was stated that no emissions units at this facility were subject to the regulations of **40 CFR Part 63 Subpart GG** “National Emission Standards for Aerospace Manufacturing and Rework Facilities.” However, the permittee determined, through internal review, that the emissions units 071, 072 and 073 are subject to 40 CFR 63 Subpart GG since these emissions units support the jet engine manufacturing, although the engines are not assembled on site. Although, the facility’s status is changed from ‘major’ to ‘synthetic minor’ for hazardous air pollutants, the regulations of 40 CFR 63 Subpart GG still apply based on the NESHAP policy of ‘once in always in.’ This permit revision adds the applicability of 40 CFR 63 Subpart GG to emissions units 071, 072 and 073.

This facility is not subject to **40 CFR Part 63 Subpart PPPP** “National Emission Standards for Hazardous Air Pollutants for Engine Test Cells /Stands”. Rule 40 CFR 63.9290(d) (2) states that the Subpart PPPP does not apply for a source that is used exclusively for testing rocket engines.

SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS**The following conditions apply facility-wide:**

FW1. Emissions of Hazardous Air Pollutants (HAPs): The facility-wide emissions of a single HAP are limited to 9.9 tons in any consecutive 365-day period (rolling total). The facility-wide emissions of total HAPs are limited to 24.9 tons in any consecutive 365-day period (rolling total). The permittee shall monitor the emissions of HAPs pursuant to the condition FW15 of this Section.

[Applicant's request to become a synthetic minor facility for HAPs; Permit No. 0990021-020-AC]

FW2. Appendices. The permittee shall comply with all documents identified in Section IV, Appendices, listed in the Table of Contents. Each document is an enforceable part of this permit, unless otherwise indicated. **[Rule 62-213.440, F.A.C.]**

Emissions and Controls

FW3. Not federally Enforceable. Objectionable Odor Prohibited. No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. **[Rule 62-296.320(2) and 62-210.200(Definitions), F.A.C.]**

FW4. General Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed-necessary and ordered by the Department. **[Rule 62-296.320(1), F.A.C.]**

{Permitting Note: Nothing is deemed necessary and ordered at this time.}

FW5. General Visible Emissions. No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C. This regulation does not impose a specific testing requirement. **[Rule 62-296.320(4)(b)1, F.A.C.]**

FW6. Unconfined Particulate Matter. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction; alteration; demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include:

- a. Paving and maintenance of roads , parking areas, and yards;
- b. Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
- c. Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent re-entrainment, and from buildings, or work areas to prevent particulates from becoming airborne.
- d. Landscaping or planting of vegetation
- e. Use of hoods, fans, filters, and similar equipment to contain, capture, and/or vent particulate matter
- f. Confining abrasive blasting where possible

[Rule 62-296.320(4)(c), F.A.C.]

SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS**Annual Reports and Fees**

See Appendix RR, Facility-wide Reporting Requirements for additional details.

- FW7. Annual Operating Report.** The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Florida Department of Health Palm Beach County (Health Department) by April 1st of each year. If the report is submitted using the Department of Environmental Protection's (DEP) electronic annual operating report software, there is no requirement to submit a copy to Health Department. **[Rule 62-210.370(3), F.A.C.]**
- FW8. Annual Emissions Fee Form and Fee.** The permittee must pay between January 15 and April 1 of each year, upon written notice as provided in the Title V permit, an annual emissions fee in an amount determined as set forth in Rule 62-213.205(1), F.A.C. **[Rule 62-213.205, F.A.C.]**
- FW9. Annual Statement of Compliance.** The permittee shall submit an annual statement of compliance to the compliance authority at the address shown on the cover of this permit within 60 days after the end of each calendar year during which the Title V permit was effective. **[Rules 62-213.440(3)(a)2. & 3, and (3)(b), F.A.C.]**
- FW10. Prevention of Accidental Releases (Section 112(r) of CAA).** If and when the facility becomes subject to 112(r), the permittee shall:

- Submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to: RMP Reporting Center, Post Office Box 10162, Fairfax, VA 22038, Telephone: (703) 227-7650.
- Submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C.

[40 CFR 68]

- FW11.** Any reports, data, notifications, certifications, and requests required to be sent to the United States Environmental Protection Agency, Region 4, should be sent to:

United States Environmental Protection Agency
Region 4
Air, Pesticides & Toxics Management Division
Air and EPCRA Enforcement Branch
Air Enforcement Section
61 Forsyth Street
Atlanta, Georgia 30303-8960
Telephone: 404/562-9155; Fax: 404/562-9163

- FW12.** The permittee shall submit all compliance related notifications and reports required of this permit to the Palm Beach County Health Department office.

Florida Department of Health Palm Beach County
Air & Waste Section (4th Floor)
800 Clematis Street, West Palm Beach, FL 33401
Ph: 561-837-5900; Fax: 561-837-5295

- FW13. Certification by Responsible Official (RO).** In addition to the professional engineering certification required for applications by Rule 62-4.050(3), F.A.C., any application form, report, compliance statement, compliance plan and compliance schedule submitted pursuant to Chapter 62-213, F.A.C., shall contain a certification signed by a responsible official that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Any responsible official who fails to submit any required information or who has submitted incorrect information shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary information or correct information.

SECTION II. FACILITY-WIDE SPECIFIC CONDITIONS

FW14. Permit Renewal: For purposes of permit renewal, a timely application is one that is submitted 225 days before the expiration of a permit [Rule 62-213.420(1)(a)2. F.A.C.]
{Permitting Note: The permittee submitted the Title V permit renewal application on 06/22/15}.

FW15. Annual HAP Emissions – Recordkeeping: The permittee shall monitor compliance with the HAPs emissions limits, specified in condition 1 of this section, on a monthly basis. If the facility-wide rolling 12-month total emissions do not exceed 80% of the HAPs emission limits as specified, the permittee shall continue to monitor facility-wide HAPs emissions on a monthly basis (rolling 12-month total). If the facility-wide rolling 12-month total emissions of HAPs exceed 80% of the HAPs emissions limits as specified, the permittee shall monitor facility-wide HAPs emissions on a daily basis (rolling 365-day total). When the facility-wide rolling 365-day total emissions of HAPs do not exceed 80% of the specified HAPs emissions limits for 30 consecutive days, then monthly monitoring of HAPs emissions can be resumed.

The permittee shall maintain and record the following information.

- The individual and total HAP fraction for each solvent/coating material that contains or emits HAPs. If the HAP content is provided by the material supplier or manufacturer as a range, then the permittee must use the upper limit of the range for determining compliance.
- The solvent utilization on a monthly basis for all solvents that contain or emit HAPs.
- The individual and total monthly HAP emissions for each material, calculated from the monthly material utilization and the individual and total HAP fraction, calculated for the preceding month no later than 20 days after the end of that month.
- For fuel burning units, the monthly emissions of individual HAP and total HAPs shall be estimated based on the monthly fuel usage; and the emissions factor provided by the manufacturer or AP-42 "Compilation of Air Pollutant Emission Factors."
- Using the monthly totals computed in subsection (c) and (d) above, rolling consecutive 12-month total emissions for individual and total HAPs for the entire facility shall be calculated for the previous twelve calendar months.

[Air Permit No. 0990021-020-AC]

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

SUBSECTION A. This subsection of the permit addresses the following unregulated emissions units:

EU No	R / U*	BRIEF DESCRIPTION																						
009	U	<p>Miscellaneous diesel storage tanks located throughout the facility, including SAC diesel storage tanks:</p> <p><u>SCC #4-03-010-19</u>: diesel, breathing loss; <u>SCC #4-03-010-21</u>: diesel, working loss</p> <p><i>{Permitting Note: The total storage capacity for this group of tanks is 14,685 gallons.}</i></p> <table><tr><td>(DL-1AFP): 540 gallon diesel tank</td><td>(DL-2-MMG): 1000 gallon diesel tank</td></tr><tr><td>(DL-1- MFP): 250 gallon diesel tank</td><td>(DL-23-TAB): 5000 gallon diesel tank</td></tr><tr><td>(DL-1- MMG): 150 gallon diesel tank</td><td>(DL-1-TABG): 50 gallon diesel tank</td></tr><tr><td>(DL-5-SIKTFP): 250 gallon diesel tank</td><td>(DL-1-RSG): 50 gallon diesel tank</td></tr><tr><td>(DL-7-CFP): 350 gallon diesel tank</td><td>(DL-24-RTFG): 1000 gallon diesel tank</td></tr><tr><td>(DL-8-ESFP): 550 gallon diesel tank</td><td>(DL-1-PH1SIK): 150 gallon diesel tank</td></tr><tr><td>(DL-10-ENFP): 1000 gallon diesel tank</td><td>(DL-1-PH2SIK): 150 gallon diesel tank</td></tr><tr><td>(DL-16-C11FP): 250 gallon diesel tank</td><td>(DL-2-PH2SIK): 150 gallon diesel tank</td></tr><tr><td>(DL-18-C14FP): 300 gallon diesel tank</td><td>(DL-1-PSTBSIK): 150 gallon diesel tank</td></tr><tr><td>(DL-22-RTF): 350 gallon diesel tank</td><td>(DL-2-PSTBSIK): 150 gallon diesel tank</td></tr><tr><td>(DL-21-C14G): 50 gallon diesel tank</td><td>(DL-1-B3ASIK): 295 gallon diesel tank</td></tr></table>	(DL-1AFP): 540 gallon diesel tank	(DL-2-MMG): 1000 gallon diesel tank	(DL-1- MFP): 250 gallon diesel tank	(DL-23-TAB): 5000 gallon diesel tank	(DL-1- MMG): 150 gallon diesel tank	(DL-1-TABG): 50 gallon diesel tank	(DL-5-SIKTFP): 250 gallon diesel tank	(DL-1-RSG): 50 gallon diesel tank	(DL-7-CFP): 350 gallon diesel tank	(DL-24-RTFG): 1000 gallon diesel tank	(DL-8-ESFP): 550 gallon diesel tank	(DL-1-PH1SIK): 150 gallon diesel tank	(DL-10-ENFP): 1000 gallon diesel tank	(DL-1-PH2SIK): 150 gallon diesel tank	(DL-16-C11FP): 250 gallon diesel tank	(DL-2-PH2SIK): 150 gallon diesel tank	(DL-18-C14FP): 300 gallon diesel tank	(DL-1-PSTBSIK): 150 gallon diesel tank	(DL-22-RTF): 350 gallon diesel tank	(DL-2-PSTBSIK): 150 gallon diesel tank	(DL-21-C14G): 50 gallon diesel tank	(DL-1-B3ASIK): 295 gallon diesel tank
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(DL-21-C14G): 50 gallon diesel tank	(DL-1-B3ASIK): 295 gallon diesel tank																							
010	U	<p>Miscellaneous jet fuel storage tanks located throughout the facility, including:</p> <p><u>SCC #4-03-010-16</u>: jet fuel, standing loss; <u>SCC #4-03-010-18</u>: jet fuel, withdrawal loss</p> <p><i>{Permitting Note: The total storage capacity for this group of tanks is 2,232,825 gallons. SAC does not have any stationary jet fuel tanks.}</i></p> <table><tr><td>(F-1-CFF): 1,000,000 gallon jet fuel tank</td><td>(F-39-C14): 275 gallon jet fuel tank</td></tr><tr><td>(F-3-CFF): 150,000 gallon jet fuel tank</td><td>(F-40-C12): 275 gallon jet fuel tank</td></tr><tr><td>(F-5-CFF): 1,000,000 gallon jet fuel tank</td><td>(F-41-D): 8,000 gallon jet fuel tank</td></tr><tr><td>(F-7-A): 10,000 gallon salvage jet fuel tank</td><td>(F-42-B): 10,000 gallon jet fuel tank</td></tr><tr><td>(F-17-B2): 7,000 gallon jet fuel tank</td><td>(F-43-B): 10,000 gallon jet fuel tank</td></tr><tr><td>(F-45-A1): 10,000 gallon jet fuel tank</td><td>(F-44-B): 8,000 gallon jet fuel tank</td></tr><tr><td>(F-35E-BO): 8,000 gallon jet fuel tank</td><td>(F-46-B): 1,000 gallon jet fuel tank</td></tr><tr><td>(F-37-C11): 275 gallon jet fuel tank</td><td>(F-28-R): 10,000 gallon jet fuel tank</td></tr></table>	(F-1-CFF): 1,000,000 gallon jet fuel tank	(F-39-C14): 275 gallon jet fuel tank	(F-3-CFF): 150,000 gallon jet fuel tank	(F-40-C12): 275 gallon jet fuel tank	(F-5-CFF): 1,000,000 gallon jet fuel tank	(F-41-D): 8,000 gallon jet fuel tank	(F-7-A): 10,000 gallon salvage jet fuel tank	(F-42-B): 10,000 gallon jet fuel tank	(F-17-B2): 7,000 gallon jet fuel tank	(F-43-B): 10,000 gallon jet fuel tank	(F-45-A1): 10,000 gallon jet fuel tank	(F-44-B): 8,000 gallon jet fuel tank	(F-35E-BO): 8,000 gallon jet fuel tank	(F-46-B): 1,000 gallon jet fuel tank	(F-37-C11): 275 gallon jet fuel tank	(F-28-R): 10,000 gallon jet fuel tank						
(F-1-CFF): 1,000,000 gallon jet fuel tank	(F-39-C14): 275 gallon jet fuel tank																							
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(F-5-CFF): 1,000,000 gallon jet fuel tank	(F-41-D): 8,000 gallon jet fuel tank																							
(F-7-A): 10,000 gallon salvage jet fuel tank	(F-42-B): 10,000 gallon jet fuel tank																							
(F-17-B2): 7,000 gallon jet fuel tank	(F-43-B): 10,000 gallon jet fuel tank																							
(F-45-A1): 10,000 gallon jet fuel tank	(F-44-B): 8,000 gallon jet fuel tank																							
(F-35E-BO): 8,000 gallon jet fuel tank	(F-46-B): 1,000 gallon jet fuel tank																							
(F-37-C11): 275 gallon jet fuel tank	(F-28-R): 10,000 gallon jet fuel tank																							
012	U	<p>One million gallon jet fuel, floating roof storage tank (F-8-CFF) located in the Test Area fuel farm; constructed during 1986 and exempt from NSPS Kb due to vapor pressure criteria (Floating Roof Tank)</p> <p><u>SCC #4-03-011-13</u>: jet fuel, standing loss; <u>SCC #4-03-001-19</u>: jet fuel, Working loss</p>																						

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

EU No	R / U*	BRIEF DESCRIPTION
015	Inactive	<p>Closed-loop halogenated flush cleaning process (BF-1-RL-10) using Vertrel MCA.</p> <p>Located in the RL-10 /SSME Rocket Assembly Area consisting of back flushing of rocket engines located in Manufacture Area using Vertrel MCA Solvent</p> <p><u>4-01-002-95</u>: Gallons used</p> <p><i>{Permitting Note: Although these cleaning processes use trichloroethylene, a halogenated solvent and regulated volatile organic compound, they are completely closed loop systems. Therefore, the units are not subject to the requirements of the NESHAP, Subpart T, which regulates halogenated solvent cleaners. Because these activities relate to the components of space vehicles, they are not covered by NESHAP, Subpart GG, regulating aerospace manufacturing and rework. In addition, these activities are exempt from the requirements of VOC RACT for degreasers [Rule 62-296.511, F.A.C.] because the combined emissions do not exceed 3 pounds per hour nor more than 15 pounds per day in accordance with Rule 62-296,500(3)(a), F.A.C. The Health Department determines this emissions unit “unregulated”.}</i></p> <p><i>A process change completed in November 2002 has eliminated the use of trichloroethylene plant-wide. A Subpart T non-regulated solvent, Vertrel MCA, is used instead. Currently, no activities subject to NESHAP, Subpart T remain at the facility.</i></p> <p><i>[This emissions unit is sold and is removed per applicants’ request]</i></p>
018	Inactive	<p>Acid gas scrubbing system (AS-2-MPL) for Nickel and Silver plating operations located in the Manufacture Area.</p> <p>With an estimated scrubbing efficiency of 98%; Ceilcote Model #VCP-78</p> <p><u>3-01-888-01</u>: tons of product used</p> <p><i>[This emissions unit is sold and is removed per applicants’ request]</i></p>
031	U	<p>Two 20,000 gallon, above ground, fixed roof, diesel storage tanks (DL-19-SEGF and DL-20-SEGF) located in the Test Area near the FPL “Pratt Whitney” substation; constructed during 1989 and exempt from NSPS.</p> <p><u>SCC #4-03-010-19</u>: diesel, breathing loss; <u>SCC #4-03-010-21</u>: diesel, working loss</p>
037	U	<p>Tank (GA-1R-TAB): 5,000 gallon gasoline; exempt from NSPS</p> <p><u>SCC #4-04-002-02</u>: gasoline (RVP-10), breathing loss; <u>SCC #4-04-002-05</u>: gasoline (RVP-10), working loss</p>
040	Inactive	<p>Two heat treatment furnaces (FU-3-MHT and FU-4-MHT), each with a heat input rate of 6 mmBTU / hour located in the Manufacture Area; both are Sunbeam box-type furnaces and burn natural gas only.</p> <p><u>SCC #1-02-006-02</u>: natural gas combustion, 10 - 100 mmBTU per hour</p> <p><i>[This emissions unit is sold and is removed per applicants’ request]</i></p>
045	U	<p>Water evaporator (EV-1-MW) with a heat input rate of 0.2 mmBTU/hour located in the Waste Management Area; SAMSCO Model # 2C820, burns natural gas only.</p> <p><u>SCC #1-02-006-03</u>: natural gas combustion, < 10 mmBTU per hour</p>

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

EU No	R / U*	BRIEF DESCRIPTION
049	U	<p>Plasma Spray Booths. These spray booths are used to coat rocket engine parts with a metal and/or ceramic coating. Process does not use organic coatings.</p> <p>Permit no. 0990021-028-AC was issued (8/1/2012) to relocate and expand the facility's Combustors, Augmentors, and Nozzles (CAN) Operations. Facility also intends to install a jet engine parts coating process. This project will be completed in five phases, as detailed below. After the expansion, the facility will have 12 spray booths. This permit includes EUs #049 and #088.</p> <p>Phase 1 – Relocation of the existing booths: The three existing plasma spray booths (EU # 49) are relocated from their current location at the Manufacturing Building to a different existing building (formerly known as Facilities Maintenance Building). The facility intends to complete this relocation by October, 2012.</p> <p>Phase 2 - Add two new booths: The facility will add two completely new spray booths in the Facilities Maintenance Building. The facility intends to complete the installation of these booths by Oct 2012.</p> <p>Phase 3 - Add three new booths: The facility will add three completely new spray booths (identical to the phase 2 units) in the Facilities Maintenance Building. The facility intends to complete the installation of these booths by Oct 2012.</p> <p>Phase 4 – Add two new booths: The facility will add two completely new spray booths (identical to the phase 2 units) in the Facilities Maintenance Building. The facility intends to complete the installation of these booths in 2014.</p> <p>All the above spray booths will be equipped with new Torit/Sulzer Metco (or equivalent) cartridge style high efficiency particulate filters to control particulate emissions.</p> <p>Phase 5 – Installation of an engine parts coating process in the same building: The facility will install an engine parts coating production line. This process would emit acetone and isopropyl alcohol (IPA) from the vacuum chambers. This process will also include two aqueous parts cleaning units with no air emissions. [Emissions Unit No. 088]</p> <p>SCC # 3-09-040-01: tons of sprayed metal; SCC # 3-09-060-99: tons of material processed</p>
059	U	<p>Miscellaneous fuel and air heaters located in the different Test Areas.</p> <p>These heaters are used to heat JP-8 fuel and/or air for testing jet engine components, and are fired with natural gas only.</p> <p><u>SCC #3-90-006-99:</u> natural gas combustion</p> <p>Air heater (HR-22-D1) with a design heat input rate of 7 mmBTU per hour, Test Area D Air heater (HR-23-D3) with a design heat input rate of 4 mmBTU per hour, Test Area D Air heater (HR-26-D4) with a design heat input rate of 4 mmBTU per hour, Test Area D Air heater (HR-27-D5) with a design heat input rate of 4 mmBTU per hour, Test Area D Air heater (HR-28-D7) with a design heat input rate of 6 mmBTU per hour, Test Area D Air heater (HR-29-A4) with a design heat input rate of 7 mmBTU per hour, Test Area A Air heater (HR-17-D2) with a design heat input rate of 15 mmBTU per hour, Test Area D Fuel heater (HR-1-A9) with a design heat input rate of 16 mmBTU per hour, Test Area A</p>

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

EU No	R / U*	BRIEF DESCRIPTION			
065	U	Diesel engines at P&W, and SAC, powering emergency equipment including fire protection pumps, backup generators and cooling water pumps during rocket engine testing.			
		<u>SCC # 2-04-004-02</u> : Thousand gallons of diesel fuel			
		Equipment listed below:			
		<u>Equipment</u>	<u>Location</u>	<u>Equipment No</u>	<u>Diesel Tank ID</u>
		Fire Pump	EOB Lake	C038806	DL-1-MFP
		Fire Pump	C11	CO47146	DL-16-C11FP
		Fire Pump	C12/14	CO49074	DL-18-C14FP
		Fire Pump	A4	CO43466	DL-1-AFP
		Fire Pump	C10	CO51454	DL-7-CFP
		Fire Pump	E Area North	CO52350	DL-10-ENFP
		Fire Pump	E Area South	CO51279	DL-8-ESFP
		Fire Pump	Remote Test Facility	CO50190	DL-22-RTF
		Generator	K-17	CO42502	DL-2-MMG
		Generator	Maintenance	CO51880	DL-1-MMG
		Generator	C Area Training	CO46467	DL-21-C14G
		Generator	Building TAB Generator	CO40336	DL-1-TABG
		Generator	Rocket Support	CO46466	DL-1-RSG
		Generator	Remote Test Facility	CO56179	DL-24-RTFG
		Fire Pump	Pump House 1 – SAC	8VA354125	DL-1-PH1SIK
		Fire Pump	Pump House 2 – SAC	6A-432657	DL-1-PH2SIK
		Fire Pump	Pump House 2 – SAC	6A-433001	DL-2-PH2SIK
		Fire Pump	PTSB1 – SAC	03Z12944	DL-1-PSTBSIK
		Fire Pump	PTSB2 – SAC	PE6068H237993	DL-2-PSTBSIK
		Generator	Building 3A	483504	DL-1-B3ASIK

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

EU No	R / U*	BRIEF DESCRIPTION
069	U	<p>10 existing jet engine test stands, consisting of:</p> <p>6 stands for testing military aircraft engines located at the west end plant site of Test Area A (A-03, A-04, A-05, A-08, A-09, and A-10)</p> <p>4 stands for testing commercial aircraft engines located at the west end plant site of Test Area C (C-10, C-11, C-12, and C-14)</p> <p>The stands are estimated to operate approximately 10,000 engine hours and consume approximately 12 million gallons of jet fuel.</p> <p><u>SCC # 2-02-009-01</u>: 1000 gallons of jet fuel burned</p> <p><i>{Permitting Note: The jet engine test stands were constructed prior to the PSD baseline date. In the early 1970s, several test stands were issued air pollution "operation" permits, which described the stands and estimated emissions, but did not limit operation. In a January 16, 1980 letter, the Department of Environmental Regulation made the following determination for the existing jet engine test stands:</i></p> <p><i>The Department would not require air pollution permits for the individual test stands nor the relocatable jet engines. The Department would not specify conditions in other permits that would affect the scheduling or utilization of individual test stands or relocatable jet engines. The Department would require Pratt & Whitney to report jet fuel consumption on a facility-wide basis. The main concern at this time was reporting an accurate emissions inventory for the purpose of tracking "reasonable further progress" towards attainment of the ozone standard.</i></p> <p><i>However, recent guidance from the EPA (listed below) indicates that jet engine test stands are considered to be stationary sources of air pollution.</i></p> <p><u>12-31-95</u>: EPA-AEB to Georgia Department of Natural Resources: Aerospace Ground Equipment, Hush Houses, and Jet Engine Test Cells</p> <p><u>03-12-96</u>: EPA-AEB to Georgia Department of Natural Resources: Aerospace Ground Equipment, Hush Houses, and Jet Engine Test Cells</p> <p><u>09-23-96</u>: EPA-APT to Mr. John R. McDowell, PE: Title V Applicability Issues Related to the Cincinnati/Northern Kentucky International Airport</p> <p><i>Therefore, the Health Department establishes the jet engine test stands as existing, "unregulated" stationary emissions units with no limits on operation.}</i></p>
072	U	<p>Aerospace flush cleaning operations</p> <p>This emission unit was engaged in manufacturing of military jet engines, and hence was subject to 40 CFR 63 Subpart GG "National Emission Standards for Aerospace Manufacturing and Rework Facilities." However, Jet engine manufacturing ceased in 2000 after the transfer of those operations and associated equipment to Connecticut. The current operations are exempt from Subpart GG based on 40 CFR 63.741(f) & (h).</p> <p>If the facility re-engages in jet engine activities, then the facility shall apply and obtain a permit revision prior to the start-up of such activities.</p> <p><u>SCC # 4-01-003-98</u>: gallons of solvent consumed</p>
074	U	<p>Aerospace waste storage and handling operations subject to NESHAP, Subpart GG – Currently operating under a RCRA permit, therefore, exempt from Subpart 40 CFR 63 Subpart GG, based on 40 CFR 63.741(e).</p> <p><u>SCC # 5-03-008-30</u>: 1000 each-year containers used</p>

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

EU No	R / U*	BRIEF DESCRIPTION
084	U	<p>SIK - Alodine tank – about 10 gallon capacity</p> <p>The tank is used to apply alodine, a chromate conversion process, to production parts. Other parts are immersed. Other parts have the alodine brush applied. This process uses hexavalent chromium.</p> <p>In the previous permits – 0990021-013-AV & 0990021-020-AC, this EU was identified as an activity subject to 40 CFR Part 63 Subpart WWWW. On September 19, 2011, the EPA issued amendments to clarify that the plating and polishing area source rule does not apply to any bench-scale activities. Bench-scale is defined as any operation that is small enough to be performed on a bench or similar structure (25 gallons) so that the equipment does not directly contact the floor.</p> <p>The tank at the facility is a 10-gallon tank, is covered and is mounted on a bench, and hence it is not subject to 40 CFR 63 Subpart WWWW. The status of this EU is changed from ‘regulated’ to ‘unregulated.’</p>
085	U	Miscellaneous VOC/HAP Emissions Sources
088	U	<p>Jet Engine Parts Coating Process.</p> <p>This process is used to coat the jet engine parts. This process would emit acetone and Isopropyl alcohol.</p> <p><i>The facility will purchase and install a jet engine parts coating process. Currently, an engine parts coating process is conducted as a research and development activity at the facility. The facility anticipates establishing an engine parts coating production line. The proposed number of total booths is reduced from 12 to 6. Per this Title V permit revision, the emissions unit includes an additional coating process step, so each part undergoes a two-step coating process.</i></p> <p>[The permit no. 0990021-028-AC was issued (8/1/2012) to relocate and expand the Combustors, Augmentors, and Nozzles (CAN) operations at the facility. The proposed relocation/expansion will be completed in five phases. This permit includes EUs #049 and #088. Later, permit nos. 0990021-034-AC and 0990021-041-AC were issued to extend the construction permit till November 30, 2015.]</p> <p><u>SCC # 3-09-999-97</u>: 1000 parts processed</p>
089	U	<p>Hot Acoustic Rig (HAR) at Test Stand B-6.</p> <p>The HAR utilizes propane, air and water in evaluating design and performance of aircraft components at the B-6 test area. The EU consists of two propane burners, three propane storage tanks, with a capacity of 1000 gallons each.</p> <p>[The permit no. 0990021-031-AC was issued on 1/23/2013 for the construction of this EU. Later, permit no. 0990021-039-AC was issued to extend the construction permit till January 23, 2015.]</p> <p><u>SCC # 1-02-010-02</u>: 1000 gallons of propane burned</p>

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

AIR POLLUTION CONTROL EQUIPMENT

- A.1 Controls: The permittee shall install, operate, and maintain any existing air pollution control equipment in accordance with the manufacturer's instructions and recommendations. The air pollution control equipment shall be on line and functioning properly when operating the emissions units generating activity.
[Rules 62-210.650, F.A.C., and Permit No. 0990021-035-AC]

PERFORMANCE STANDARDS

- A.2 Emission Units, #72 and #73: If the facility re-engages in jet engine activities, then the facility shall apply and obtain a permit revision prior to the start-up of such activities.
[Permit no. 0990021-020-AC and Permit No. 0990021-035-AC]
- A.3 Hours of Operation: The hours of operation of these emissions units are not limited (8760 hours per year).
[Rules 62-4.160(2) and 62-210.200 (Def. of PTE), F.A.C. and Permit No. 0990021-035-AC]
- A.4 Allowable Fuels: Fuel combustion is limited to only those fuels listed in the above description of each emissions unit.
[Rules 62-4.160(2) and 62-210.200 (Def. of PTE), F.A.C. and Permit No. 0990021-035-AC]
- A.5 Emissions Unit #49- Notification to the Department: The permittee shall notify the Health Department within 10 days of each phase of the proposed project is completed. [Permit No. 0990021-028-AC and Permit No. 0990021-035-AC]
- A.6 Emissions Unit #73: Coatings: The permittee shall use only siloxane-based products at this emissions unit to prepare the surface of the parts.
[Permit no. 0990021-020-AC and Permit No. 0990021-035-AC]
- A.7 Emissions Unit # 088 and 089 - Notification to the Department: The permittee shall notify the Health Department within 10 days of the startup of the emission unit. [Permit No. 0990021-031-AC and Permit No. 0990021-035-AC]

COMPLIANCE MONITORING REQUIREMENTS

- A.8 Records: The permittee shall be able to track the actual activity level for each emissions unit, reportable on an annual basis in accordance with the Annual Operating Report, DEP Form No. 62-210.900(5), F.A.C. Activities include fuel combustion (including test stands), fuel throughput, raw material usage, etc.
[Rule 62-210.370(3), F.A.C., and Permit No. 0990021-035-AC]

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

SUBSECTION B: *This subsection addresses the following emissions units:*

EU No.	STATUS	BRIEF DESCRIPTION
014	R	Paint spray booth (PS-1-TMC) Located in open hanger with no forced exhaust or filtration located in the rocket support Test Area E; used to <i>refinish</i> metal parts of support equipment <u>SCC #4-02-001-10</u> : Gallons of Coating
064	R	Paint spray booth (PSB-1-RTF) with panel filter located in the Remote Test Facility; Binks Model # CA-528-T-LH, and it is used to <i>refinish</i> metal parts of support equipment or to coat prototype, non-production parts. Stack details: Height 46', exit diameter 3', and 16,400 ACFM. <u>SCC #4-02-001-10</u> : tons of solvent

{Permitting Note: Because these emissions units are not directly related to aerospace vehicles or components, they are not covered by the NESHAP, Subpart GG, which regulates aerospace manufacturing and rework activities. Because they are only used to refinish metal components of support equipment, they are not subject to the VOC RACT Rule 62-296.513, F.A.C.}

EU # 14: The potential emissions of HAPs are 2.51 tons per year. EU # 64: The potential emissions of HAPs are 4.57 tons per year.}

AIR POLLUTION CONTROL EQUIPMENT AND METHODS

B.1 Particulate Control: Particulate matter emissions from paint overspray shall be controlled by:

- (a) *EU 014 (PS-1-TMC)*: Confining painting to spray booth located in large, enclosed hanger. Hanger door may be open for ventilation as long as particulate matter emissions remain confined.
- (b) *EU 064 (PSB-1-RTF)*: Forced exhaust from each spray booth through mat or panel filters.

[Rule 62-4.070(1), F.A.C., and Permit No. 0990021-035-AC]

EMISSION LIMITING AND PERFORMANCE STANDARDS

B.2 Operational Restrictions:

- (a) The hours of operation for these emissions units are not limited (8760 hours per year).
- (b) *VOC Emissions*: Emissions of volatile organic compounds (VOC) from the spray booths shall not exceed:
 - (1) *EU 014 (PS-1-TMC)*: 11.50 tons per consecutive 12 months, rolling total.
 - (2) *EU 064 (PSB-1-RTF)*: 2.84 tons per consecutive 12 months, rolling total.
- (c) Emissions of Hazardous Air Pollutants (HAPs) are subject to the Facility-wide condition # 2.1.

[Permit No. 0990021-035-AC, Rule 62-210.200 (PTE), F.A.C. and Applicant Request]

COMPLIANCE MONITORING REQUIREMENTS

B.3 VOC Content: The volatile organic compound (VOC) and Hazardous Air Pollutant (HAP) content of all coatings, thinners, and cleaners shall be determined by the Manufacturer Safety Data Sheets (MSDS), or EPA Method 24, or EPA 450/3-84-019, incorporated and adopted by reference in Chapter 62-297, F.A.C.

[Rule 62-4.070(3), F.A.C., and Permit No. 0990021-035-AC]

B.4 Daily Spray Log: For each day of operation, the permittee shall record the following information in a written log, or an equivalent electronic recordkeeping system, provided records can be generated when requested by the Health Department:

- (a) Date of operation;
- (b) Identification of each VOC/HAP-containing material used (i.e., paints, thinners, cleaners, resins, adhesives, etc.); and
- (c) Quantity of each VOC/HAP-containing material used to nearest tenth of a gallon.

[Rule 62-4.070(3), F.A.C., and Permit No. 0990021-035-AC]

B.5 Monthly Operations Log: The permittee shall demonstrate compliance with the VOC/HAP limits on a monthly basis by keeping a written log, or an equivalent electronic recordkeeping system, provided records can be generated when requested by the Health Department, of the operations. Prior to the 20th calendar day of each month, the permittee shall calculate and record the following information for the previous month of operation:

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

- (a) Month of operation.
- (b) Type and quantity of each VOC/HAP-containing material used during the previous month.
- (c) Calculated emissions of VOC/HAP for the previous month and for the previous consecutive 12 months, rolling total. Calculations are to assume that 100% of the solvents in the coatings, thinners, and cleaners used will evaporate into the atmosphere and shall be consistent with the following generic equation:

$$E^M = \Sigma(U^M \times D \times C)$$

Where:

E^M = Calculated VOC/HAP emissions for a given month reported to the nearest hundredth of a ton

Σ = Sum of the products of the coatings, thinners, and cleaners

U^M = Usage of coating, thinner, or cleaner for a given month reported from the daily spray log

D = Density of coating, thinner, or cleaner reported from MSDS

C = VOC/HAP content of coating, thinner, or cleaner reported from MSDS

The actual equations and calculations are left to the discretion of the permittee, but they must meet the basic intent of the calculation described above. For example, calculation and summary by a computer spreadsheet or database is acceptable as long as the calculations are consistent with the methodology specified in this section.

[Rule 62-4.070(3), F.A.C., and Permit No. 0990021-035-AC]

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

Subsection C: *This subsection addresses the following equipment as a single emissions unit:*

EU No	STATUS	BRIEF DESCRIPTION
068	I*	8 emergency electrical generators located near Test Area B This emission units consists of: <ul style="list-style-type: none"> • 14 identical diesel engines, Detroit Diesel Model #32V-149-TIB-3200; • Each engine consumes approximately 106.4 gallons of diesel fuel per hour; and • A pair of engines powers a single generator for emergency electrical power demands. • Stack Details: Height 12.9', exit diameter 0.875', Stack Exhaust Temperature 535 F, and 4,203 ACFM volumetric flow rate. (Made Inactive to create separate emission units)
092	R	2100 hp Detroit Diesel Engine (Generator 1A), Engine Model 91637416, Serial Number 16E0009430.
093	R	2100 hp Detroit Diesel Engine (Generator 1B) Engine Model 91633416, Serial Number 16E0009909.
094	R	2100 hp Detroit Diesel Engine (Generator 2A) Engine Model 91637416, Serial Number 16E0009404.
095	R	2100 hp Detroit Diesel Engine (Generator 2B) Engine Model 91633416, Serial Number 16E0009908.
096	R	2100 hp Detroit Diesel Engine (Generator 3A) Engine Model 91637416, Serial Number 16E0009427.
097	R	2100 hp Detroit Diesel Engine (Generator 3B) Engine Model 91633416, Serial Number 16E0009907.
098	R	2100 hp Detroit Diesel Engine (Generator 4A) Engine Model 91637416, Serial Number 16E0009403.
099	R	2100 hp Detroit Diesel Engine (Generator 4B) Engine Model 91633416, Serial Number 16E0009896.
100	R	2100 hp Detroit Diesel Engine (Generator 5A) Engine Model 91637416, Serial Number 16E0009402.
101	R	2100 hp Detroit Diesel Engine (Generator 5B) Engine Model 91633416, Serial Number 16E0009897.
102	R	2100 hp Detroit Diesel Engine (Generator 6A) Engine Model 91637416, Serial Number 16E0009401.
103	R	2100 hp Detroit Diesel Engine (Generator 6B) Engine Model 91633416, Serial Number 16E0009895.
104	R	2100 hp Detroit Diesel Engine (Generator 7A) Engine Model 91637416, Serial Number 16E0009397.
105	R	2100 hp Detroit Diesel Engine (Generator 7B) Engine Model 91633416, Serial Number 16E0009894.

**The emissions Unit (EU 068) is split into different emissions units – one for each engine. Originally, these emissions unit consisted of 8 generators (2 engines per each generator). But, one of the generators is shut down indefinitely. Hence, 14 new EUs are created for 14 engines (7 generators).*

These 14 engines have identical parameters such as; Stack Height 12.9', exit diameter 0.875', Stack Exhaust Temperature 535 F, and 4,203 ACFM volumetric flow rate. Engine Consumption of each engine is 106.4 gallons per hour. Each engine burns Ultra-Low Sulfur Fuel and is Subject to 40 CFR 63, Subpart ZZZZ. All engines were manufactured in March 1990.

The following table provides the details for the 14 engines collectively.

Engine(s) Identification	Engine(s) Brake HP	Date of Manufacture	Model Year	Displacement liters/cylinder (l/c)	Engine Manufacturer	Model No.
EU 092 thru EU 105	2100 (1566kw)	March 1990	1990	<10	Detroit Diesel	91633416/ 32V-149-TIB-3200

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

{Permitting Note: These compression ignition reciprocating internal combustion engines (CI RICE) are regulated under 40 CFR 63, Subpart ZZZZ, NESHAP for Stationary RICE adopted in Rule 62.204.800(11)(b), F.A.C. These RICE are not used for fire pumps. These RICE are used as standby generators to power the facility in the event of a full or partial power failure as backup power for jet engine testing or for electrical power on-demand usage. These RICE are not subject to the regulations under 40 CFR 60, Subpart IIII - New Source Performance for Stationary Internal Combustion Engines (ICE) because these engines were manufactured prior to the rule applicability date. These are "existing" stationary CI RICE greater than 500 HP, with a displacement of less than 10 liters per cylinder that are located at an area source of HAPS and that have not been modified or reconstructed after 6/12/2006.

In a letter dated August 10, 1989, the Department of Environmental Regulation (now DEP) exempted the emergency generators from the requirement to obtain an air permit based on Rule 17-2.210(3)(t), F.A.C. which exempted all diesel emergency generators. Later this rule was revised [Rule 62-210.300, F.A.C.] to exempt only those diesel emergency generators that operated less than 400 hours per year. Therefore, the units remained exempt from air permitting requirements. Subsequently, the Department developed major source NOx RACT regulations [Rule 62-296.570, F.A.C.] which included a NOx RACT emission limiting standard for "oil-fired diesel generating units". Although this facility was major for NOx, the applicability portion of the rule [Rule 62-296.570(1)(b), F.A.C.] stated that requirements did not apply to emissions units that are exempt in accordance with Rule 62-210.300, F.A.C. Finally, the Department revised Rule 62-210.300(3)(a)20., F.A.C. to exempt only those diesel generators consuming less than 32,000 gallons of diesel fuel per year. In the initial Title V application, the applicant specifically requested a limit of less than 400 hours per year.}

Essential Potential to Emit (PTE) Parameters

C.1 Hours of Operation:

- (a) Normal Operation: The permittee shall not operate any engine for more than 399 hours in any consecutive 12 months, rolling total. This permit must be modified prior to operation beyond this limit. Engines operating more than 400 hours per year shall be tested for nitrogen oxide emissions.
- (b) Engine Startup: During periods of startup, the permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emissions limitations apply.

[Permit No. 0990021-032-AC, Rule 62-210.200, (Def. of PTE), F.A.C. and 40 CFR 63 6625(h)]

Emission Limiting and Performance Standards

C.2 40 CFR 63 Subpart ZZZZ: These emission units are subject to the regulations of 40 CFR Part 63 Subpart ZZZZ "National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines." **[40 CFR 63 Subpart ZZZZ]**

C.3 Nitrogen Oxides (NOx) Emissions RACT Limit: Emissions of nitrogen oxides (NOx) from any oil-fired diesel generator shall not exceed 4.75 pounds per million BTU of heat input. This emission limit shall apply at all times except during periods of startup, shutdown, or malfunction, as provided by Rule 62-210.700, F.A.C. **[Rule 62-296.570(4)(a)2., (b)7., and (c), F.A.C. and Permit No. 0990021-023-AC]**

C.4 Carbon Monoxide (CO) Emissions Limit – Effective May 3, 2014: The permittee shall meet the following requirements, except during periods of startup:

- (a) Limit concentration of carbon Monoxide (CO) in the exhaust to 23 ppmvd at 15% Oxygen (O₂);

or

- (b) Reduce CO Emissions by 70% percent or more. **[40 CFR 63.6603, and Table 2d of 40 CFR 63 Subpart ZZZZ]**

C.5 Operating Limitations: The permittee shall meet the following operating limitation, except during periods of startup.

- (a) maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and
- (b) maintain the temperature of the stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.

[40 CFR 63.6603(b); Table 2b, 40 CFR 63.7(e) and 40 CFR 63 Subpart ZZZZ]

C.6 Allowable Fuel: Fuel shall be limited to diesel fuel containing no more than 0.0015% sulfur by weight. The permittee is must use diesel fuel that meets the following requirements of 40 CFR 80.510(b) for nonroad diesel fuel.

- (a) Maximum Sulfur content of 15 ppm.

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(b) Cetane index or aromatic content, as follows:

- (i) A minimum cetane index of 40; or
- (ii) A maximum aromatic content of 35 volume percent.

[40 CFR 63.6604, and 40 CFR 80.510(b)]

Compliance Requirements

C.7 Compliance Date: The permittee shall comply with the applicable regulations, emission limitations and operating limitations of 40 CFR Part 63 Subpart ZZZZ no later than May 3, 2013. The permittee shall comply with 'non-emergency compression ignition (CI) engine' regulations from May 3, 2014. **[40 CFR 63.6640 (f)(4)(i), 40 CFR 63.6585(c), 40 CFR 63.6590(a)(1) & 40 CFR 63.6595(a)(1)]**

{Permitting Note: The applicant requested the Department to recategorize these engines as 'emergency engines' pursuant to 40 CFR 63.6640(f) until May 2, 2014. The permittee also requested the Health Department to categorize the engines as non-emergency engines effective May 3, 2014. Hence, the engines are subject to 'emergency engine' regulations till May 2, 2014; and from May 3, 2014, the engines will be subject to 'non-emergency engine' regulations}

C.8 Continuous Compliance: Each emissions unit shall be in compliance with the emissions limitations and operating limitations in this section at all times. **[40 CFR 6605(a)]**

C.9 At all times, the permittee shall operate and maintain the emissions units and the associated pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Health Department which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. **[40 CFR 63.6605(b)]**

Monitoring, Installation, Collection, Operation and Maintenance Requirements

C.10 Installation of Control Technology: The permittee shall install diesel oxidation catalyst (DOC) at each of the fourteen 2,100 BHP engines to reduce the CO emissions to 23 ppmvd @ 15% O₂ or by 70% or more as required by 40 CFR 63 Subpart ZZZZ. The DOC units are Quick-Lid Catalytic Converter, manufactured by DCL International, Inc. **[Permittee request to comply with 40 CFR Part 63 Subpart ZZZZ]**

C.11 Continuous Parameter Monitoring System (CPMS): The permittee shall install a continuous parameter monitoring system (CPMS) to monitor catalyst inlet temperature, as specified in **condition C.14 of this Subsection**. The permittee must install, operate, and maintain each CPMS according to the following requirements.

- (a) The permittee must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined below, and in 40 CFR 63.8(d). As specified in 40 CFR 63.8(f)(4), The permittee may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in 40 CFR 63.6625(b)(1) through (5) in the site-specific monitoring plan.
 - i The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;
 - ii Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements;
 - iii Equipment performance evaluations, system accuracy audits, or other audit procedures;
 - iv Ongoing operation and maintenance procedures in accordance with provisions in 40 CFR 63.8(c)(1) (ii) and (c)(3); and
 - v Ongoing reporting and recordkeeping procedures in accordance with provisions in 40 CFR 63.10(c), (e)(1), and (e)(2)(i).
- (2) The permittee must install, operate, and maintain each CPMS in continuous operation according to the procedures in the site-specific monitoring plan.
- (3) The CPMS must collect data at least once every 15 minutes (see also 40 CFR 63.6635).
- (4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.
- (5) The permittee must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in the site-specific monitoring plan at least annually.

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- (6) The permittee must conduct a performance evaluation of each CPMS in accordance with the site specific monitoring plan.

[40 CFR 63.6625(b)]

- C.12 **Crankcase ventilation system:** The permittee shall comply with either of the following conditions.
- (a) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or
 - (b) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.
 - (c) Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Health Department to approve different maintenance requirements that are as protective as manufacturer requirements.

[40 CFR 63.6625(g)]**Testing and Initial Compliance Requirements**

- C.13 **Initial Performance Test:** The permittee must conduct the initial performance test on two engines (one pair serving a single generator), as specified in **conditions C.14, C.15 of this subsection** within 180 days of May 3, 2014 (the compliance date), as specified in **condition C.7 of this Subsection**. **[40 CFR 63.6612(a)]**
{Permitting Note: On October Florida Department of Environmental Protection (FDEP) approved the permittee's request to conduct compliance test at two engines each year till all engines are tested, in lieu of conducting all engines at a time. Initial CO performance test was conducted on 10/7/2014, and the test report was submitted on 10/30/2014. The test was conducted at EUs 094 and 095. The CO results were 7.97 ppm and 6.93 ppm respectively}
- C.14 **Initial Compliance Demonstration:** The permittee, complying with the requirement to reduce CO emissions and using oxidation catalyst, shall demonstrate the initial compliance as specified below:

When complying with CO reduction efficiency and using oxidation catalyst and using a CPMS.	
(a)	The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and
(b)	The permittee installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in Condition C.11 of this Subsection ; and
(c)	The permittee recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test
When complying with the requirement to limit concentration of CO, using oxidation catalyst, and using a CPMS	
(a)	The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and
(b)	The permittee installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in Condition C.11 of this Subsection ; and
(c)	The permittee recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.

[40 CFR 63.6630(a) and Table 5 of 40 CFR 63 Subpart ZZZZ]

- C.15 **Initial Compliance Testing – Establishing Operating Limitations:** During the initial performance test as specified in **Condition C.14 of this Subsection**, the permittee shall establish the following operating limitations.
- (a) Pressure drop across the catalyst; and
 - (b) maintain the temperature of the RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.

[40 CFR 63.6630(b)]

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- C.16** Initial Compliance Testing – Notification of Compliance Status: The permittee shall submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in 40 CFR 63.6645. **[40 CFR 63.6630(c)]**
- C.17** NOx Emissions Compliance Test Method: EPA Method 7 shall be used to determine compliance with the emission-limiting standard for nitrogen oxides. See **Appendix TR** for applicable Test Methods and Procedures. **[Rule 62-296.570(4)(a)3., F.A.C.]**
- C.18** NOx Emissions Testing Frequency: The permittee shall conduct annual emission testing for each engine operating on oil for 400 hours or more during each federal fiscal year (October 1- September 30). Annual compliance testing, while firing oil is unnecessary, for units that operate on oil for less than 400 hours in the current federal fiscal year.
[Rule 62-296.570(4)(a)3., F.A.C.]
- C.19** Subsequent Performance Test: The permittee shall conduct subsequent performance tests as specified in **Condition C.4 of this Subsection** every 8,760 hours or 3 years, whichever comes first. Per FDEP's approval, the permittee shall test two different engines during each subsequent performance test until all fourteen engines have been tested. **[40 CFR 63.6615, Table 3 of 40 CFR 63 Subpart ZZZZ]**
- C.20** Performance test for CO reduction efficiency: The permittee must conduct the performance test as specified below, to comply with the requirement to reduce CO emissions.
- Measurements to Determine O₂.* The owner or operator must measure the O₂ at the inlet and outlet of the control device using a portable CO and O₂ analyzer according to the ASTM D6522-00 (2005) (incorporated by reference, see 40 CFR 63.14) requirements. Measurements to determine O₂ must be made at the same time as the measurements for CO concentration. Methods 3, 3A, or 3B of 40 CFR 60 Appendix A, may also be used to determine O₂ concentrations.
 - Measurements to Determine CO.* The owner or operator must measure the CO at the inlet and the outlet of the control device using a portable CO and O₂ analyzer according to the ASTM D6522-00 (2005) (incorporated by reference, see 40 CFR 63.14) or Method 10 of 40 CFR 60 Appendix A requirements. The CO concentration must be at 15 percent O₂, dry basis. Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03 may also be used.
[40 CFR 63.6620 (a) and (b), Table 4 of 40 CFR 63 Subpart ZZZZ]
- C.21** Performance test for CO emissions limit: The permit must conduct the performance test as specified below, to comply with the requirements to limit the concentration of CO in the RICE exhaust.
- Select the sampling port location and the number of traverse points according to Method 1 of 1A of 40 CFR Part 60, appendix A 40 CFR 63.7(d)(1)(i). The sampling site must be located at the outlet of the oxidation catalyst.
 - Determine the O₂ concentration of the RICE exhaust at the sampling port location, according to Method 3 of 3A or 3B of 40 CFR 60 Appendix A or ASTM Method D6522-00. Measurements to determine O₂ concentration must be made at the same time and location as the measurements for CO concentration.
 - Measure moisture content of the stationary RICE exhaust at the sampling port location, according to Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03. Measurements to determine moisture content must be made at the same time and location as the measurements for CO concentration.
 - Measure CO at the exhaust of the RICE, according to Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522-00 (2005), Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03. CO concentration must be at 15 percent O₂, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
[40 CFR 63.6620 (a) and (b), Table 4 of 40 CFR 63 Subpart ZZZZ]
- C.22** The permittee must conduct three separate test runs for each performance test required, as specified in 40 CFR 63.7(e)(3). Each test run must last at least 1 hour. **[40 CFR 63.6620(d)]**
- C.23** Performance Test Procedure: The permittee shall use the following performance test procedures. **[40 CFR 63.6620 (e)]:**
- The Permittee must use Equation 1 (below) to determine compliance with the percent reduction requirement **[40 CFR 63.6620(e)](1) & (2)]:**

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (\text{Eq. 1})$$

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Where:

C_i = concentration of carbon monoxide (CO) at the control device inlet,

C_o = concentration of CO at the control device outlet, and

R = percent reduction of CO emissions

- (2) The Permittee must normalize the carbon monoxide (CO) concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO₂). If pollutant concentrations are to be corrected to 15 percent oxygen and CO₂ concentration is measured in lieu of oxygen concentration measurement, a CO₂ correction factor is needed. Calculate the CO₂ correction factor as described below **[40 CFR 63.6620 (e)(2)(i) through (iii)]**

- (i) Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, section 5.2, and the following equation:

$$F_o = \frac{0.209 F_d}{F_c} \quad (\text{Eq. 2})$$

Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO₂ volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm³/J (dscf/10⁶ Btu).

F_c = Ratio of the volume of CO₂ produced to the gross calorific value of the fuel from Method 19, dsm³/J (dscf/10⁶ Btu).

- (ii) Calculate the CO₂ correction factor for correcting measurement data to 15 percent oxygen, as follows:

$$X_{co_2} = \frac{5.9}{F_o} \quad (\text{Eq. 3})$$

Where:

X_{co_2} = CO₂ correction factor, percent.

5.9 = 20.9 percent O₂–15 percent O₂, the defined O₂ correction value, percent.

- (iii) Calculate the NO_x and SO₂ gas concentrations adjusted to 15 percent O₂ using CO₂ as follows:

$$C_{adj} = C_d \frac{X_{co_2}}{\%CO_2} \quad (\text{Eq. 4})$$

Where:

%CO₂ = Measured CO₂ concentration measured, dry basis, percent.

[40 CFR 63.6620(e)]

C.24 **Initial performance test report:** The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report:

- (a) the engine model number,
- (b) the engine manufacturer,
- (c) the year of purchase,

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- (d) the manufacturer's site-rated brake horsepower,
- (e) the ambient temperature, pressure, and humidity during the performance test, and
- (f) All assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained.
- (g) If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[40 CFR 63.6620 (i)]**Continuous compliance requirements:**

C.25 Collection and Monitoring Data: The permittee must monitor and collect data according to 40 CFR 63 Subpart ZZZZ.

- (a) Except for monitor malfunctions, associated repairs, and required performance evaluations and required quality assurance or control activities, the permittee must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.
- (b) The permittee may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. The permittee must, however, use all the valid data collected during all other periods.

[40 CFR 63.6635(a), (b), and (c)]

C.26 Continuous Compliance Demonstration: The owner or operator must demonstrate continuous compliance with each emission limitation, operating limitation and other requirements specified in Tables 2b and Table 2d of 40 CFR 63 Subpart ZZZZ

(Conditions C.4 and C.5 of this Subsection) by the following methods:

- (a) Conducting the performance tests every 8,760 hours or 3 years, whichever comes first, for CO to demonstrate that the required CO, percent reduction is achieved or that emissions remain at or below the CO concentration limit; and
- (b) Collecting the catalyst inlet temperature data according to 40 CFR 63.6625(b); and
- (c) Reducing these data to 4-hour rolling averages; and
- (d) Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
- (e) Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.

[40 CFR 63.6640(a), and Table 6 of 40 CFR 63 Subpart ZZZZ]

C.27 The permittee must report each instance in which the permittee did not meet each emission limitation or operating limitation in **Conditions C.4 and C.5 of this Subsection**. These instances are deviations from the emission and operating limitations. These deviations must be reported according to the requirements in 40 CFR 63.6650.

If catalyst is changed, the permittee must reestablish the values of the operating parameters measured during the initial performance test. When reestablishing the values of the operating parameters, the permittee must also conduct a performance test to demonstrate required emission limitation applicable to the stationary RICE is met.

[40 CFR 63.6640(b)]

C.28 The permittee must also report each instance in which the applicable requirements of Table 8 of 40 CFR 63 Subpart ZZZZ are not met. **[40 CFR 63.6640(e)]**

Notification Requirements:

C.29 Notification Requirements: The owner or operator must submit all of the notifications in 40 CFR 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply by the dates specified. **[40 CFR 63.6645(a)]**

C.30 Notification of Intent to Conduct a Performance Test. The permittee must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in 40 CFR 63.7(b)(1). **[40 CFR 63.6645(g)]**

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C.31 Notification of Compliance Status: When the initial compliance demonstration is conducted as specified in Tables 4 and 5 of 40 CFR 63 Subpart ZZZZ (**Conditions C.14, C.20 and C.21 of this Subsection**), the permittee must submit a Notification of Compliance Status according to Rule 40 CFR 63.9(h)(2)(ii).

- (a) For each compliance demonstration required in Table 5 of 40 CFR 63, Subpart ZZZZ that does not include a performance test, the owner or operator must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.
- (b) For each compliance demonstration required in Table 5 of 40 CFR 63, Subpart ZZZZ that includes a performance test conducted according to the requirements in Table 3 of 40 CFR 63, Subpart ZZZZ, the owner or operator must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to 40 CFR 63.10(d)(2).

[40 CFR 63.6645(h)]

Reporting Requirements:

C.32 Reporting Requirements: The Permittee shall submit Annual and Semiannual Compliance Report, **as required in Table 7 of 40 CFR Part 63 Subpart ZZZZ**, containing the following information:

- (a) When there were no deviations: If there are no deviations from any emission limitations or operating limitations that apply to the emissions units, the report shall contain a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CPMS was out-of-control, as specified in 40 CFR 63.8(c)(7), the report shall contain a statement that there were not periods during which the CPMS was out-of-control during the reporting period.
- (b) When there were deviations: If the emissions units had a deviation from any emission limitation or operating limitation during the reporting period, the report shall contain following information:
 - (1) Company name and address.
 - (2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.
 - (3) Date of report and beginning and ending dates of the reporting period.
 - (4) If there was a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.6605(b), including actions taken to correct a malfunction.

[40 CFR 63.6650(a) and (c) , Table 7 of 40 CFR 63 Subpart ZZZZ]

C.33 Semiannual Compliance Report: The permittee shall submit each report required in **Condition C.32 of this Subsection** by the dates as specified below:

- (a) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date as specified in **Condition D.7 of this Subsection** 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.
 - (b) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date as specified in **Condition C.7 of this Subsection**.
 - (c) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.
 - (d) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.
- [40 CFR 63.6650(b)(1) – (4)]**

C.34 Annual Reports: The permittee shall submit each annual compliance report required in **Condition C.32 of this Subsection** by the dates as specified below:

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

- (a) The first annual Compliance report must cover the period beginning on the compliance date that is specified in 40 CFR 63.6595 and ending on December 31.
- (b) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified in 40 CFR 63.6595.
- (c) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.
- (d) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

[40 CFR 63.6650(b)(6)-(9)]

C.35 For each deviation from an emission or operating limitation occurring for a stationary RICE where the permittee is using a CMS to comply with the emission and operating limitations in this subpart, the permittee must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

- (a) Company name and address.
- (b) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.
- (c) Date of report and beginning and ending dates of the reporting period.
- (d) If there was a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.6605(b), including actions taken to correct a malfunction
- (e) The date and time that each malfunction started and stopped.
- (f) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.
- (g) The date, time, and duration that each CMS was out-of-control, including the information in § 63.8(c)(8).
- (h) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.
- (i) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.
- (j) 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.
- (k) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.
- (l) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.
- (m) A brief description of the stationary RICE.
- (n) A brief description of the CMS.
- (o) The date of the latest CMS certification or audit.
- (p) A description of any changes in CMS, processes, or controls since the last reporting period.

[40 CFR 63.6650(e), and 40 CFR 63.6650(c)(1) – (4)]

C.36 Title V Semi-Annual Report: The permittee must report all deviations as defined in this permit in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If the permittee submits a Compliance report pursuant to Table 7 40 CFR 63 Subpart ZZZZ along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

[40 CFR 63.6656(f)]

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Recordkeeping Requirements**C.37** The permittee must keep the records as specified below.

- (a) A copy of each notification and report that the permittee submitted to comply with this permit, including all documentation supporting any Initial Notification or Notification of Compliance Status that the permittee submitted, according to the requirement in 40 CFR 63.10(b)(2)(xiv).
- (b) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.
- (c) Records of performance tests and performance evaluations as required in 40 CFR 63.10(b)(2)(viii).
- (d) Records of all required maintenance performed on the air pollution control and monitoring equipment.
- (e) Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

For each CPMS, the permittee must maintain the following records.

- (a) Records described in 40 CFR 63.10(b)(2)(vi) through (xi).
- (b) Previous (i.e., superseded) versions of the performance evaluation plan as required in 40 CFR 63.8(d)(3).
- (c) Requests for alternatives to the relative accuracy test for CPMS as required in 40 CFR 63.8(f)(6)(i), if applicable.

[40 CFR 63.6655(a) and (b)]

C.38 The permittee must keep the records required in Table 6 of 40 CFR 63 Subpart ZZZZ (**Condition C.26 of this Subsection**) to show continuous compliance with each emission or operating limitation that applies to the emissions units.**C.39** The permittee must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in § 63.6640(f)(2)(ii) or (iii) or § 63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

[40 CFR 63.6655(f)]

C.40 Duration and Form of the Records: The records must be in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1).

As specified in § 63.10(b)(1), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

The permittee must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1).

[40 CFR 63.6660]

Operation of the Emissions Units as Emergency Engines till May 2, 2014

{Permitting Note: These conditions are removed since they were applicable only till May 2, 2014}

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

Subsection D: *This subsection addresses the following emissions units:*

EU No.	Status	Brief Description
070	R	Aerospace hand-wiping operations: <u>SCC # 4-01-003-98:</u> gallons of solvent consumed

{Permitting Note: When the facility ceased the jet engine manufacturing in 2000, the permittee requested to change the status of this emissions unit to 'unregulated' from 'regulated,' since the regulations of 40 CFR Part 63 Subpart GG no longer applied. This emissions unit was considered 'unregulated' since the Title V permit renewal 0990021-013-AV issued in 2011. However, the permittee continued to submit the semi-annual reports required by 40 CFR Part 63 Subpart GG. Recently, the permittee determined through internal review, that the emissions units 070, 071 and 073 are subject to 40 CFR 63 Subpart GG since these emissions units support the jet engine manufacturing, although the engines are not assembled on site. Although, the facility's status is changed from 'major' to 'synthetic minor' for hazardous air pollutants, the regulations of 40 CFR 63 Subpart GG still apply based on the NESHAP policy of 'once in always in.' This permit revision adds the applicability of 40 CFR 63 Subpart GG to emissions units 070, 071 and 073.}

Applicability

D.1 **Applicability:** The regulations of 40 CFR Part 63 Subpart GG "National Emission Standards for Aerospace Manufacturing and Rework Facilities" (See Appendix 40 CFR 63 GG) apply to all hand-wipe cleaning operations at this facility except the following:

- (a) Hand-wipe cleaning operations that use only cleaners containing HAP and VOC at a concentration less than 0.1% for carcinogens or 1.0% for noncarcinogens, as determined from manufacturer's representations.

[40 CFR 63.744(f)]

D.2 **Exempt Cleaning Operations:** The following cleaning operations are exempt from the regulations of 40 CFR Part 63 Subpart GG:

- (a) Cleaning during the manufacture, assembly, installation, maintenance, or testing of components of breathing oxygen systems that are exposed to the breathing oxygen;
- (b) 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);
- (c) Cleaning and surface activation prior to adhesive bonding;
- (d) Cleaning of electronic parts and assemblies containing electronic parts;
- (e) 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;
- (f) Cleaning of fuel cells, fuel tanks, and confined spaces;
- (g) Surface cleaning of solar cells, coated optics, and thermal control surfaces;
- (h) Cleaning during fabrication, assembly, installation, and maintenance of upholstery, curtains, carpet, and other textile materials used in the interior of the aircraft;
- (i) 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;
- (j) Cleaning of aircraft transparencies, polycarbonate or glass substrates; and
- (k) Cleaning and cleaning solvent usage associated with research and development, quality control, and laboratory testing.
- (l) Cleaning operations, using nonflammable 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
- (m) 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.

[40 CFR 63.744(e)]

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

Control Requirements

D.3 General Housekeeping Measures: The permittee shall comply with the following general housekeeping measures:

- (a) Place cleaning solvent-laden cloth, paper, or any other absorbent applicators used for cleaning, in bags or other closed containers upon completing their use. 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.
- (b) Store fresh and spent cleaning solvents in closed containers (except semi-aqueous solvent cleaners).
- (c) Minimizes spills when handling and transferring fresh or spent cleaning solvents to or from enclosed systems, vats, waste containers, and other cleaning operation equipment.

[40 CFR 63.744(a)]

D.4 Hand-Wipe Cleaning Operations: The permittee shall comply with the following conditions for all hand-wipe operations:

- (a) All hand-wipe shall meet one of composition requirements specified in below table.

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 ₂ O and 68°F). These cleaners also contain no HAP.

- (b) All hand-wipe solvents shall have a composite vapor pressure of 45 mm Hg (24.1 in. H₂O) or less at 20°C (68°F).

[40 CFR 63.744(b)(1) & (2)]

Compliance Demonstration:

D.5 Compliance Demonstration: An affected hand-wipe cleaning operation shall be considered in compliance when all hand-wipe cleaning solvents meet either the composition requirements or the vapor pressure requirement specified in **condition D.4** of this Subsection.

[40 CFR 63.749(c)(1)]

Test Methods and Procedures

D.6 Composition determination: Compliance with the hand-wipe cleaning solvent approved composition list specified in 40 CFR 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.

[40 CFR 63.750(a)]

D.7 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:

- (a) 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.
- (b) 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

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

with ASTM E 260–91 (incorporated by reference as specified in § 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:

$$PP_c = \frac{\sum_{i=1}^n \frac{(W_i)(VP_i)/MW_i}{\frac{W_w}{MW_w} + \sum_{e=1}^n \frac{W_e}{MW_e} + \sum_{i=1}^n \frac{W_i}{MW_i}}}$$

where:

- W_i = Weight of the "i"th VOC compound, grams.
- W_w = Weight of water, grams.
- W_e = Weight of non-HAP, non VOC 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.

[40 CFR 63.750 (b)]

Record Keeping Requirements

- D.8 The permittee shall record the name, vapor pressure, and documentation showing the organic HAP constituents of each cleaning solvent used for affected cleaning operations at the facility.
- D.9 For each cleaning solvent used in hand-wipe cleaning operations that complies with the composition requirements specified in **condition D.4**, following information shall be recorded.
 - (a) The name of each cleaning solvent used,
 - (b) All data and calculations that demonstrate that the cleaning solvent complies with one of the composition requirements, and
 - (c) Annual records of the volume of each solvent used, as determined from the facility purchase or usage records.
- D.10 For each cleaning solvent used in hand-wipe cleaning operations that does not comply with the composition requirements in **condition D.4(a)** of this Subsection but does comply with the vapor pressure requirement in **condition D.4(b)** of this Subsection:
 - (a) The name of each cleaning solvent used;
 - (b) The composite vapor pressure of each cleaning solvent used;
 - (c) All vapor pressure test results, if appropriate, data, and calculations used to determine the composite vapor pressure of each cleaning solvent; and
 - (d) The amount (in gallons) of each cleaning solvent used each month at each operation.
- D.11 For each cleaning solvent used for the exempt hand-wipe cleaning operations specified in **condition D.2** of this Subsection that does not conform to the vapor pressure or composition requirements of **condition D.4** of this Subsection:
 - (a) The identity and amount (in gallons) of each cleaning solvent used each month at each operation; and
 - (b) A list of the processes set forth **condition D.2** of this Subsection to which the cleaning operation applies

[40 CFR 63.752(b)(1), (2),(3),& (4)]

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

Reporting Requirements

D.12 Semiannual Reports: The permittee shall submit semiannual reports that include the following information:

- (a) Any instance where a noncompliant cleaning solvent is used for a non-exempt hand-wipe cleaning operation;
- (b) 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 **condition D.4(a)** of this Subsection; and
- (c) 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.
- (d) These reports shall be submitted as a part of the facility-wide "Semiannual Monitoring Reports" due before March 1st and September 1st of each year.

[40 CFR 63.753(b)]

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

Subsection E: This subsection addresses the following activities as a single emissions unit:

EU No.	Status	Brief Description
071	R	Aerospace spray gun cleaning operations subject to NESHAP Subpart GG. <u>SCC # 4-02-999-98:</u> gallons of solvent consumed

{Permitting Note: When the facility ceased the jet engine manufacturing in 2000, the permittee requested to change the status of this emissions unit to 'unregulated' from 'regulated,' since the regulations of 40 CFR Part 63 Subpart GG no longer applied. This emissions unit was considered 'unregulated' since the Title V permit renewal 0990021-013-AV issued in 2011. However, the permittee continued to submit the semi-annual reports required by 40 CFR Part 63 Subpart GG. Recently, the permittee determined through internal review, that the emissions units 070, 071 and 073 are subject to 40 CFR 63 Subpart GG since these emissions units support the jet engine manufacturing, although the engines are not assembled on site. Although, the facility's status is changed from 'major' to 'synthetic minor' for hazardous air pollutants, the regulations of 40 CFR 63 Subpart GG still apply based on the NESHAP policy of 'once in always in.' This permit revision adds the applicability of 40 CFR 63 Subpart GG to emissions units 070, 071 and 073.}

Applicability

E.1 Exception: This subsection applies to each spray gun cleaning operation associated with aerospace manufacturing and rework at this facility except the following: spray gun cleaning operations that use only containing HAP and VOC at a concentration less than 0.1% for carcinogens or 1.0% for noncarcinogens, as determined from manufacturer's representations.

This emissions unit is subject to the regulations of 40 CFR Part 63 Subpart GG "National Emission Standards for Aerospace Manufacturing and Rework Facilities" (see Appendix GG).

[40 CFR 63.744(c) and 40 CFR 63.741(f)]

Control Requirements

E.2 General Housekeeping Measures: The permittee shall comply with the following general housekeeping measures:

- Place cleaning solvent-laden cloth, paper, or any other absorbent applicators used for cleaning, in bags or other closed containers upon completing their use. 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.
- Store fresh and spent cleaning solvents in closed containers (except semi-aqueous solvent cleaners).
- Minimizes spills when handling and transferring fresh or spent cleaning solvents to or from enclosed systems, vats, waste containers, and other cleaning operation equipment.

[40 CFR 63.744(a)]

E.3 Spray Gun Cleaning Operations: The permittee shall use one of the following methods to clean spray guns associated with the aerospace manufacturing and rework operations:

- 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. Any leak in the enclosed system shall be repaired 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; or
[40 CFR 63.744(c)(1)]
- 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; or
[40 CFR 63.744(c)(2)]
- 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; or
[40 CFR 63.744(c)(3)]

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

- (d) *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 solvent emissions.
[40 CFR 63.749(c)(2) and 40 CFR 63.744(c)(4)]

Monitoring Requirements

- E.4 Enclosed Systems: The permittee 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.

[40 CFR 63.751(a)]

Record Keeping Requirements

- E.5 Leaks: For each leak identified from an enclosed spray gun cleaner, the permittee shall record the following information:

- (a) Identification and location of spray gun cleaner;
- (b) Date leak was discovered; and
- (c) Date leak was repaired.

[40 CFR 63.752(b)(5)]

Reporting Requirements

- E.6 Semiannual Reports: The permittee shall submit semiannual reports of the compliance status that identify:

- (a) Any instance where a noncompliant spray gun cleaning method is used;
- (b) Any instance where a leaking enclosed spray gun cleaner remains unrepaired and in use for more than 15 days; and
- (c) 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.
- (d) These reports shall be submitted as a part of the facility-wide "Semiannual Monitoring Reports" due before March 1st and September 1st of each year.

[40 CFR 63.753(b)]

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

Subsection F: This subsection addresses the following activities as a single emissions unit:

EU No.	Status	Brief Description
073	R	Aerospace primer and topcoat applications subject to 40 CFR Part 63 Subpart GG <u>SCC # 4-02-001-10:</u> gallons used

{Permitting Note: When the facility ceased the jet engine manufacturing in 2000, the permittee requested to change the status of this emissions unit to 'unregulated' from 'regulated,' since the regulations of 40 CFR Part 63 Subpart GG no longer applied. This emissions unit was considered 'unregulated' since the Title V permit renewal 0990021-013-AV issued in 2011. However, the permittee continued to submit the semi-annual reports required by 40 CFR Part 63 Subpart GG. Recently, the permittee determined through internal review, that the emissions units 070, 071 and 073 are subject to 40 CFR 63 Subpart GG since these emissions units support the jet engine manufacturing, although the engines are not assembled on site. Although, the facility's status is changed from 'major' to 'synthetic minor' for hazardous air pollutants, the regulations of 40 CFR 63 Subpart GG still apply based on the NESHAP policy of 'once in always in.' This permit revision adds the applicability of 40 CFR 63 Subpart GG to emissions units 070, 071 and 073.}

Applicability

- F.1 **General Applicability:** This emissions unit is subject to the regulations of 40 CFR Part 63 Subpart GG "National Emission Standards for Aerospace Manufacturing and Rework Facilities" (see Appendix GG).
[40 CFR 63.741(a)]
- F.2 **Affected Sources:** The affected primer and topcoat application operations to which the provisions of 40 CFR Part 63 Subpart GG apply are specified below. 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 that the activity is not regulated under this subpart.
- (a) For organic HAP or VOC emissions, each primer application operation, which is the total of all primer applications at the facility.
 - (b) For organic HAP or VOC emissions, each topcoat application operation, which is the total of all topcoat applications at the facility.
 - (c) For inorganic HAP emissions, each spray booth or hangar that contains a regulated primer or topcoat application subject to the aerospace NESHAP, Subpart GG.
- [40 CFR 63.741(c)]**
- F.3 **Exempt Activities:** 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 top coating of completed assemblies), manufacture of aircraft transparencies, and wastewater operations at aerospace facilities. These requirements also do not apply to parts and assemblies not critical to the vehicle's structural integrity or flight performance.
- [40 CFR 63.741(f)]**
- F.4 **Low Volume Coating Exemption:** The requirements for primers and topcoats 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 liters (50 gallons), and the combined annual total of all such primers and topcoats used at a facility does not exceed 757 liters (200 gallons). Primers and topcoats exempted as "specialty coatings" are not included in the 50 and 200 gallon limits. Chemical milling maskants exempted under 40 CFR 63.747(c)(3) are also not included in these limits.
- [40 CFR 63.741(g)]**
- F.5 **Space Vehicle Exemption:** 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 40 CFR 63.746.
- [40 CFR 63.741(h)]**

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

- F.6 Waterborne Coating Exemptions: Any waterborne coating for which the manufacturer's supplied data demonstrates 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 40 CFR 63.745(c) and 40 CFR 63.747(c), is exempt from the following requirements of this subpart: 40 CFR 63.745(d)-(e), 63.747(d)-(e), 63.749(d) and (h), 63.750(c)-(h) and (k)-(m), 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.

[40 CFR 63.741(i)]

- F.7 Antique Aerospace Vehicle Exemption: This subpart does not apply to rework operations performed on antique aerospace vehicles or components.

[40 CFR 63.741(j)]**Organic HAP and VOC Emission Limiting Standards**

- F.8 Spills: The permittee 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.

[40 CFR 63.745(b)]

- F.9 Uncontrolled Coatings - Organic HAP and VOC Content Levels: The permittee shall comply with the following organic HAP and VOC content limits:

- (a) Organic HAP emissions from primers shall be limited to an organic HAP content level of no more than 350 grams per liter (2.9 pounds per gallon) of primer, less water, as applied.
- (b) VOC emissions from primers shall be limited to an VOC content level of no more than 350 grams per liter (2.9 pounds per gallon) of primer, less water and exempt solvents, as applied.
- (c) Organic HAP emissions from topcoats shall be limited to an organic HAP content level of no more than 420 grams per liter (3.5 pounds per gallon) of coating, less water, as applied. Organic HAP emissions from self-priming topcoats shall be limited to an organic HAP content level of no more than 420 grams per liter (3.5 pounds per gallon) of self-priming topcoat, less water, as applied.
- (d) VOC emissions from topcoats shall be limited to a VOC content level of no more than 420 grams per liter (3.5 pounds per gallon) of coating, less water and exempt solvents, as applied. VOC emissions from self-priming topcoats shall be limited to a VOC content level of no more than 420 grams per liter (3.5 pounds per gallon) of self-priming topcoat, less water and exempt solvents, as applied.

[40 CFR 63.745(c)(1) – (4)]

- F.10 Compliance Method: Compliance with the organic HAP and VOC content limits specified in this subsection shall be accomplished by using primers and topcoats (including self-priming topcoats) with HAP and VOC content levels equal to or less than the limits specified. Compliance using the averaging provisions described in 40 CFR 63.743(d) would require a revision of this permit.

[40 CFR 63.745(e), 40 CFR 63.749(d) and 40 CFR 63.745(e)]

- F.11 Application Equipment:

- (a) Except for the exempt operations listed in **specific condition F.11(b)** of this subsection, all primers and topcoats (including self-priming topcoats) shall be applied using one or more of the application techniques:
 - (1) Flow/curtain coat application;
 - (2) Dip coat application;
 - (3) Roll coating;
 - (4) Brush coating;
 - (5) Cotton-tipped swab application;
 - (6) Electrodeposition (dip) coating;

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

- (7) High volume low pressure (HVLP) spraying;
- (8) Electrostatic spray application; or
- (9) Other coating application methods that achieve emission reductions equivalent to HVLP or electrostatic spray application methods, as determined according to the requirements in 40 CFR 63.750(i).

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 all times. Equipment modified by the facility shall maintain a transfer efficiency equivalent to HVLP and electrostatic spray application techniques.

[40 CFR 63.749(d) and 40 CFR 63.745(f)(1) and (2)]

- (b) The following situations are exempt from the above requirements for application equipment:
 - (1) Any situation that normally requires the use of an airbrush or an extension on the spray gun to properly reach limited access spaces;
 - (2) 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 **specific condition F.11(a)** of this subsection;
 - (3) 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 **specific condition F.11(a)** of this subsection;
 - (4) The use of airbrush application methods for stenciling, lettering, and other identification markings;
 - (5) The use of hand-held spray can application methods; and
 - (6) Touch-up and repair operations.

[40 CFR 63.745(f)(3)]**Inorganic HAP Emission Limiting Standards**

F.12 Applicability: Each primer or topcoat application operation that spray applies coatings containing inorganic HAP to aerospace parts or components are subject to the following control requirements, except the following activities:

- (a) Touch-up of scratched surfaces or damaged paint;
- (b) Hole daubing for fasteners;
- (c) Touch-up of trimmed edges;
- (d) Coating prior to joining dissimilar metal components;
- (e) Stencil operations performed by brush or air brush;
- (f) Section joining;
- (g) Touch-up of bushings and other similar parts;
- (h) Sealant detackifying;
- (i) 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
- (j) The use of hand-held spray can application methods.

[40 CFR 63.745(g) and (g)(4)]

F.13 Capture: 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.

[40 CFR 63.745(g)(1)]

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F.14 Control Equipment: For coating application operations containing inorganic HAP, the permittee shall employ one of the following control methods:

- (a) 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
[40 CFR 63.745(g)(2)(i)(B)]
- (b) Before exhausting it to the atmosphere, pass the air stream through a dry particulate filter system certified using the methods described in 40 CFR 63.750(o) to meet or exceed the efficiency data points in Tables 1 and 2 of 40 CFR 63.745 (see below):

TABLE 1 of 40 CFR 63.745

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 of 40 CFR 63.745

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

Dry particulate filters must be certified by the filter manufacturer, filter distributor, paint booth supplier, and/or the permittee using EPA Method 319 in Appendix A of 40 CFR 63, Subpart A to meet or exceed the efficiency data points found in the tables above.

[40 CFR 63.745(g)(2)(i)(A) and 40 CFR 63.750(o)]

- (c) New Construction/Modification: The installation of new, or modification of existing, coating application booths subject to the inorganic HAP emissions limiting standards will require more stringent controls. The permittee shall obtain any required air pollution construction permits for the installation of new or modified equipment as well as revising this Title V operation permit. **[40 CFR 63.745(g)(2)(iii)]**

Monitoring Requirements

F.15 Organic HAP and VOC Content Levels - Primer and Topcoat Application Operations: 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.

[40 CFR 63.749(d)(1)]

F.16 Dry Particulate Filtration Systems: If a dry particulate filter system is used, the permittee shall meet the following requirements:

- (a) Maintain the system in good working order;
- (b) Install a differential pressure gauge across the filter banks;
- (c) When the booth is in use, continuously monitor the pressure drop across the filter and read and record the pressure drop once per shift; and
- (d) Shut down the operation immediately and take corrective actions when:

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- (1) The pressure drop exceeds or falls below the limits specified by the filter manufacturer or in locally prepared operating procedures; or
- (2) The maintenance procedures specified by the manufacturer or in a locally prepared maintenance plan have not been performed.

The operation shall not be resumed until the pressure drop is returned within the specified operating range or the preventive maintenance is performed.

[40 CFR 63.751(c)(1) and 40 CFR 63.745(g)(2)(iv), (3)]

- F.17 **Waterwash systems:** If a waterwash system is used, continuously monitor the water flow rate and read and record the water flow rate once per shift. The permittee shall shut down the operation immediately and take corrective actions when:
- (a) The water path in the waterwash system fails the visual continuity/flow characteristics check;
 - (b) The water flow rate recorded exceeds the limits specified by the booth manufacturer or in a locally prepared maintenance plan; or
 - (c) The maintenance procedures specified by the manufacturer or in a locally prepared maintenance plan have not been performed.

The operation shall not be resumed until the water path passes the visual continuity/flow characteristics check, the water flow rate is returned within the specified operating range, or the preventive maintenance is performed.

[40 CFR 63.751(c)(2) and 40 CFR 63.745(g)(2)(v) and (3)]

Test Methods and Procedures:

- F.18 **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 40 CFR 63.745(c) (**see condition F.9**) 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.
- (a) 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.
- (b) 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.
 - (c) 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:

$$V_{wi} = \frac{D_{ci} W_{wi}}{D_w} \quad Eq. 1$$

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.

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$$M_H = D_c W_H \quad \text{Eq. 2}$$

where:

M_H = mass (lb) of organic HAP in one gal of coating i.

D_c = density (lb of coating per gal of coating) of coating i.

W_H = weight fraction (expressed as a decimal) of organic HAP in coating i.

$$H_i = \frac{M_H}{(1 - V_{wi})} \quad \text{Eq. 3}$$

where:

H_i = mass of organic HAP emitted per volume of coating i (lb/gal) less water as applied.

M_H = mass (lb) of organic HAP in one gal of coating i.

V_{wi} = volume (gal) of water in one gal of coating i.

[40 CFR 63.750(c)(1) – (3)]

F.19 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 40 CFR 63.745 (c) without being averaged (**see condition F.9**), the following procedure shall be used to determine the mass of VOC emitted per volume of coating (less water and exempt solvents) as applied.

- (a) 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.

- (b) 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:

$$V_{wi} = \frac{D_c W_{wi}}{D_w} \quad \text{Eq. 5}$$

where:

V_{wi} = volume (gal) of water in one gal of coating i.

D_c = 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.

$$M_{Vi} = D_c W_{Vi} \quad \text{Eq. 6}$$

where:

M_{Vi} = mass (lb) of VOC in one gal of coating i.

D_c = density (lb of coating per gal of coating) of coating i.

W_{Vi} = weight fraction (expressed as a decimal) of VOC in coating i.

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

$$G_i = \frac{M_{vi}}{(1 - V_{wi}) - V_{xi}} \quad \text{Eq. 7}$$

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 .

- (c) (1) 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 upon the VOC content obtained using EPA Method 24.

[40 CFR 750(e)]

Record Keeping Requirements

F.20 Primer and Topcoat Application Operations - Organic HAP and VOC: The permittee shall record the following information, as appropriate.

- (a) The name and VOC content as received and as applied of each primer and topcoat used at the facility;
[40 CFR 63.752(c)(1)]
- (b) For uncontrolled primers and topcoats that meet the organic HAP and VOC content limits in 40 CFR 745(c)(1) through (c)(4) (**see condition F.9**) without averaging:
- (1) 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 40 CFR 63.750(c) and (e)) (**see conditions F.18 and F.19**);
 - (2) All data, calculations, and test results (including EPA Method 24 results) used in determining the values of H_i and G_i ;
 - (3) The volume (gallons) of each coating formulation within each coating category used each month.

[40 CFR 63.752(c)(2)]

- (c) 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:
- (1) Annual usage or purchase records of the total volume of each primer purchased; and
 - (2) 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.

[40 CFR 63.752(c)(3)]

F.21 Primer and topcoat application operations - inorganic HAP emissions:

- (a) For each dry particulate filter system or a HEPA filter system used to comply with the emissions limiting standards of this subsection, the permittee shall record the pressure drop across the operating system once each shift during which coating operations occur.

[40 CFR 63.752(d)(1)]

- (b) For each waterwash system used to comply with the emission limiting standards of this subsection, the permittee shall record the water flow rate through the operating system once each shift during which coating operations occur.

[40 CFR 63.752(d)(2)]

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

- (c) This log shall include the acceptable limits of pressure drop or water flow rate, as applicable, as specified by the filter or booth manufacturer or in locally prepared operating procedures.

[40 CFR 63.752(d)(3)]

F.22 Startup, Shutdown, and Malfunction Plans: The permittee shall prepare a plan for the startup, shutdown, and malfunction procedures for all control equipment used to comply with the inorganic HAP emissions limiting standards. These plans shall include:

- (a) In addition to the information required in 40 CFR 63.6, this plan shall also include the following provisions:
- (b) 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;
- (c) The plan shall include a systematic procedure for identifying malfunctions and for reporting them immediately to supervisory personnel; and
- (d) 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.

[40 CFR 63.743(b)]

Reporting Requirements

F.23 Semiannual Reports: The permittee shall submit a semiannual report summarizing the compliance status of each aerospace coating application booth during the 6 month reporting period. These reports shall be submitted as a part of the facility-wide "Semiannual Monitoring Reports" due before March 1st and September 1st of each year. The reports shall include:

- (a) 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 40 CFR 63.752(c)(2)(i) (**see condition F.20 (b)**), that exceeds the applicable organic HAP or VOC content limit specified in 40 63.745(c) (**see condition F.9**);
- (b) 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, or the water flow rate through a waterwash system, as appropriate, was outside the limit(s) specified by the filter or booth manufacturer or in locally prepared operating procedures;
- (c) 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,
- (d) Annual Reports: The permittee shall submit an annual report listing the number of times the pressure drop for each dry filter or the water flow rate for each waterwash system was outside the limits specified by the filter or booth manufacturer or in locally prepared operating procedures.

[40 CFR 63.753(c)(2)]

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

Subsection G: *This subsection addresses the following emissions units:*

EU No.	STATUS	BRIEF DESCRIPTION
077	R	Combustion Turbine Test Stands Natural Gas firing at the combustion turbine test stands using wet, dry, and low-NOx technologies. <u>SCC # 1-02-006-02</u> : MMCF Natural gas burned

EMISSION LIMITING AND PERFORMANCE STANDARDS

G.1 Permitted Capacity: The permittee shall not allow, cause, suffer or permit the operation of the modified test stands in excess of the following capacities without prior authorization from the Permitting Authority:

- (a) *Annual Natural Gas Usage*: The permittee is authorized to use a maximum of 992 million standard cubic feet of natural gas per year (12-month rolling total) based on the method of operation.
- (b) *Maximum Natural Gas Usage*: The permittee is authorized to fire a maximum of 0.310 million standard cubic feet of natural gas per hour while conducting R&D and QA & QC activities.

[Permit No. 0990021-005-AC]

G.2 Hours of Operation: The permittee is authorized to operate the combustion turbine test stands continuously within the limits specified in this permit. **[Permit No. 0990021-005-AC]**

G.3 Modes/Methods of Operation: The permittee shall not allow, cause, suffer or permit any change in the method(s) of operation resulting in emissions in excess of limits specified in **Specific Condition.G.4** of this subsection without prior authorization from the Permitting Authority. The authorized modes and methods of operation include the following:

- (a) *Research & Development Activities*: The permittee is authorized to conduct R&D activities related to the firing of natural gas in the combustion turbines using either wet, dry, or low-NOx control technologies.
- (b) *QA/QC Activities*: The permittee is authorized to conduct QA/QC activities related to the firing of natural gas in the combustion turbines using either wet, dry, or low-NOx control technologies.

[Permit No. 0990021-005-AC]

{Permitting Note: Prior authorization includes the issuance of construction, reconstruction, or modification permits or a determination by the Permitting Authority that the action is not subject to Rule 62-210.300(1), F.A.C. The limits of this permit do not apply to fuel oil firing.}

EMISSION LIMITATIONS AND STANDARDS

G.4 Emission Limitations: The permittee shall not allow, cause, suffer or permit emissions in excess of the following limitations without prior authorization from the Permitting Authority:

- (a) *Oxides of Nitrogen*: Emissions shall not exceed 39.9 tons per year (12-month rolling total).
- (b) *Carbon Monoxide*: Emissions shall not exceed 99.9 tons per year (12-month rolling total).

[Permit No. 0990021-005-AC]

COMPLIANCE MONITORING REQUIREMENTS

G.5 Emissions Inventory: The permittee shall maintain a current emissions inventory for each combustion turbine model tested. As a minimum, the emissions inventory shall be reviewed and revised semi-annually, as needed. The emissions inventory shall include the following information:

- (a) Combustion Turbine Model No.
- (b) Mode of Operation [R&D Activities or QA/QC Activities].
- (c) Method of Operation [Wet, Dry, or Low NOx]
- (d) Emissions data for NOx and CO based on load, water to fuel ratio (if applicable), ambient temperature, ambient pressure, and relative humidity.

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS**[Permit No. 0990021-005-AC]**

{Permitting note: When establishing the inventory, the permittee may use single worst-case emissions over the various loads for either a mode or method of operation. The complexity and detail of the inventory is at the option of the permittee provided sufficient background information is available for the Health Department to document the emissions inventory assumptions if required.}

- G.6 Quality Assurance Plan (QAP): The permittee shall prepare a written QAP for the Emissions Inventory requirement of **Condition.G.5** of this subsection. The QAP shall, as a minimum, require periodic sampling and analysis of the exhaust gas temperature and concentrations of oxygen, NO_x and CO. The QAP shall be implemented once actual NO_x or CO emissions equal or exceed eighty (80) percent of the 12-month rolling totals of **Condition.G.4** of this subsection. The permittee may elect to use a portable Combustion Gas Analyzer provided the unit is operated and maintained in accordance with the manufacturer's instructions or equivalent test method.

[Permit No. 0990021-005-AC]

- G.7 Continuous Emissions Monitoring System (CEMS): The permittee may in-lieu of the emissions inventory and QAP requirements of **Conditions G.5 and G.6 of this subsection**, elect to use a CEMS for monitoring and tracking emissions of NO_x and CO. The CEMS system shall be installed, operated, and maintained in accordance with the performance specifications of 40 CFR 60 Appendices B and F as adopted in Rule 62-297.520, F.A.C.

[Permit No. 0990021-005-AC]

{Permitting note: The applicant is being required to maintain an emissions inventory to ensure that the facility does not exceed the major source thresholds for PSD. The Health Department's intent is that the permittee will maintain a sufficient inventory to document actual emissions on a monthly basis in accordance with the most recent emissions data. It is not the Health Department's intent to back-calculate annual emissions in the event new data are made available. However, the Health Department is requiring the permittee to use the most recent factors to calculate test emissions once any revised factors are made available and comply with the emission limits of this permit.}

RECORDKEEPING AND REPORTING

- G.8 Operating Records: The permittee shall maintain the following records:

1. Test Number (Assigned by P&W).
2. Test Date (MM/DD/YY).
3. Test Mode (R&D or QA/QC).
4. Test Method (Wet, Dry, or Low-NO_x).
5. Ambient Conditions (Temperature, Pressure, and Relative Humidity) during each test.
6. Test data examples include Load (%), Duration at each Load Point (min.), Water to Fuel ratio, and test duration.
7. Emissions estimates for the Oxides of Nitrogen (NO_x) and Carbon Monoxide (CO) in pounds per test based on the Emissions Inventory Data of **Condition G.5 of this subsection**
8. Annual Emissions for NO_x and CO based on a 12-month rolling total calculated by the 20th of each month.

[Permit No. 0990021-005-AC]

{Permitting Note: The permittee may elect to use an electronic recordkeeping system in the format of either a spreadsheet or database provided records can be generated when requested by the Health Department.}

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

Sub Section H: This subsection of the permit addresses the following group of emissions units:

EU ID No	EMISSIONS UNIT DESCRIPTION
079	<p>Two GG4-9A JP-8 Fired Combustion Turbines</p> <p>These units are rated at 19.5 MW, the maximum operating load will be limited to 12.3 MW as requested by applicant. The maximum heat input has been estimated to be about 232.1 MMBTU/hr. The maximum hourly consumption of fuel is estimated to be 29 gallons per minute per engine.</p>

{Permitting Note: The potential emissions of NOx and CO from this emission unit are estimated to be 36.7 and 42.5 tons per year respectively. The project remains as a minor modification under PSD regulations since the project's maximum increase in criteria pollutant emissions for CO and NOx will remain below 100 and 40 tons per year, which are the PSD significant emission rates.}

OPERATING RESTRICTIONS

H.1 Permitted Capacity: The permittee shall not allow, cause, suffer or permit the operation of the combustion turbines in excess of the following capacities without prior authorization from the Permitting Authority:

- The maximum operating load for each of the combustion turbines is 12.3 MW. The turbines are allowed to burn only JP-8 fuel.

[Permit No: 0990021-008-AC]

H.2 Individual Hours of Operation: The permittee shall not operate any one gas turbine for more than 375 hours per consecutive 12 months, rolling total. This permit must be modified prior to operation beyond this limit. Engines operating more than 400 hours per year shall be tested for nitrogen oxide emissions. **[Permit No: 0990021-008-AC]**

{Permitting Note: The restriction on operating hours of each turbine limits the potential emissions of NOx and CO to 36.7 and 42.5 tons per year respectively}

H.3 Combined Hours of Operation: The combined hours of operation of both gas turbines shall not exceed 750 hours per consecutive 12 months, rolling total. **[Permit No: 0990021-008-AC]**

EMISSION LIMITING AND PERFORMANCE STANDARDS

H.4 RACT Standards for Nitrogen Oxides (NOx): Emissions of NOx from each gas turbine shall not exceed 0.90 lb/MMBtu while firing JP-8 fuel oil. As the turbines are substantially similar, compliance with this limit could be demonstrated by a stack test on one representative turbine unit within a facility. **[Rule 62-296.570(4)(b)5, F.A.C.]**

{Permitting Note: The facility conducted NOx emissions test on July 31, 2008, and demonstrated compliance with 0.90 lb/MMBtu at various load levels.}

COMPLIANCE ASSURANCE MONITORING

H.5 Emissions Inventory: The permittee shall maintain a current emissions inventory for each combustion turbine. As a minimum, the emissions inventory shall be reviewed and revised monthly, as needed. The emissions inventory shall include the following information:

- Combustion Turbine No.
- The hourly average operating load (psia),
- The hourly average heat input rate (mmbtu/hr)
- Monthly Hours of Operation.
- Monthly Fuel consumption [Gallons of JP-8]
- Monthly Heat Input [Million BTU/Month]
- Average Operating Load [MW] as determined by parametric monitoring (i.e. fuel consumption, assumed efficiency, rpm, etc.) based on a 30-day average.
- Emissions data for NOx and CO based on load, water to fuel ratio (if applicable), ambient temperature, ambient pressure, and relative humidity. **[Permit No: 0990021-008-AC]**

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

- H.6 Compliance with RACT Standards: Rule 62-296.570(4)(b)5, F.A.C. establishes a NOx emission limiting standard for gas turbines firing fuel oil at 0.90 lb/MMBTU. For units that do not use continuous emission monitors (CEMs), compliance with this emission limit shall be demonstrated through annual stack testing. Rule 62-296.570(4)(a)3, F.A.C. exempts oil-fired units from annual testing requirements if they operate on oil for less than 400 hours per year.

The permittee proposed to limit the hours of operation of each individual turbine to 375 hours per federal fiscal year (October 1- September 30), thus avoiding the need to conduct compliance stack testing on an annual basis. If the rolling 12-month hours of operations exceed 375 hours, the permittee shall notify the Health Department within 48 hours of the exceedance and conduct a compliance stack for NOx within 30 days of exceeding the 400-hour/yr. **[Rule 62-296.570(4)(a)3, F.A.C., and Permit No: 0990021-008-AC]**

- H.7 The permittee shall monitor hourly average operating load (psia) and hourly heat input rate (mmbtu/hr). The emission factors developed, during the stack test conducted on July 31, 2008, at each operating load (psia) shall be used in estimating the monthly NOx and CO emissions. The monthly emissions estimates are used in calculating the 12-month rolling emissions of NOx and CO. The yearly estimates of NOx and CO shall be below the PSD significant emission rates as specified in Chapter 62-212, F.A.C. **[Permit No: 0990021-008-AC]**

- H.8 Special Compliance Tests: When the Health Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a DEP rule or permit is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Health Department. **[Rule 62-297.310(7)(b), F.A.C.]**

REPORTING AND RECORDKEEPING REQUIREMENTS

- H.9 Monthly Emission Records: The permittee shall maintain monthly emission records as described in **Specific Condition H.5** of this subsection, on or before the 20th of each month, to summarize site-wide emissions of NOx and CO for the previous 12 months. These records shall include, as a minimum, the monthly emissions and the rolling 12-month total emissions for NOx and CO. These records shall be kept on site for a period of no less than five years and be made available to PBCHD representatives upon request. **[Permit No: 0990021-008-AC]**
- H.10 Excess Emissions Reporting: If excess emissions occur, the permittee shall notify the Health Department (PBCHD) within one (1) working day of the discovery of the excess emission occurrence. The notification shall include the following information: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. Within five (5) days following the initial notification, the owner or operator shall submit a report summarizing the incident to the PBCHD. The incident summary shall include all the information required in the initial notification plus any additional information regarding further actions taken to prevent future excess emissions from occurring. Neither of these notification requirements shall release the permittee from any liability for failure to comply with FDEP rules. **[Permit No: 0990021-008-AC]**

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

SUBSECTION I. This subsection of the permit addresses the following group of emissions units:

<i>EU ID No</i>	<i>STATUS</i>	<i>EMISSIONS UNIT DESCRIPTION</i>
081	R	<p><u>Spray Booth (PS-14-SIK):</u> Binks Model PFA-8-7-T-LH spray booth</p> <p>This booth controls particulate matter emissions with large, dry panel filters. Controlled emissions of particulate matter and uncontrolled emissions of volatile organic compounds are discharged at 50 feet above ground level at ambient temperature from a stack with a 2-foot diameter and a maximum flow rate of 7400 acfm.</p> <p><i>This emission unit was previously permitted as EU # 006 in Sikorsky's air permit – 0990185-004-AF.</i></p> <p><u>SCC# 4-02-001-10:</u> gallons of coating</p>
082	R	<p><u>Spray Booth (PS-16-SIK):</u> Binks auto spray booth</p> <p>This booth controls particulate matter emissions with large, dry panel filters; controlled emissions of particulate matter and uncontrolled emissions of volatile organic compounds are discharged at 50 feet above ground level at ambient temperature from two identical stacks each with a 5-foot diameter and a maximum flow rate of 27,000 acfm.</p> <p><i>This emission unit was previously permitted as EU # 008 in Sikorsky's air permit – 0990185-004-AF.</i></p> <p><u>SCC# 4-02-001-10:</u> gallons of coating</p>

{Permitting Note: These units were previously included in a separate air permit issued to Sikorsky Aircraft Corporation, Inc (0990185-001-AF). During the review of application for permit renewal for Pratt & Whitney, it was determined that permits for these two facilities will be combined in to one permit, with United Technologies Corporation as the permittee. Potential emissions of HAPs from EU 081 are 2.1 tons per year. Potential emissions of HAPs from EU 082 are 7.5 tons per year.}

The operation of the spray booths includes the following miscellaneous activities:

- *Cleaning operations (hand-wipe, spray gun cleaning, and flush cleaning)*
- *Depainting operations (media blasting, high intensity UV light blasting, and chemical stripping)*
- *Coating operations (primer, top coat, clear coat, and , and specialty coatings}*

{Spray Booth (PS-13-SIK) was removed from this permit according to the permittee's request, since this booth is no longer operational at the facility}

EMISSION LIMITING AND PERFORMANCE STANDARDS

- I.1 **Air Pollution Control Equipment:** In accordance with the manufacturer's recommendations, the permittee shall install, operate, and maintain the following control devices:
- (a) ***Emissions Unit # 081:*** A Binks Model PFA-8-7-T-LH spray booth (or equivalent) with large, dry panel filters, exhaust fan, ductwork, and stack to control particulate matter emissions from surface coating operations. This spray booth is identified by the facility as PS-14-SIK. **[Permit No. 0990021-020-AC]**
 - (b) ***Emissions Unit # 082:*** A Binks auto spray booth (or equivalent) with large, dry panel filters, exhaust fan, ductwork, and stack to control particulate matter emissions from surface coating operations. This spray booth is identified by the facility as PS-16-SIK. **[Permit No. 0990021-020-AC]**
- I.2 **Circumvention:** All air pollution control equipment shall be on line and function properly during surface coating operations. **[Rule 62-210.650, F.A.C., and Permit No. 0990021-020-AC]**
- I.3 **Hours of Operation:** There are no restrictions on the hours of operation for these emissions units (8760 hours per year). **[Permit No. 0990021-020-AC]**
- I.4 **Allowable Surface Coating:** These spray booths may be used to surface coat the exteriors of aircraft and refinish miscellaneous parts and support equipment. The permittee is prohibited from surface coating any newly manufactured metal parts from any production line without first applying for a modification of this permit. **[Permit No. 0990021-020-AC]**

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

{Permitting Note: The painting operations are not subject to VOC RACT limits in Rule 62-296.513, F.A.C. because either a: exterior aircraft are coated, which are exempt under Rule 62-296.513(b)(7), F.A.C., or b: coating of parts results in emissions less than 3 lb VOC/hour and 15 lb VOC/day, which is exempt under Rule 62-296.500(3), F.A.C.}

- I.5 Volatile Organic Compounds (VOCs): Emissions of volatile organic compounds (VOCs) from all cleaning, depainting, maskant, priming, and coating operations shall not exceed **2.1** tons from PS-14-SK, and **7.5** tons from PS-16-SIK; in any consecutive 12 months, rolling total. **[Applicant's request, and Permit No. 0990021-020-AC]**
- I.6 Hazardous Air Pollutants (HAPs): **Facility shall not exceed the limit of facility-wide hazardous air pollutants as specified in Section II Specific condition FW1. [Applicant's request and Permit No. 0990021-020-AC]**
- I.7 40 CFR 63 Subpart HHHHHH: These spray booths are subject to the regulations of 40 CFR Part 63 Subpart HHHHHH "National Emission Standard for Hazardous Air Pollutants for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources," which are included in Appendix HHHHHH. **[Permit No. 0990021-020-AC]**

COMPLIANCE MONITORING REQUIREMENTS

- I.8 HAP / VOC Content: The permittee shall maintain records at the facility of the content of volatile organic compounds (VOC) and hazardous air pollutants (HAP) in all raw materials used in the surface coating operations. The VOC and HAP of the raw materials shall be determined by Material Safety Data Sheets (MSDS) or engineering calculations. Equivalent methods may be used with prior written approval of the Health Department. **[Permit No. 0990021-020-AC]**
- I.9 Spray Booth Usage Logs: For each spray booth, the permittee shall maintain a written log of the usage of coatings, thinners, cleaning agents, and other solvent containing materials. For each use of a spray booth, the operator shall record the following information:
- Date
 - Identification of spray booth number (PS-14-SIK, or PS-16-SIK)
 - Type of job or job identification number
 - Name of coating, thinner, cleaning agent, or other solvent containing material used
 - Quantity of material used to the nearest tenth of a gallon
- At the end of each month, these log sheets shall be used to compile the Monthly Emissions Report. **[Permit No. 0990021-020-AC]**
- I.10 Monthly Emissions Report: The permittee shall be able to demonstrate compliance with the emissions limiting and performance standards of this Subsection on a monthly basis by compiling a Monthly Emissions Report. Prior to the 20th calendar day of each month, the permittee shall calculate and record the following information for the previous month of operation in a written report:
- Month of operation.
 - Type, VOC content, HAP content, and total monthly usage (to the nearest tenth of a gallon) of each material used during the month in the cleaning, depainting, maskant, and coating operations.
 - Calculated monthly emissions of VOC, each HAP, and combined total HAPs.
 - Calculated rolling 12-month total emissions of VOC, each HAP, and combined total HAPs.

The 12-month rolling total pollutant emission rate shall be the sum of the emissions calculated for the given month of operation and the emissions calculated for the previous consecutive 11 calendar months. Calculations must assume 100% of the VOCs and HAPs in the raw materials are emitted to the atmosphere. The actual format of the equations, the calculations, and the report are left to the discretion of the permittee and may be performed by a computer spreadsheet or database, provided the methodology and calculations are defined in the report.

The Monthly Emissions Reports are to be kept on site at the facility and made available to the Health Department upon request. In addition, these reports shall be used to complete the Annual Operating Report, *DEP Form No. 62-210.900(5)*, which is submitted to the Health Department before April 1 of each year. **[Permit No. 0990021-020-AC]**

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

SUBSECTION J. This subsection of the permit addresses the following emissions unit:

<i>EU ID No</i>	STATUS	EMISSIONS UNIT DESCRIPTION
083	R	<p><u>Small Boiler (BO-4-SIK):</u> Steam boiler model CBH-70 is manufactured by Cleaver Brooks and identified by the facility as BO-4-SIK. <i>This emission unit was previously permitted as EU # 009 in Sikorsky's permit – 0990185-004-AF.</i></p> <p><u>SCC# 1-02-006-03:</u> MMCF Gas burned <i>This unit has a design heat input of 2.93 mmbTU per hour (2845 cubic feet of natural gas per hour). Products of incomplete combustion are discharged to the atmosphere 60 feet above ground level from a 12-inch diameter stack at 200° F exit temperature.</i></p>

{Permitting Note: This emission unit was previously permitted as EU # 009 in Sikorsky's permit – 0990185-004-AF. This boiler is not subject to 40 CFR 60 Subpart Dc, since the heat input is less than 10 mmbtu/hr}

EMISSION LIMITING AND PERFORMANCE STANDARDS

- J.1 Visible Emissions shall not exceed 20 percent opacity except for one, two-minute period per hour, during which the opacity shall not exceed 40 percent. **[Rule 62-296.406(1), F.A.C. and Permit No. 0990021-020-AC]**
- J.2 Particulate Matter and Sulfur Dioxide: Emissions of particulate matter and sulfur dioxide shall be controlled using the Best Available Control Technology (BACT). BACT for this boiler is firing only pipeline quality natural gas.
[Rule 62-296.406(2), F.A.C., Applicant Request, and Permit No. 0990021-020-AC]
- J.3 Fuel Limitations: In order to comply with the Best Available Control Technology (BACT) determination for particulate matter and sulfur dioxide, fuel shall be limited to pipeline quality natural gas. **[Rule 62-296.406, F.A.C. and Permit No. 0990021-020-AC]**
- J.4 Unrestricted Hours of Operation: The hours of operation for this emissions unit are not limited.
[Permit No. 0990021-02-AC]

COMPLIANCE MONITORING REQUIREMENTS

- J.5 Fuel Use Records: In lieu of conducting annual visible emission observations, the permittee can demonstrate compliance with the visible emission standards by maintaining fuel use records that document the exclusive use of pipeline quality natural gas to fuel during the previous federal fiscal year.
[Permit No. 0990021-020-AC]
- J.6 Record keeping requirements: The permittee shall be able to monitor and record the actual amount of natural gas consumed and the operating hours on a monthly basis. All records shall be maintained on site at the facility. The annual amount of natural gas consumed by this emission unit shall be included in the Annual Operating Report (AOR), DEP Form N0.62-210.900(5), F.A.C. **[Rule 62-210.370, F.A.C. and Permit No. 0990021-020-AC]**

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

SUBSECTION K. This subsection of the permit addresses the following emissions unit:

EU No.	BRIEF DESCRIPTION
086	<p>Fire Innovation and Test (FIT) Center.</p> <p>The air emissions from indoor testing at the FIT center will be controlled by two parallel ultra high-efficiency filters (UHF) manufactured by APC Technologies, Inc. Each train includes two UHF units in series. The primary-stage UHF removes the coarser particulate and the second-stage unit removes very fine particulate and condensed organics. The estimated flow rate at each train is 50,000 cfm. The facility also added a water spray system which will cool gas before entering the UHF unit. The UHF filter achieves 90% control efficiency for particulate matter.</p> <p><u>Stack parameters:</u> Emissions from both the trains are vented to a single stack with height ~ 72 ft, exit diameter 6.5 ft, exit temperature 400°F, actual volumetric flow rate 100,000 acfm.</p> <p><u>SCC # 10300908:</u> Tons burned (engineered wood, waste wood, untreated wood products)</p> <p><u>SCC # 21004004:</u> 1000 gallons burned (No 2 fuel oil, vegetable oil)</p> <p><u>SCC # 50200203:</u> tons burned (plastic)</p>

AIR POLLUTION CONTROL EQUIPMENT AND METHODS

K.1 Ultra High-Efficiency Filters (UHF) Units: Air pollutant emissions from the test hall shall be controlled by two trains of UHF filters with 50,000 acfm flow rate at each train. Each train shall consist of two UHF units in series as specified in the permit application.

The UHF units shall be maintained and operated according the manufacturer's specifications. The operators shall be trained in the operation and maintenance procedures.

[Permit No. 0990021-030-AC]

EMISSION LIMITING AND PERFORMANCE STANDARDS

K.2 Operating hours: The hours of operation for these emissions units are not limited (8760 hours per year).

[Rule 62-210.200 (PTE), F.A.C. and Permit No. 0990021-030-AC]

K.3 Indoor Burning: Test fuel packages shall contain only the following materials. The permitted shall receive approval from the Health Department to include other materials in the test fuel packages.

- Wood (engineered wood, waste wood and untreated wood)
- Plastics
- Heptane
- No 2 Fuel Oil
- Vegetable Oil
- Isopropyl Alcohol
- Acetone
- Propane
- Methane
- Other light hydrocarbons

[Permit Nos. 0990021-023-AC & 0990021-030-AC]

K.4 Outdoor Burning: No person shall ignite, cause to be ignited, or permit to be ignited, any material which will result in any prohibited open burning as regulated by Chapter 62-256, F.A.C.; nor shall any person suffer, allow, conduct, or maintain any prohibited open burning.

[Rule 62-250.300(1), F.A.C. and Permit No. 0990021-030-AC]

Open burning of test package material is allowed only as provided in Chapter 62-256, F.A.C. Open burning shall not involve any material prohibited from being burned at Rule 62-256.300, F.A.C. Open burning of biological waste, hazardous waste, asbestos-containing materials, mercury-containing devices, pharmaceuticals, tires, rubber material, residual oil, used oil, asphalt, roofing material, tar, treated wood, plastics, garbage, or trash is prohibited.

[Rules 62-296.320(3)(a) and 62-256.300(2)(a), F.A.C.]

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

The permittee shall use only virgin diesel fuel oil, untreated wood, heptane, propane, methane, other light hydrocarbons, and isopropyl alcohol in test packages that are used in outdoor burning.

[Permit Nos. 0990021-023-AC & 0990021-030-AC, Rule 62-296.320(3), F.A.C.]

- K.5** Air Pollutant Emissions Limits: The permittee shall not allow the emissions of air pollutants from this emission unit to exceed the limits specified below:

Pollutant	Permissible Limits (tons per any consecutive 12-month period)
PM	3.45
PM ₁₀	3.13
NO _x	15
CO	14.8
VOC	39.26
Lead	0.00009
SO ₂	2.5

[Permit Nos. 0990021-023-AC & 0990021-030-AC]

- K.6** HAP Emissions: Emissions of Hazardous Air Pollutants (HAPs) are subject to the Facility-wide condition no. **FW1**.

[Applicant's Request, Rule 62-210.200(PTE), F.A.C. and Permit No. 0990021-030-AC]

- K.7** Fire Suppressants: The fire suppressants shall not contain any chlorofluorocarbons (CFCs).

[Permit No. 0990021-023-AC and Permit No. 0990021-030-AC]

COMPLIANCE MONITORING REQUIREMENTS

- K.8** Daily Log: For each day of operation either indoor testing or outdoor testing, the permittee shall record the following information in a written log, or an equivalent electronic recordkeeping system, provided records can be generated when requested by the Health Department:

- (d) Date of operation and type of testing (indoor or outdoor)
- (e) Identification of each material in each test fuel package.
- (f) Identification of fire suppressant
- (g) Quantity of each material used in each test fuel package in pounds. The permittee may use 100% of the material used in estimating the emissions, or may follow the procedure specified in **Appendix E** to estimate the amount of each material burned.
- (h) Quantity of fire suppressant used
- (i) If the UHF unit was operational and the details any maintenance performed at the UHF unit.

[Permit Nos. 0990021-023-AC & 0990021-030-AC]

- K.9** Monthly Operations Log: The permittee shall demonstrate compliance with the emission limits specified in **conditions K.5 and K.6** of this subsection on a monthly basis by keeping a written log, or an equivalent electronic recordkeeping system, provided records can be generated when requested by the Health Department, of the operations. On or before the 20th calendar day of each month, the permittee shall calculate and record the following information for the previous month of indoor & outdoor testing operations:

- (d) Month of operation.
- (e) Type and quantity of each material used in test fuel packages during the previous month.
- (f) Calculate air emissions from each material for the previous month and for the previous consecutive 12 months, rolling total. Permittee shall use the emission factors shown in **Appendix D** in estimating the air emissions. Individual HAP emissions shall be estimated using AP-42 or the industry specific publications. The Health Department may revise the emission factors when the Environmental Protection Agency revises the emission factors in AP-42 publication.

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

(g) Calculations shall assume that 100% of heptane and alcohols used will evaporate into the atmosphere.

[Permit Nos. 0990021-023-AC & 0990021-030-AC]

K.10 Monthly Emissions Calculations: The emissions calculation shall be consistent with the following generic equation:

$$E_M = \Sigma (U_M \times EF_M)$$

Where:

E_M =Calculated air emissions for a given month reported to the nearest hundredth of a ton for a give pollutant M

Σ =Sum of the emissions from different materials (wood, plastics, Heptane, no 2 fuel oil, vegetable oil, and alcohol.)

U_M =Usage of each material for a given month reported from the daily log

EF_M = Emission factor for pollutant M from each material

The actual equations and calculations are left to the discretion of the permittee, but they must meet the basic intent of the calculation described above. For example, calculation and summary by a computer spreadsheet or database is acceptable as long as the calculations are consistent with the methodology specified in this section.

[Permit No. 0990021-023-AC and Permit No. 0990021-030-AC]

REPORTING REQUIREMENTS

K.11 The permittee shall submit semi-annual reports that summarize the details of materials usage (both indoor and outdoor operations) and the air emissions calculations for indoor & outdoor operations. Each report covers a period of six months (January – June & July-December) and these reports shall be submitted to the Health Department by July 31st and January 31st respectively.

These reports shall contain a statement regarding CFC content in the fire suppressants used during the reporting period.

[Permit No. 0990021-023-AC and Permit No. 0990021-030-AC]

K.12 The permittee shall provide a written notification (by email, fax, or letter) to the permitting authority at least 48 hours prior to burning any additional light hydrocarbons. The notification shall include name of the hydrocarbon, whether burning is indoor or outdoor, if it is classified as a HAP, and emission factors for estimating the air emissions.

[Permit No 0990021-030-AC]

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

Subsection L: *This subsection addresses the following equipment as a single emissions unit:*

EU NO.	Status	BRIEF DESCRIPTION
087	R	<p>One 810 KW emergency electrical generator</p> <p>Kohler, 810 KW, Model Number 800REOZMB, Serial number 2342382, consumes ~58 – 67 gallons of distillate fuel per hour at 100% load.</p> <p><u>SCC #2-03-001-01</u>: Internal combustion, diesel fuel</p>

[This emergency generator is used for emergency power in support of life safety and safe shutdown of testing operations in the event of a power loss event. The permittee stated that this generator is categorically exempt pursuant to Rule 62-210.300(3)(a)35, F.A.C.]

EMISSION LIMITING AND PERFORMANCE STANDARDS

- L.1** 40 CFR 63 Subpart ZZZZ & 40 CFR 60 Subpart IIII: This emission unit is subject to the regulations of 40 CFR Part 63 Subpart ZZZZ “National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)”; and the regulations of 40 CFR 60 Subpart IIII “Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE).”
[40 CFR 63 Subpart ZZZZ & 40 CFR 60 Subpart IIII, and Permit No. 0990021-030-AC]
- L.2** Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in 40 CFR 60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.
[40 CFR 60. 4205(b), and Permit No. 0990021-030-AC]
- L.3** Allowable Fuel: Fuel shall be limited to No. 2 diesel fuel oil. The permittee shall use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.
[Rules 62-4.160(2) and 62-210.200 (PTE), F.A.C. and Permit No. 0990021-030-AC]
- L.4** Hours of Operation: Operating hours of this emission unit for emergency operations are not restricted
[Rules 62-4.160(2) and 62-210.200 (PTE), F.A.C. and Permit No. 0990021-030-AC]

RECORDS

- L.5** Fuel Records: The permittee shall record the actual amount of fuel throughput for this emission unit. All records shall be maintained on site at the facility. **The permittee shall maintain records of combined fuel consumption for ALL emergency generators at the facility that are exempt under Rule 62-210.300(3)(a), F.A.C.**
[Permit No. 0990021-030-AC]

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

Subsection M: *This subsection addresses the following emissions unit:*

EU No.	STATUS	BRIEF DESCRIPTION
090	R	FT4000 Gas Turbine Testing at Test Stand A-4 Maximum Heat Input is 653.3 MMbtu/hr and average heat input of 367.7 MMbtu/hr 2-04-003-01 -- Internal combustion engine, Engine Testing, Natural Gas, Turbine (Million Cubic Feet of Natural Gas Burned)

The FT4000 gas Turbine testing is conducted at the Test Stand A-4. This test stand is currently included in the Title V air operation permit as an unregulated emission unit and is grouped with other test stands under Emissions Unit number 069 of the Title V permit. Currently, military and commercial aircraft engines are tested at these test stands (EU 069).

This permit is issued to authorize the testing of FT4000 gas turbines at test stand A-4. This project also includes a reciprocating internal combustion engine (RICE) that is permitted under a different emissions unit number. The facility will keep track of air emissions from this project (both testing gas turbines and the RICE).

AIR POLLUTION CONTROL EQUIPMENT

M.1. Permitted Capacity: The permittee shall not allow, cause, suffer or permit the operation of the test stand, when testing the FT4000 gas turbines, in excess of the following capacities without prior authorization from the Permitting Authority:

- The maximum heat input is 653.3 MMbtu/hr. The testing of the gas turbines shall utilize only natural gas or JP-8 fuel.

[Permit No. 0990021-037-AC]

M.2. Air Emissions Controls: The permittee shall install, operate, and maintain the proposed air pollution control equipment in accordance with the manufacturer's instructions and recommendations. The air pollution control equipment shall be on line and functioning properly when operating the emissions unit.

[Permit No. 0990021-037-AC]

M.3. Notification to the Department: The permittee shall notify the Health Department within 30 days of commencing the testing of the FT4000 gas turbine. **[Permit No. 0990021-037-AC]**

PERFORMANCE STANDARDS

M.4. Hours of Operation: The hours of operation of the test stand, while testing the FT4000 gas turbines on natural gas, are limited to 315 hours per year. **[Applicant request to escape PSD Regulations, and Permit No. 0990021-037-AC]**

M.5. Natural Gas Consumption: The fuel consumption from the test stand, while testing FT4000 gas turbines, shall not exceed 114.1 million cubic feet of natural gas in any 12 consecutive months, rolling total. **[Applicant request to escape PSD Regulations, and Permit No. 0990021-037-AC]**

[Permitting Note: Based on operating hours limit and the fuel consumption limit, the emissions of NOx and CO are restricted to 12.3 tons per year and 9.61 tons per year – less than the threshold for significant emission rate pursuant to PSD regulations.]

COMPLIANCE MONITORING REQUIREMENTS

M.6. Emissions Inventory: The permittee shall maintain a current emissions inventory for each testing cycle of the gas turbine. As a minimum, the emissions inventory shall be reviewed and revised monthly, as needed. The emissions inventory shall include the following information:

- The gas turbine type
- The operating load and duration of each operating load
- The average heat input rate (MMbtu/hr) during each operating load
- Duration of each test (hrs)
- Monthly Hours of Operation

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

- (f) Monthly Fuel consumption [mmcf of natural gas]
- (g) Emissions estimation for NO_x and CO based on each operating load during each test
- (h) Monthly estimation of NO_x and CO emissions

[Permit No. 0990021-037-AC]

M.7. Monitoring of operating load: The permittee shall monitor hourly average operating load and hourly heat input rate (MMBtu/hr). The emission factors, provided in permit application and presented in **Appendix F**, at each operating load shall be used in estimating the monthly NO_x and CO emissions. The monthly emissions estimates are used in calculating the 12-month rolling emissions of NO_x and CO. The yearly estimates of NO_x and CO shall be below the PSD significant emission rates as specified in Chapter 62-212, F.A.C. **[Permit No. 0990021-037-AC]**

M.8. Testing of CO and NO_x: In order to verify the emissions factors for CO and NO_x, used in the permit application (shown in **appendix F**), the permittee shall measure the emissions of CO and NO_x at various loads during the testing of FT4000 gas turbines. At a minimum, three emissions tests (runs) shall be conducted at each load. The permittee shall evaluate the measured data with the emissions data presented in **Appendix F**. If the measured concentrations (emissions) are higher than the emissions rates presented in the application, then the permittee shall use the higher emissions rate in estimating the actual emissions of NO_x and CO. **[Permit No. 0990021-037-AC]**

M.9. Special Compliance Tests: When the Health Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a DEP rule or permit is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Health Department. **[Permit No. 0990021-037-AC]**

REPORTING AND RECORDKEEPING REQUIREMENTS

M.10. Monthly Emission Records: The permittee shall maintain monthly emission records as described in Specific **Condition M.6** of this subsection, on or before the 15th of each month, to summarize site-wide emissions of NO_x and CO for the previous 12 months. These records shall include, as a minimum, the monthly emissions and the rolling 12-month total emissions for NO_x and CO. These records shall be kept on site for a period of no less than five years and be made available to the Health Department representatives upon request. **[Rule 62-297.310(7) (b), F.A.C. and Permit No. 0990021-037-AC]**

SECTION III: EMISSION UNIT SPECIFIC CONDITIONS

Subsection N: This subsection addresses the following emissions unit:

EU No.	STATUS	BRIEF DESCRIPTION
091	R	FT4000 Compressor Reciprocating Internal Combustion Engine (RICE) Engine The proposed RICE will be a Caterpillar Model No. G3412C. The RICE being considered is manufactured in 2004, and has the rating of 676 hp. <u>SCC 2-03-002-01</u> Internal Combustion Engine, Industrial, Natural Gas, Reciprocating (MMCF Burned)

Permitting Note: Since the RICE is manufactured in 2004, it is not subject to the regulations of 40 CFR 60 Subpart JJJJ "New Source Performance Standards for Spark Ignition (SI) Engines." This RICE is subject to the regulations of 40 CFR 63 Subpart ZZZZ "National Emissions Standards for Hazardous Air Pollutants for RICE." According to Subpart ZZZZ, this engine is classified as "spark ignition non-emergency four stroke lean burn (4SLB) engine."

Initial performance test for CO emissions was conducted on 10/08/2014, and the compliance report was submitted. The test result was 12 ppm @15% O₂.

AIR POLLUTION CONTROL EQUIPMENT

N.1. Air Emissions Controls: The permittee shall install, operate, and maintain any existing air pollution control equipment in accordance with the manufacturer's instructions and recommendations. The air pollution control equipment shall be on line and functioning properly when operating the emissions unit.

[Permit No. 0990021-032-AC]

N.2. Notification to the Department: The permittee shall notify the Health Department within 10 days after the RICE is installed. The permittee shall include the manufacturing date of the RICE in the notification. **[Permit No. 0990021-032-AC]**

PERFORMANCE STANDARDS

N.3. Hours of Operation: The hours of operation of the RICE are limited to 394 hours in any 12 consecutive months, rolling total. **[Applicant's request to escape the PSD Regulations, and Permit No. 0990021-037-AC]**

N.4. Natural Gas Consumption: The fuel consumption from the RICE shall not exceed 2.21 million cubic feet of natural gas in any 12 consecutive months, rolling total. **[Applicant's request to escape the PSD Regulations, and Permit No. 0990021-037-AC]**

COMPLIANCE MONITORING REQUIREMENTS

N.5. Applicability of 40 CFR 63 Subpart ZZZZ: This reciprocating engine is subject to the regulations of 40 CR part 63 Subpart ZZZZ "National Emissions Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines." **[Rule 62-204.800(11), F.A.C. and Permit No. 0990021-037-AC]**

N.6. Compliance with the numerical emission limitations established for this emissions unit is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in 40 CFR 63.6620 and Table 4 of 40 CFR Part 63 Subpart ZZZZ.

The permittee must install an oxidation catalyst to reduce HAP emissions from the emissions unit. **[40 CFR 63.6603(a), Table 2d of 40 CFR 63 Subpart ZZZZ]**

General Compliance Requirements

N.7. Continuous Compliance: Each emissions unit shall be in compliance with the emissions limitations and operating limitations in this section at all times. **[40 CFR 6605(a)]**

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N.8. At all times, the permittee shall operate and maintain the emissions units and the associated pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Health Department which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. **[40 CFR 63.6605(b)]**

Testing and Initial Compliance Requirements

N.9. Initial Performance Test: The permittee must conduct the initial performance test, as specified in N.11, N.12 and N.13 of this subsection within 180 days of October 19, 2013 (the compliance date), as specified in **40 CFR 63.6595(a)**. **[40 CFR 63.6612(a)]**
{Permitting Note: Initial performance test for CO emissions was conducted on 10/08/2014, and the compliance report was submitted. The test result was 12 ppm @15% O₂.}

N.10. Initial Compliance Demonstration: The permittee, complying with the requirement to reduce HAP emissions and using oxidation catalyst, shall demonstrate the initial compliance as specified below:

- (a) You have conducted an initial compliance demonstration as specified in 40 CFR 63.6630(e) to show that the **average reduction of emissions of CO is 93 percent or more**, or the average CO concentration is **less than or equal to 47 ppmvd at 15 percent O₂**.
- (b) The permittee installed a CPMS to continuously monitor the catalyst inlet temperature according to the requirements in 40 CFR 63.6625(b), **OR** the permittee installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350° F.

[40 CFR 63.6612(a) and Table 5 of 40 CFR 63 Subpart ZZZZ]

{Permitting Note: Initial performance test for CO emissions was conducted on 10/08/2014, and the compliance report was submitted. The test result was 12 ppm @15% O₂.}

N.11. Performance test for CO reduction efficiency: The permittee must conduct the performance test as specified below, to comply with the requirement to reduce CO emissions.

- (a) Measurements to Determine O₂. The owner or operator must measure the O₂ at the inlet and outlet of the control device using a portable CO and O₂ analyzer according to the ASTM D6522–00 (2005) (incorporated by reference, see 40 CFR 63.14) requirements. Measurements to determine O₂ must be made at the same time as the measurements for CO concentration. Methods 3, 3A, or 3B of 40 CFR 60 Appendix A, may also be used to determine O₂ concentrations.
- (b) Measurements to Determine CO. The owner or operator must measure the CO at the inlet and the outlet of the control device using a portable CO and O₂ analyzer according to the ASTM D6522–00 (2005) (incorporated by reference, see 40 CFR 63.14) or Method 10 of 40 CFR 60 Appendix A requirements. The CO concentration must be at 15 percent O₂, dry basis. Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 may also be used.

[40 CFR 63.6603, 40 CFR 63.6620 (a) and (b), Table 4 of 40 CFR 63 Subpart ZZZZ]

N.12. Performance test for CO emissions limit: The permit must conduct the performance test as specified below, to comply with the requirements to limit the concentration of CO in the RICE exhaust.

- (a) Select the sampling port location and the number of traverse points according to Method 1 of 1A of 40 CFR Part 60, appendix A 40 CFR 63.7(d)(1)(i). The sampling site must be located at the outlet of the oxidation catalyst.
- (b) Determine the O₂ concentration of the RICE exhaust at the sampling port location, according to Method 3 of 3A or 3B of 40 CFR 60 Appendix A or ASTM Method D6522-00. Measurements to determine O₂ concentration must be made at the same time and location as the measurements for CO concentration.
- (c) Measure moisture content of the stationary RICE exhaust at the sampling port location, according to Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03. Measurements to determine moisture content must be made at the same time and location as the measurements for CO concentration.
- (d) Measure CO at the exhaust of the RICE, according to Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522-00 (2005), Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03. CO concentration must be at 15 percent O₂, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

[40 CFR 63.6603, 40 CFR 63.6620 (a) and (b), Table 4 of 40 CFR 63 Subpart ZZZZ]

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{Permitting Note: Initial performance test for CO emissions was conducted on 10/08/2014, and the compliance report was submitted. The test result was 12 ppm @15% O₂.}

- N.13. The permittee must conduct three separate test runs for each performance test required, as specified in 40 CFR 63.7(e)(3). Each test run must last at least 1 hour. **[40 CFR 63.6620(d)]**

- N.14. **Performance Test Procedure:** The permittee shall use the following performance test procedures. **[40 CFR 63.6620 (e)]:**
 (1) The Permittee must use Equation 1 (below) to determine compliance with the percent reduction requirement **[40 CFR 63.6620(e)](1) & (2)]:**

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (\text{Eq. 1})$$

Where:

C_i = concentration of carbon monoxide (CO) at the control device inlet,

C_o = concentration of CO at the control device outlet, and

R = percent reduction of CO emissions

- (2) The Permittee must normalize the carbon monoxide (CO) concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO₂). If pollutant concentrations are to be corrected to 15 percent oxygen and CO₂ concentration is measured in lieu of oxygen concentration measurement, a CO₂ correction factor is needed. Calculate the CO₂ correction factor as described below **[40 CFR 63.6620 (e)(2)(i) through (iii)]**

- (i) Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, section 5.2, and the following equation:

$$F_o = \frac{0.209 F_d}{F_c} \quad (\text{Eq. 2})$$

Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO₂ volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm³/J (dscf/10⁶ Btu).

F_c = Ratio of the volume of CO₂ produced to the gross calorific value of the fuel from Method 19, dsm³/J (dscf/10⁶ Btu).

- (ii) Calculate the CO₂ correction factor for correcting measurement data to 15 percent oxygen, as follows:

$$X_{co_2} = \frac{5.9}{F_o} \quad (\text{Eq. 3})$$

Where:

X_{co_2} = CO₂ correction factor, percent.

5.9 = 20.9 percent O₂–15 percent O₂, the defined O₂ correction value, percent.

- (iii) Calculate the NO_x and SO₂ gas concentrations adjusted to 15 percent O₂ using CO₂ as follows:

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$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \quad (\text{Eq. 4})$$

Where:

%CO₂ = Measured CO₂ concentration measured, dry basis, percent.

[40 CFR 63.6620(e)]

N.15. Initial performance test report: The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report:

- (a) the engine model number,
- (b) the engine manufacturer,
- (c) the year of purchase,
- (d) the manufacturer's site-rated brake horsepower,
- (e) the ambient temperature, pressure, and humidity during the performance test, and
- (f) All assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained.
- (g) If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[40 CFR 63.6620 (i)]

{Permitting Note: Initial performance test for CO emissions was conducted on 10/08/2014, and the compliance report was submitted. The test result was 12 ppm @15% O₂.}

N.16. If Continuous Parameter Monitoring System (CPMS) is chosen for inlet temperature: The permittee shall install a continuous parameter monitoring system (CPMS) to monitor catalyst inlet temperature, as specified in **Table 5 of 40 CFR 63 Subpart ZZZZ (Condition N.11 of this subsection)**. The permittee must install, operate, and maintain each CPMS according to the following requirements.

(1) The permittee must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined below, and in 40 CFR 63.8(d). As specified in 40 CFR 63.8(f)(4), The permittee may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in 40 CFR 63.6625(b)(1) through (5) in the site-specific monitoring plan.

- i The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;
- ii Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements;
- iii Equipment performance evaluations, system accuracy audits, or other audit procedures;
- iv Ongoing operation and maintenance procedures in accordance with provisions in 40 CFR 63.8(c)(1) (ii) and (c)(3); and
- v Ongoing reporting and recordkeeping procedures in accordance with provisions in 40 CFR 63.10(c), (e)(1), and (e)(2)(i).

(2) The permittee must install, operate, and maintain each CPMS in continuous operation according to the procedures in the site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also 40 CFR 63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) The permittee must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in the site-specific monitoring plan at least annually.

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(6) The permittee must conduct a performance evaluation of each CPMS in accordance with the site specific monitoring plan.

[40 CFR 63.6625(b)]

- N.17. Engine Startup: During periods of startup, the permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emissions limitations apply. **[40 CFR 63.6625(h)]**
- N.18. The permittee must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies according to Table 5 of 40 CFR 63 subpart ZZZZ. **[40 CFR 63.6630(a)]**
- N.19. Initial Compliance Testing – Establishing Operating Limitations: During the initial performance test as specified in **Table 2d of 40 CFR 63 Subpart ZZZZ**, the permittee shall establish the following operating limitations.
- (a) Pressure drop across the catalyst; and
 - (b) maintain the temperature of the RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.

[40 CFR 63.6630(b)]

- N.20. Initial Compliance Testing – Notification of Compliance Status: The permittee shall submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in 40 CFR 63.6645. **[40 CFR 63.6630(c)]**
- N.21. The initial compliance demonstration must be conducted according to the following requirements:
- (a) The compliance demonstration must consist of at least three test runs.
 - (b) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A of 40 CFR 63 must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.
 - (c) When demonstrating compliance with the CO concentration or CO percent reduction requirement, the permittee must measure CO emissions using one of the CO measurement methods specified in **Table 4 of 40 CFR 63 subpart ZZZZ (condition N.12 of this subsection)**, or using appendix A to this subpart.
 - (d) The permittee must measure O₂ using one of the O₂ measurement methods specified in **Table 4 of 40 CFR 63 subpart ZZZZ (condition N.12 of this subsection)**. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO concentration.
 - (e) When demonstrating compliance with the CO percent reduction requirement, the permittee must measure CO emissions and O₂ emissions simultaneously at the inlet and outlet of the control device.

[40 CFR 63.6630(e)]**Continuous Compliance Requirements**

- N.22. Collection and Monitoring Data: The permittee must monitor and collect data according to 40 CFR 63 Subpart ZZZZ. Except for monitor malfunctions, associated repairs, and required performance evaluations and required quality assurance or control activities,, the permittee must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. The permittee may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. The permittee must, however, use all the valid data collected during all other periods.

[40 CFR 63.6635(a), (b), and (c)]

- N.23. Continuous Compliance Demonstration: The owner or operator must demonstrate continuous compliance with each emission limitation, operating limitation and other requirements as specified below.
- (a) Install an oxidation catalyst

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- (b) Conducting annual compliance demonstrations as specified in show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O₂; and either.
- (c) Collecting the catalyst inlet temperature data according to 40 CFR 63.6625(b); and reducing these data to 4-hour rolling averages; and
Maintaining the 4-hour rolling averages within the limitation of greater than 450 °F and less than or equal to 1350 °F for the catalyst inlet temperature, or
- (d) Immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 °F.
[40 CFR 63.6640(a), and Table 2d and 6 of 40 CFR 63 Subpart ZZZZ]

N.24. The permittee must report each instance in which the permittee did not meet each emission limitation or operating limitation in **condition N.24 of this subsection**. These instances are deviations from the emission and operating limitations. These deviations must be reported according to the requirements in 40 CFR 63.6650.

If catalyst is changed, the permittee must reestablish the values of the operating parameters measured during the initial performance test. When reestablishing the values of the operating parameters, the permittee must also conduct a performance test to demonstrate required emission limitation applicable to the stationary RICE is met.

[40 CFR 63.6640(b)]

N.25. Annual Compliance Demonstration: The annual compliance demonstration must be conducted according to the following requirements:

- (a) The compliance demonstration must consist of at least one test run.
- (b) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.
- (c) When the permittee is demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in **Table 4 of 40 CFR 63 subpart ZZZZ (condition N.12 of this subsection), or using appendix A to this subpart**.
- (d) The permittee must measure O₂ using one of the O₂ measurement methods specified in **Table 4 of 40 CFR 63 subpart ZZZZ (condition N.12 of this subsection)**. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO concentration.
- (e) When permittee is demonstrating compliance with the CO percent reduction requirement, you must measure CO emissions and O₂ emissions simultaneously at the inlet and outlet of the control device.
- (f) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of 40 CFR 63 subpart ZZZZ, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in **Table 6 of 40 CFR 63 subpart ZZZZ (condition N.24 of this subsection)**. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in **Table 6 of subpart ZZZZ**.

[40 CFR 63.6640(c)]

N.26. The permittee must also report each instance in which the applicable requirements of Table 8 of 40 CFR 63 Subpart ZZZZ are not met. **[40 CFR 63.6640(e)]**

Notifications, Reports, and Records

N.27. Notification Requirements: The owner or operator must submit all of the notifications in 40 CFR 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply by the dates specified. **[40 CFR 63.6645(a)]**

N.28. Notification of Intent to Conduct a Performance Test. The permittee must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in 40 CFR 63.7(b)(1). **[40 CFR 63.6645(g)]**

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N.29. **Notification of Compliance Status:** When the initial compliance demonstration is conducted as specified in Tables 4 and 5 of 40 CFR 63 Subpart ZZZZ (**Conditions N.11 and N.12 of this subsection**), the permittee must submit a Notification of Compliance Status according to Rule 40 CFR 63.9(h)(2)(ii).

- For each compliance demonstration required in Table 5 of 40 CFR 63 Subpart ZZZZ (**condition N.12 of this subsection**) that does not include a performance test, the owner or operator must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

[40 CFR 63.6645(h)]

N.30. **Reporting Requirements:** The Permittee shall submit Semiannual Compliance Report as specified in **condition N.32 of this subsection**. The report must contain the following information:

- The results of the annual compliance demonstration, if conducted during the reporting period.

[40 CFR 63.6650(a) and (c), Table 7 of 40 CFR 63 Subpart ZZZZ]

N.31. **Semiannual Compliance Report:** The permittee shall submit each report required in **Condition N.31 of this subsection** by the dates as specified below:

- (a) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date as specified in **Condition N.7 of this subsection** 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.
- (b) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date as specified in **Condition N.7 of this subsection**.
- (c) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.
- (d) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

[40 CFR 63.6650(b)(1) – (4)]

N.32. **Compliance Report:** When there were deviations: If the emissions units had a deviation from any emission limitation or operating limitation during the reporting period, the report shall contain following information:

- (1) Company name and address.
- (2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.
- (3) Date of report and beginning and ending dates of the reporting period.
- (4) If there was a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.6605(b), including actions taken to correct a malfunction.
- (5) When there were no deviations: If there are no deviations from any emission limitations or operating limitations that apply to the emissions units, the report shall contain a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CPMS was out-of-control, as specified in 40 CFR 63.8(c)(7), the report shall contain a statement that there were not periods during which the CPMS was out-of-control during the reporting period

[40 CFR 63.6650(c)]

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N.33. For each deviation from an emission or operating limitation occurring for a stationary RICE where the permittee is using a CMS to comply with the emission and operating limitations in this subpart, the permittee must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

- (a) Company name and address.
- (b) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.
- (c) Date of report and beginning and ending dates of the reporting period.
- (d) If there was a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.6605(b), including actions taken to correct a malfunction
- (e) The date and time that each malfunction started and stopped.
- (f) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.
- (g) The date, time, and duration that each CMS was out-of-control, including the information in § 63.8(c)(8).
- (h) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.
- (i) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.
- (j) 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.
- (k) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.
- (l) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.
- (m) A brief description of the stationary RICE.
- (n) A brief description of the CMS.
- (o) The date of the latest CMS certification or audit.
- (p) A description of any changes in CMS, processes, or controls since the last reporting period.

[40 CFR 63.6650(e), and 40 CFR 63.6650(c)(1) – (4)]

N.34. Title V Semi-Annual Report: The permittee must report all deviations as defined in this permit in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If the permittee submits a Compliance report pursuant to Table 7 40 CFR 63 Subpart ZZZZ along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

[40 CFR 63.6656(f)]

Recordkeeping Requirements

N.35. Fuel consumption and Hours of Operation monitoring: Within the first 15 days of each month, the permittee shall record in a written log the following information:

- Million cubic feet of natural gas consumed for the previous month of operation;
- Million cubic feet of natural gas consumed for the previous consecutive 12 months of operation
- Hours of operation for the previous month of operation, and
- Hours of operation for the previous consecutive 12 months of operation.

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N.36. The permittee must keep the records as specified below.

- (1) A copy of each notification and report that the permittee submitted to comply with this permit, including all documentation supporting any Initial Notification or Notification of Compliance Status that the permittee submitted, according to the requirement in 40 CFR 63.10(b)(2)(xiv).
- (2) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.
- (3) Records of performance tests and performance evaluations as required in 40 CFR 63.10(b)(2)(viii).
- (4) Records of all required maintenance performed on the air pollution control and monitoring equipment.
- (5) Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

For each CPMS, the permittee must maintain the following records.

- (1) Records described in 40 CFR 63.10(b)(2)(vi) through (xi).
 - (2) Previous (i.e., superseded) versions of the performance evaluation plan as required in 40 CFR 63.8(d)(3).
 - (3) Requests for alternatives to the relative accuracy test for CPMS as required in 40 CFR 63.8(f)(6)(i), if applicable.
- [40 CFR 63.6655(a) and (b)]**

N.37. The permittee must keep the records required in Table 6 of 40 CFR 63 Subpart ZZZZ (CONDITION N.24 of this subsection**) to show continuous compliance with each emission or operating limitation that applies to the emissions units.****N.38. Duration and Form of the Records: The records must be in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1).**

As specified in § 63.10(b)(1), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

The permittee must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1).

[40 CFR 63.6660]

SECTION IV. APPENDICES.

The Following Appendices Are Enforceable Parts of This Permit:

HHHHHH	40 CFR Part 63 Subpart HHHHHH: National Emission Standard for Hazardous Air Pollutants for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources
D	Air Pollutant Emission Factors – FIT Center
E	Compliance Procedures – FIT Center
F	Emissions Factors For No _x And Co At Various Loads During Testing Of Ft4000 Gas Turbines (Eu 090)
ICE	Requirements for Internal Combustion Engines.
RR	Facility-wide Reporting Requirements
TR	Facility-wide Testing Requirements.
TV	Title V General Conditions
GG	40 CFR Part 63 Subpart GG: National Emission Standards for Aerospace Manufacturing and Rework Facilities

The Following Attachments Are Included for Information Purposes only

A	Abbreviations, Acronyms, Citations, and Identification Numbers (version dated 02/05/97)
H	Permit History.
SOB	Statement of Basis

APPENDIX A
Lists of Abbreviations, Acronyms, Rule Citation Formats, and Identification Formats

° F: degrees Fahrenheit

acfm: actual cubic feet per minute

AOR: Annual Operating Report

ARMS: Air Resource Management System (Department's database)

BACT: best available control technology

Btu: British thermal units

CAM: compliance assurance monitoring

CEMS: continuous emissions monitoring system

cfm: cubic feet per minute

CFR: Code of Federal Regulations

CO: carbon monoxide

COMS: continuous opacity monitoring system

DARM: Division of Air Resources Management

DCA: Department of Community Affairs

DEP: Department of Environmental Protection

Department: Department of Environmental Protection

dscfm: dry standard cubic feet per minute

EPA: Environmental Protection Agency

ESP: electrostatic precipitator (control system for reducing particulate matter)

EU: emissions unit

F.A.C.: Florida Administrative Code

F.D.: forced draft

F.S.: Florida Statutes

FGR: flue gas recirculation

Fl: fluoride

ft²: square feet

ft³: cubic feet

gpm: gallons per minute

gr: grains

HAP: hazardous air pollutant

Hg: mercury

I.D.: induced draft

ID: identification

ISO: International Standards Organization (refers to those conditions at 288 Kelvin, 60% relative humidity and 101.3 kilopascals pressure.)

kPa: kilopascals

LAT: Latitude

lb: pound

lbs/hr: pounds per hour

LONG: Longitude

MACT: maximum achievable technology

mm: millimeter

MMBtu: million British thermal units

MSDS: material safety data sheets

MW: megawatt

NESHAP: National Emissions Standards for Hazardous Air Pollutants

NO_x: nitrogen oxides

NSPS: New Source Performance Standards

O&M: operation and maintenance

O₂: oxygen

ORIS: Office of Regulatory Information Systems

OS: Organic Solvent

Pb: lead

PM: particulate matter

PM₁₀: particulate matter with a mean aerodynamic diameter of 10 microns or less

PSD: prevention of significant deterioration

psi: pounds per square inch

PTE: potential to emit

RACT: reasonably available control technology

RATA: relative accuracy test audit

RMP: Risk Management Plan

RO: Responsible Official

SAM: sulfuric acid mist

scf: standard cubic feet

scfm: standard cubic feet per minute

SIC: standard industrial classification code

SNCR: selective non-catalytic reduction (control system used for reducing emissions of nitrogen oxides)

SOA: Specific Operating Agreement

SO₂: sulfur dioxide

TPH: tons per hour

TPY: tons per year

UTM: Universal Transverse Mercator coordinate system

VE: visible emissions

VOC: volatile organic compounds

x: By or times

Citations:

The following examples illustrate the methods used in this permit to abbreviate and cite the references of rules, regulations, guidance memorandums, permit numbers and ID numbers.

Code of Federal Regulations:

Example: **[40 CFR 60.334]**

APPENDIX A**Lists of Abbreviations, Acronyms, Rule Citation Formats, and Identification Formats**

Where: 40 refers to Title 40
CFR refers to Code of Federal Regulations
60 refers to Part 60
60.334 refers to Regulation 60.334

Florida Administrative Code (F.A.C.) Rules:

Example: **[Rule 62-213.205, F.A.C.]**

Where: 62 refers to Title 62
62-213 refers to Chapter 62-213
62-213.205 refers to Rule 62-213.205, F.A.C.

Identification Numbers:Facility Identification (ID) Number:

Example: Facility ID No.: 1050221

Where:

105 = 3-digit number code identifying the facility is located in Polk County
0221 = 4-digit number assigned by state database.

Permit Numbers:

Example: 1050221-002-AV, or
1050221-001-AC

Where:

AC = Air Construction Permit
AV = Air Operation Permit (Title V Source)
105 = 3-digit number code identifying the facility is located in Polk County
0221 = 4-digit number assigned by permit tracking database
001 or 002 = 3-digit sequential project number assigned by permit tracking database

Example: PSD-FL-185
PA95-01
AC53-208321

Where:

PSD = Prevention of Significant Deterioration Permit
PA = Power Plant Siting Act Permit
AC53 = old Air Construction Permit numbering identifying the facility is located in Polk County

APPENDIX H
Permit History (for tracking purposes):

Description	Permit No.	Issue Date	Expiration Date	Extended
Manufacture Area	AO50-193241	05-24-91	04-01-96	08-16-96
Test Area	AO50-193242	05-24-91	04-01-96	08-16-96
Boiler (BO-14-E8)	0990021-001-AC	04-03-96	04-03-97	N/A
Modification to correct outdated permit conditions for Title V	0990021-003-AC	10-28-98	12-31-98	N/A
INITIAL TITLE V PERMIT	0990021-002-AV	01-06-99	01-05-04	N/A
LOX/ Kerosene Rocket Engine Test Stand	0990021-004-AC	09-05-01	06-30-03	09-30-04
Combustion Turbine Test Stand And Vertrel Degreaser	0990021-005-AC	12-04-01	12-02-03	N/A
Title V PERMIT RENEWAL	0990021-006-AV	07/16/04	07/15/09	
Facility	0990021-007-AC	Withdrawn		
JP8 fired gas turbines	0990021-008-AC	05/01/06	04/30/07	04/22/08 , 10/08/08 [009-AC] 01/31/09 [009-AC], 10/31/09 [011-AC]
Extension of 008-AC	0990021-009-AC	04/22/08	10/31/08	
E-8 Rocket engine stand	0990021-010-AC	10/13/08	10/12/09	10/12/09, 04/12/10 [018-AC] ,10/12/10 [021-AC] 04/11/11 [024-AC]
Extension of 009-AC	0990021-011-AC	10/08/08	01/31/09	
Modification of JP8 fired gas turbines	0990021-012-AC	11/17/08	05/16/09	11/06/09 [016-AC], 11/16/10 [019-AC] 11/16/11 [025-AC]
TITLE V PERMIT RENEWAL	0990021-013-AV	03/04/11	03/03/16	
Extension of 012-AC	0990021-016-AC	05/26/09	11/16/09	
Extension of 010-AC	0990021-018-AC	10/12/09	04/12/10	
Extension of 016-AC	0990021-019-AC	11/06/09	11/16/10	
Extension of 018-AC	0990021-021-AC	04/09/10	10/12/10	
Add a Spray Booth at EU 073	0990021-022-AC	08/20/10	8/19/11	8/19/12 [026-AC]
Construction of FIT Center (EU 086)	0990021-023-AC	12/27/10	12/26/11	
Extension of 021-AC	0990021-024-AC	10/12/10	04/11/11	
Extension of 019-AC	0990021-025-AC	11/12/10	11/16/11	
Extension of 022-AC	0990021-026-AC	6/30/11	8/19/12	
Modification at FIT (EU 086) ¹	0990021-027-AC	12/02/11	12/01/12	
Modification of plasma Booths (EUs 043 & 088)	0990021-028-AC	08/01/12	07/30/13	7/30/2014 [034-AC]; 11/30/15 [041-AC]
TITLE V PERMIT REVISION	0990021-029-AV	1/30/2013	2/3/2016	
Modification at FIT (EU 086) ²	0990021-030-AC	11/1/2012	10/31/2012	
Add a Hot Acoustic Rig (HAR) (EU 089)	0990021-031-AC	1/23/2013	1/22/2014	01/23/2015 [039-AC]
Add a test stand for FT4000 turbines (EUs 090 & 091)	0990021-032-AC	5/30/2013	5/29/2014	
Electric Generators – addition of diesel oxidation catalyst (EUs 92-105)	0990021-033-AC	7/10/2013	7/9/2014	
Extension of permit no. 028-AC	0990021-034-AC	04/26/2013	07/30/2014	11/30/15 [041-AC]
Removal of the EUs sold to Aerojet	0990021-035-AC	11/21/2013	11/20/2014	
Title V revision – removal of the EUs sold to Aerojet	0990021-036-AV	03/11/2014	03/11/2019	

¹ Initial Startup of FIT Center 02/15/2012

² Concurrent application with 0990021-029-AV permit

Description	Permit No.	Issue Date	Expiration Date	Extended
Modification of A-4 test stand for FT 4000 turbine testing (EUs 090 and 091)	0990021-037-AC	04/17/2014	04/16/2015	
Construction of A-5 test stand (EU 106)	0990021-038-AC	04/17/2014	04/16/2015	
Extension of 031-AC	0990021-039-AC	01/17/2014	01/23/2015	
Title V Permit revision	0990021-040-AV	WITHDRAWN		
Extension of 034-AC	0990021-041-AC	05/29/2014	11/30/2015	
Title V permit revision	0990021-042-AV			
Add APU Testing complex	0990021-043-AC			

APPENDIX TV
TITLE V CONDITIONS (VERSION 2/16/2012)

Operation

- TV1. General Prohibition.** A permitted installation may only be operated, maintained, constructed, expanded or modified in a manner that is consistent with the terms of the permit. [Rule 62-4.030, Florida Administrative Code (F.A.C.)]
- TV2. Validity.** This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department. [Rule 62-4.160(2), F.A.C.]
- TV3. Proper Operation and Maintenance.** The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules. [Rule 62-4.160(6), F.A.C.]
- TV4. Not Federally Enforceable. Health, Safety and Welfare.** To ensure protection of public health, safety, and welfare, any construction, modification, or operation of an installation which may be a source of pollution, shall be in accordance with sound professional engineering practices pursuant to Chapter 471, F.S. [Rule 62-4.050(3), F.A.C.]
- TV5. Continued Operation.** An applicant making timely and complete application for permit, or for permit renewal, shall continue to operate the source under the authority and provisions of any existing valid permit or Florida Electrical Power Plant Siting Certification, and in accordance with applicable requirements of the Acid Rain Program and applicable requirements of the CAIR Program, until the conclusion of proceedings associated with its permit application or until the new permit becomes effective, whichever is later, provided the applicant complies with all the provisions of subparagraphs 62-213.420(1)(b)3., F.A.C. [Rules 62-213.420(1)(b)2., F.A.C.]
- TV6. Changes Without Permit Revision.** Title V sources having a valid permit issued pursuant to Chapter 62-213, F.A.C., may make the following changes without permit revision, provided that sources shall maintain source logs or records to verify periods of operation:
- a. Permitted sources may change among those alternative methods of operation allowed by the source's permit as provided by the terms of the permit;
 - b. A permitted source may implement operating changes, as defined in Rule 62-210.200, F.A.C., after the source submits any forms required by any applicable requirement and provides the Department and EPA with at least 7 days written notice prior to implementation. The source and the Department shall attach each notice to the relevant permit;
 - (1) The written notice shall include the date on which the change will occur, and a description of the change within the permitted source, the pollutants emitted and any change in emissions, and any term or condition becoming applicable or no longer applicable as a result of the change;
 - (2) The permit shield described in Rule 62-213.460, F.A.C., shall not apply to such changes;
 - c. Permitted sources may implement changes involving modes of operation only in accordance with Rule 62-213.415, F.A.C.
- [Rule 62-213.410, F.A.C.]
- TV7. Circumvention.** No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]

Compliance

- TV8. Compliance with Chapter 403, F.S., and Department Rules.** Except as provided at Rule 62-213.460, Permit Shield, F.A.C., the issuance of a permit does not relieve any person from complying with the requirements of Chapter 403, F.S., or Department rules. [Rule 62-4.070(7), F.A.C.]

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- TV9.** Compliance with Federal, State and Local Rules. Except as provided at Rule 62-213.460, F.A.C., issuance of a permit does not relieve the owner or operator of a facility or an emissions unit from complying with any applicable requirements, any emission limiting standards or other requirements of the air pollution rules of the Department or any other such requirements under federal, state, or local law. [Rule 62-210.300, F.A.C.]
- TV10.** Binding and enforceable. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions. [Rule 62-4.160(1), F.A.C.]
- TV11.** Timely information. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly. [Rule 62-4.160(15), F.A.C.]
- TV12.** Halting or reduction of source activity. It shall not be a defense for a permittee in an enforcement action that maintaining compliance with any permit condition would necessitate halting of or reduction of the source activity. [Rule 62-213.440(1)(d)3., F.A.C.]
- TV13.** Final permit action. Any Title V source shall comply with all the terms and conditions of the existing permit until the Department has taken final action on any permit renewal or any requested permit revision, except as provided at Rule 62-213.412(2), F.A.C. [Rule 62-213.440(1)(d)4., F.A.C.]
- TV14.** Sudden and unforeseeable events beyond the control of the source. A situation arising from sudden and unforeseeable events beyond the control of the source which causes an exceedance of a technology-based emissions limitation because of unavoidable increases in emissions attributable to the situation and which requires immediate corrective action to restore normal operation, shall be an affirmative defense to an enforcement action in accordance with the provisions and requirements of 40 CFR 70.6(g)(2) and (3), hereby adopted and incorporated by reference. [Rule 62-213.440(1)(d)5., F.A.C.]
- TV15.** Permit Shield. Except as provided in Chapter 62-213, F.A.C., compliance with the terms and conditions of a permit issued pursuant to Chapter 62-213, F.A.C., shall, as of the effective date of the permit, be deemed compliance with any applicable requirements in effect, provided that the source included such applicable requirements in the permit application. Nothing in this condition or in any permit shall alter or affect the ability of EPA or the Department to deal with an emergency, the liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance, or the requirements of the Federal Acid Rain Program or the CAIR Program. [Rule 62-213.460, F.A.C.]
- TV16.** Compliance With Federal Rules. A facility or emissions unit subject to any standard or requirement of 40 CFR, Part 60, 61, 63 or 65, adopted and incorporated by reference at Rule 62-204.800, F.A.C., shall comply with such standard or requirement. Nothing in this chapter shall relieve a facility or emissions unit from complying with such standard or requirement, provided, however, that where a facility or emissions unit is subject to a standard established in Rule 62-296, F.A.C., such standard shall also apply. [Rule 62-296.100(3), F.A.C.]

Permit Procedures

- TV17.** Permit Revision Procedures. The permittee shall revise its permit as required by Rules 62-213.400, 62-213.412, 62-213.420, 62-213.430 & 62-4.080, F.A.C.; and, in addition, the Department shall revise permits as provided in Rule 62-4.080, F.A.C. & 40 CFR 70.7(f).
- TV18.** Permit Renewal. The permittee shall renew its permit as required by Rules 62-4.090, 62.213.420(1) and 62-213.430(3), F.A.C. Permits being renewed are subject to the same requirements that apply to permit issuance at the time of application for renewal. Permit renewal applications shall contain that information identified in Rules 62-210.900(1) [Application for Air Permit - Long Form], 62-213.420(3) [Required Information], 62-213.420(6) [CAIR Part Form], F.A.C. Unless a Title V source submits a timely and complete application for permit renewal in accordance with the requirements this rule, the existing permit shall expire and the source's right to operate shall terminate. For purposes of a permit renewal, a timely application is one that is submitted 225 days before the expiration of a permit that expires on or after June 1, 2009. No Title V permit will be issued for a new term except through the renewal process. [Rules 62-213.420 & 62-213.430, F.A.C.]

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TV19. Insignificant Emissions Units or Pollutant-Emitting Activities. The permittee shall identify and evaluate insignificant emissions units and activities as set forth in Rule 62-213.430(6), F.A.C.

TV20. Savings Clause. If any portion of the final permit is invalidated, the remainder of the permit shall remain in effect. [Rule 62-213.440(1)(d)1., F.A.C.]

TV21. Suspension and Revocation.

- a. Permits shall be effective until suspended, revoked, surrendered, or expired and shall be subject to the provisions of Chapter 403, F.S., and rules of the Department.
- b. Failure to comply with pollution control laws and rules shall be grounds for suspension or revocation.
- c. A permit issued pursuant to Chapter 62-4, F.A.C., shall not become a vested property right in the permittee. The Department may revoke any permit issued by it if it finds that the permit holder or his agent:
 - (1) Submitted false or inaccurate information in his application or operational reports.
 - (2) Has violated law, Department orders, rules or permit conditions.
 - (3) Has failed to submit operational reports or other information required by Department rules.
 - (4) Has refused lawful inspection under Section 403.091, F.S.
- d. No revocation shall become effective except after notice is served by personal services, certified mail, or newspaper notice pursuant to Section 120.60(5), F.S., upon the person or persons named therein and a hearing held if requested within the time specified in the notice. The notice shall specify the provision of the law, or rule alleged to be violated, or the permit condition or Department order alleged to be violated, and the facts alleged to constitute a violation thereof.

[Rule 62-4.100, F.A.C.]

TV22. Not federally enforceable. Financial Responsibility. The Department may require an applicant to submit proof of financial responsibility and may require the applicant to post an appropriate bond to guarantee compliance with the law and Department rules. [Rule 62-4.110, F.A.C.]

TV23. Emissions Unit Reclassification.

- a. Any emissions unit whose operation permit has been revoked as provided for in Chapter 62-4, F.A.C., shall be deemed permanently shut down for purposes of Rule 62-212.500, F.A.C. Any emissions unit whose permit to operate has expired without timely renewal or transfer may be deemed permanently shut down, provided, however, that no such emissions unit shall be deemed permanently shut down if, within 20 days after receipt of written notice from the Department, the emissions unit owner or operator demonstrates that the permit expiration resulted from inadvertent failure to comply with the requirements of Rule 62-4.090, F.A.C., and that the owner or operator intends to continue the emissions unit in operation, and either submits an application for an air operation permit or complies with permit transfer requirements, if applicable.
- b. If the owner or operator of an emissions unit which is so permanently shut down, applies to the Department for a permit to reactivate or operate such emissions unit, the emissions unit will be reviewed and permitted as a new emissions unit.

[Rule 62-210.300(6), F.A.C.]

TV24. Transfer of Permits. Per Rule 62-4.160(11), F.A.C., this permit is transferable only upon Department approval in accordance with Rule 62-4.120, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department. The permittee transferring the permit shall remain liable for corrective actions that may be required as a result of any violations occurring prior to the sale or legal transfer of the facility. The permittee shall also comply with the requirements of Rule 62-210.300(7), F.A.C., and use DEP Form No. 62-210.900(7). [Rules 62-4.160(11), 62-4.120, and 62-210.300(7), F.A.C.]

Rights, Title, Liability, and Agreements

TV25. Rights. As provided in Subsections 403.987(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit. [Rule 62-4.160(3), F.A.C.]

TV26. Title. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title. [Rule 62-4.160(4), F.A.C.]

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TV27. Liability. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of F.S. and Department rules, unless specifically authorized by an order from the Department. [Rule 62-4.160(5), F.A.C.]

TV28. Agreements.

- a. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:
 - (1) Have access to and copy any records that must be kept under conditions of the permit;
 - (2) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and,
 - (3) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules. Reasonable time may depend on the nature of the concern being investigated.
- b. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
- c. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

[Rules 62-4.160(7), (9), and (10), F.A.C.]

Recordkeeping and Emissions Computation

TV29. Permit. The permittee shall keep this permit or a copy thereof at the work site of the permitted activity. [Rule 62-4.160(12), F.A.C.]

TV30. Recordkeeping.

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
- b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least five (5) years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
- c. Records of monitoring information shall include:
 - (1) The date, exact place, and time of sampling or measurements, and the operating conditions at the time of sampling or measurement;
 - (2) The person responsible for performing the sampling or measurements;
 - (3) The dates analyses were performed;
 - (4) The person and company that performed the analyses;
 - (5) The analytical techniques or methods used;
 - (6) The results of such analyses.

[Rules 62-4.160(14) and 62-213.440(1)(b)2., F.A.C.]

TV31. Emissions Computation. Pursuant to Rule 62-210.370, F.A.C., the following required methodologies are to be used by the owner or operator of a facility for computing actual emissions, baseline actual emissions, and net emissions increase, as defined at Rule 62-210.200, F.A.C., and for computing emissions for purposes of the reporting requirements of subsection 62-210.370(3) and paragraph 62-212.300(1)(e), F.A.C., or of any permit condition that requires emissions be computed in accordance with Rule 62-210.370, F.A.C. Rule 62-210.370, F.A.C., is not intended to establish methodologies for determining compliance with the emission limitations of any air permit.

For any of the purposes specified above, the owner or operator of a facility shall compute emissions in accordance with the requirements set forth in this subsection.

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- a. *Basic Approach.* The owner or operator shall employ, on a pollutant-specific basis, the most accurate of the approaches set forth below to compute the emissions of a pollutant from an emissions unit; provided, however, that nothing in this rule shall be construed to require installation and operation of any continuous emissions monitoring system (CEMS), continuous parameter monitoring system (CPMS), or predictive emissions monitoring system (PEMS) not otherwise required by rule or permit, nor shall anything in this rule be construed to require performance of any stack testing not otherwise required by rule or permit.
 - (1) If the emissions unit is equipped with a CEMS meeting the requirements of paragraph 62-210.370(2)(b), F.A.C., the owner or operator shall use such CEMS to compute the emissions of the pollutant, unless the owner or operator demonstrates to the department that an alternative approach is more accurate because the CEMS represents still-emerging technology.
 - (2) If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C, but emissions of the pollutant can be computed pursuant to the mass balance methodology of paragraph 62-210.370(2)(c), F.A.C., the owner or operator shall use such methodology, unless the owner or operator demonstrates to the department that an alternative approach is more accurate.
 - (3) If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C., and emissions cannot be computed pursuant to the mass balance methodology, the owner or operator shall use an emission factor meeting the requirements of paragraph 62-210.370(2)(d), F.A.C., unless the owner or operator demonstrates to the department that an alternative approach is more accurate.
- b. *Continuous Emissions Monitoring System (CEMS).*
 - (1) An owner or operator may use a CEMS to compute emissions of a pollutant for purposes of this rule provided:
 - (a) The CEMS complies with the applicable certification and quality assurance requirements of 40 CFR Part 60, Appendices B and F, or, for an acid rain unit, the certification and quality assurance requirements of 40 CFR Part 75, all adopted by reference at Rule 62-204.800, F.A.C.; or,
 - (b) The owner or operator demonstrates that the CEMS otherwise represents the most accurate means of computing emissions for purposes of this rule.
 - (2) Stack gas volumetric flow rates used with the CEMS to compute emissions shall be obtained by the most accurate of the following methods as demonstrated by the owner or operator:
 - (a) A calibrated flowmeter that records data on a continuous basis, if available; or
 - (b) The average flow rate of all valid stack tests conducted during a five-year period encompassing the period over which the emissions are being computed, provided all stack tests used shall represent the same operational and physical configuration of the unit.
 - (3) The owner or operator may use CEMS data in combination with an appropriate f-factor, heat input data, and any other necessary parameters to compute emissions if such method is demonstrated by the owner or operator to be more accurate than using a stack gas volumetric flow rate as set forth at subparagraph 62-210.370(2)(b)2., F.A.C., above.
- c. *Mass Balance Calculations.*
 - (1) An owner or operator may use mass balance calculations to compute emissions of a pollutant for purposes of this rule provided the owner or operator:
 - (a) Demonstrates a means of validating the content of the pollutant that is contained in or created by all materials or fuels used in or at the emissions unit; and,
 - (b) Assumes that the emissions unit emits all of the pollutant that is contained in or created by any material or fuel used in or at the emissions unit if it cannot otherwise be accounted for in the process or in the capture and destruction of the pollutant by the unit's air pollution control equipment.
 - (2) Where the vendor of a raw material or fuel which is used in or at the emissions unit publishes a range of pollutant content from such material or fuel, the owner or operator shall use the highest value of the range to compute the emissions, unless the owner or operator demonstrates using site-specific data that another content within the range is more accurate.
 - (3) In the case of an emissions unit using coatings or solvents, the owner or operator shall document, through purchase receipts, records and sales receipts, the beginning and ending VOC inventories, the amount of VOC purchased during the computational period, and the amount of VOC disposed of in the liquid phase during such period.
- d. *Emission Factors.*
 - (1) An owner or operator may use an emission factor to compute emissions of a pollutant for purposes of this rule provided the emission factor is based on site-specific data such as stack test data, where available, unless the owner or operator demonstrates to the department that an alternative emission factor is more accurate. An

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owner or operator using site-specific data to derive an emission factor, or set of factors, shall meet the following requirements.

- (a) If stack test data are used, the emission factor shall be based on the average emissions per unit of input, output, or gas volume, whichever is appropriate, of all valid stack tests conducted during at least a five-year period encompassing the period over which the emissions are being computed, provided all stack tests used shall represent the same operational and physical configuration of the unit.
 - (b) Multiple emission factors shall be used as necessary to account for variations in emission rate associated with variations in the emissions unit's operating rate or operating conditions during the period over which emissions are computed.
 - (c) The owner or operator shall compute emissions by multiplying the appropriate emission factor by the appropriate input, output or gas volume value for the period over which the emissions are computed. The owner or operator shall not compute emissions by converting an emission factor to pounds per hour and then multiplying by hours of operation, unless the owner or operator demonstrates that such computation is the most accurate method available.
- (2) If site-specific data are not available to derive an emission factor, the owner or operator may use a published emission factor directly applicable to the process for which emissions are computed. If no directly-applicable emission factor is available, the owner or operator may use a factor based on a similar, but different, process.
- e. *Accounting for Emissions During Periods of Missing Data from CEMS, PEMS, or CPMS.* In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of missing data from CEMS, PEMS, or CPMS using other site-specific data to generate a reasonable estimate of such emissions.
 - f. *Accounting for Emissions During Periods of Startup and Shutdown.* In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of startup and shutdown of the emissions unit.
 - g. *Fugitive Emissions.* In computing the emissions of a pollutant from a facility or emissions unit, the owner or operator shall account for the fugitive emissions of the pollutant, to the extent quantifiable, associated with such facility or emissions unit.
 - h. *Recordkeeping.* The owner or operator shall retain a copy of all records used to compute emissions pursuant to this rule for a period of five years from the date on which such emissions information is submitted to the department for any regulatory purpose.

[Rule 62-210.370(1) & (2), F.A.C.]

Responsible Official

TV32. Designation and Update. The permittee shall designate and update a responsible official as required by Rule 62-213.202, F.A.C.

Prohibitions and Restrictions

TV33. Asbestos. This permit does not authorize any demolition or renovation of the facility or its parts or components which involves asbestos removal. This permit does not constitute a waiver of any of the requirements of Chapter 62-257, F.A.C., and 40 CFR 61, Subpart M, National Emission Standard for Asbestos, adopted and incorporated by reference in Rule 62-204.800, F.A.C. Compliance with Chapter 62-257, F.A.C., and 40 CFR 61, Subpart M, Section 61.145, is required for any asbestos demolition or renovation at the source. [40 CFR 61; Rule 62-204.800, F.A.C.; and, Chapter 62-257, F.A.C.]

TV34. Refrigerant Requirements. Any facility having refrigeration equipment, including air conditioning equipment, which uses a Class I or II substance (listed at 40 CFR 82, Subpart A, Appendices A and B), and any facility which maintains, services, or repairs motor vehicles using a Class I or Class II substance as refrigerant must comply with all requirements of 40 CFR 82, Subparts B and F, and with Chapter 62-281, F.A.C.

TV35. Open Burning Prohibited. Open burning is prohibited unless performed in accordance with the provisions of Rule 62-296.320(3) or Chapter 62-256, F.A.C.

APPENDIX ICE**Requirements for Reciprocating Internal Combustion Engines (RICE)**

APPENDIX ICE**Requirements for Reciprocating Internal Combustion Engines (RICE)**

This Title V facility contains stationary internal combustion engines that have been exempted from the requirement to obtain an air construction permit because they qualify for one of the categorical exemptions listed in Rule 62-210.300(3)(a), F.A.C. However, they are included in this permit as regulated emissions units because they are subject to the following federal rules:

40 CFR 60, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

EU ID No.	Brief Description of Engines	Rule Applicability
087	810 KW Diesel Generator – FIT Center	ZZZZ & IIII
	<ul style="list-style-type: none">Three diesel generators – Model No. CAT D20-6 (20 ekW, 1800 rpm, 2.2 L displacement, fuel consumption 1.8 gal/hr)One diesel generator – Model No. CAT D40-6 (40 ekW, 1800 rpm, 4.4 L displacement, fuel consumption 3.9 gal/hr)	

The generators are exempt from the requirement to obtain Air Construction Permits in accordance with Rule 62-210.300(3)(a)(35), F.A.C. based on the total annual fuel usage of less than 64,000 gallons.

{Permitting Note: *These generators are exempt from permitting pursuant to Rule 62-210.300(3)(a)35, F.A.C. This rule states that when an exempt generator engine is subject to 40 CFR Part 63 Subpart ZZZZ, then the owner or operator shall comply with all limitations and requirements of Subpart ZZZZ that apply to the engine}*

Subpart HHHHHH—**National Emission Standards for Hazardous Air Pollutants:
Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources**

Subpart HHHHHH—National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources

Source: 73 FR 1759, Jan. 9, 2008, unless otherwise noted.

What This Subpart Covers**§ 63.11169 What is the purpose of this subpart?**

Except as provided in paragraph (d) of this section, this subpart establishes national emission standards for hazardous air pollutants (HAP) for area sources involved in any of the activities in paragraphs (a) through (c) of this section. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission standards contained herein.

- (a) Paint stripping operations that involve the use of chemical strippers that contain methylene chloride (MeCl), Chemical Abstract Service number 75092, in paint removal processes;
- (b) Autobody refinishing operations that encompass motor vehicle and mobile equipment spray-applied surface coating operations;
- (c) Spray application of coatings containing compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd), collectively referred to as the target HAP to any part or product made of metal or plastic, or combinations of metal and plastic that are not motor vehicles or mobile equipment.
- (d) This subpart does not apply to any of the activities described in paragraph (d)(1) through (6) of this section.
 - (1) Surface coating or paint stripping performed on site at installations owned or operated by the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State), the National Aeronautics and Space Administration, or the National Nuclear Security Administration.
 - (2) Surface coating or paint stripping of military munitions, as defined in §63.11180, manufactured by or for the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State) or equipment directly and exclusively used for the purposes of transporting military munitions.
 - (3) Surface coating or paint stripping performed by individuals on their personal vehicles, possessions, or property, either as a hobby or for maintenance of their personal vehicles, possessions, or property. This subpart also does not apply when these operations are performed by individuals for others without compensation. An individual who spray applies surface coating to more than two motor vehicles or pieces of mobile equipment per year is subject to the requirements in this subpart that pertain to motor vehicle and mobile equipment surface coating regardless of whether compensation is received.
 - (4) Surface coating or paint stripping that meets the definition of “research and laboratory activities” in §63.11180.
 - (5) Surface coating or paint stripping that meets the definition of “quality control activities” in §63.11180.
 - (6) Surface coating or paint stripping activities that are covered under another area source NESHAP.

§ 63.11170 Am I subject to this subpart?

- (a) You are subject to this subpart if you operate an area source of HAP as defined in paragraph (b) of this section, including sources that are part of a tribal, local, State, or Federal facility and you perform one or more of the activities in paragraphs (a)(1) through (3) of this section:
 - (1) Perform paint stripping using MeCl for the removal of dried paint (including, but not limited to, paint, enamel, varnish, shellac, and lacquer) from wood, metal, plastic, and other substrates.
 - (2) Perform spray application of coatings, as defined in §63.11180, to motor vehicles and mobile equipment including operations that are located in stationary structures at fixed locations, and mobile repair and refinishing operations that travel to the customer's location, except spray coating applications that meet the definition of facility maintenance in §63.11180. However, if you are the owner or operator of a motor vehicle or mobile equipment surface coating operation, you may petition the Administrator for an exemption from this subpart if you can demonstrate, to the satisfaction of the Administrator, that you spray apply no coatings that contain the target HAP, as defined in §63.11180. Petitions must include a description of the coatings that you spray apply and your certification that you do not spray apply any coatings containing the target HAP. If circumstances change such that you intend to spray apply coatings containing the target HAP, you must submit the initial notification required by 63.11175 and comply with the requirements of this subpart.
 - (3) Perform spray application of coatings that contain the target HAP, as defined in §63.11180, to a plastic and/or metal substrate on a part or product, except spray coating applications that meet the definition of facility maintenance or space vehicle in §63.11180.
- (b) An area source of HAP is a source of HAP that is not a major source of HAP, is not located at a major source, and is not part of a major source of HAP emissions. A major source of HAP emissions is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit any single HAP at

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a rate of 9.07 megagrams (Mg) (10 tons) or more per year, or emit any combination of HAP at a rate of 22.68 Mg (25 tons) or more per year.

§ 63.11171 How do I know if my source is considered a new source or an existing source?

(a) This subpart applies to each new and existing affected area source engaged in the activities listed in §63.11170, with the exception of those activities listed in §63.11169(d) of this subpart.

(b) The affected source is the collection of all of the items listed in paragraphs (b)(1) through (6) of this section. Not all affected sources will have all of the items listed in paragraphs (b)(1) through (6) of this section.

(1) Mixing rooms and equipment;

(2) Spray booths, ventilated prep stations, curing ovens, and associated equipment;

(3) Spray guns and associated equipment;

(4) Spray gun cleaning equipment;

(5) Equipment used for storage, handling, recovery, or recycling of cleaning solvent or waste paint; and

(6) Equipment used for paint stripping at paint stripping facilities using paint strippers containing MeCl.

(c) An affected source is a new source if it meets the criteria in paragraphs (c)(1) and (c)(2) of this section.

(1) You commenced the construction of the source after September 17, 2007 by installing new paint stripping or surface coating equipment. If you purchase and install spray booths, enclosed spray gun cleaners, paint stripping equipment to reduce MeCl emissions, or purchase new spray guns to comply with this subpart at an existing source, these actions would not make your existing source a new source.

(2) The new paint stripping or surface coating equipment is used at a source that was not actively engaged in paint stripping and/or miscellaneous surface coating prior to September 17, 2007.

(d) An affected source is reconstructed if it meets the definition of reconstruction in §63.2.

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

General Compliance Requirements**§ 63.11172 When do I have to comply with this subpart?**

The date by which you must comply with this subpart is called the compliance date. The compliance date for each type of affected source is specified in paragraphs (a) and (b) of this section.

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

(1) If the initial startup of your new or reconstructed affected source is after September 17, 2007, the compliance date is January 9, 2008.

(2) If the initial startup of your new or reconstructed affected source occurs after January 9, 2008, the compliance date is the date of initial startup of your affected source.

(b) For an existing affected source, the compliance date is January 10, 2011.

§ 63.11173 What are my general requirements for complying with this subpart?

(a) Each paint stripping operation that is an affected area source must implement management practices to minimize the evaporative emissions of MeCl. The management practices must address, at a minimum, the practices in paragraphs (a)(1) through (5) of this section, as applicable, for your operations.

(1) Evaluate each application to ensure there is a need for paint stripping (e.g., evaluate whether it is possible to re-coat the piece without removing the existing coating).

(2) Evaluate each application where a paint stripper containing MeCl is used to ensure that there is no alternative paint stripping technology that can be used.

(3) Reduce exposure of all paint strippers containing MeCl to the air.

(4) Optimize application conditions when using paint strippers containing MeCl to reduce MeCl evaporation (e.g., if the stripper must be heated, make sure that the temperature is kept as low as possible to reduce evaporation).

(5) Practice proper storage and disposal of paint strippers containing MeCl (e.g., store stripper in closed, air-tight containers).

(b) Each paint stripping operation that has annual usage of more than one ton of MeCl must develop and implement a written MeCl minimization plan to minimize the use and emissions of MeCl. The MeCl minimization plan must address, at a minimum, the management practices specified in paragraphs (a)(1) through (5) of this section, as applicable, for your operations. Each operation must post a placard or sign outlining the MeCl minimization plan in each area where paint stripping operations subject to this subpart occur. Paint stripping operations with annual usage of less than one ton of MeCl, must comply with the requirements in paragraphs (a)(1) through (5) of this section, as applicable, but are not required to develop and implement a written MeCl minimization plan.

(c) Each paint stripping operation must maintain copies of annual usage of paint strippers containing MeCl on site at all times.

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- (d) Each paint stripping operation with annual usage of more than one ton of MeCl must maintain a copy of their current MeCl minimization plan on site at all times.
- (e) Each motor vehicle and mobile equipment surface coating operation and each miscellaneous surface coating operation must meet the requirements in paragraphs (e)(1) through (e)(5) of this section.
- (1) All painters must be certified that they have completed training in the proper spray application of surface coatings and the proper setup and maintenance of spray equipment. The minimum requirements for training and certification are described in paragraph (f) of this section. The spray application of surface coatings is prohibited by persons who are not certified as having completed the training described in paragraph (f) of this section. The requirements of this paragraph do not apply to the students of an accredited surface coating training program who are under the direct supervision of an instructor who meets the requirements of this paragraph.
- (2) All spray-applied coatings must be applied in a spray booth, preparation station, or mobile enclosure that meets the requirements of paragraph (e)(2)(i) of this section and either paragraph (e)(2)(ii), (e)(2)(iii), or (e)(2)(iv) of this section.
- (i) All spray booths, preparation stations, and mobile enclosures must be fitted with a type of filter technology that is demonstrated to achieve at least 98-percent capture of paint overspray. The procedure used to demonstrate filter efficiency must be consistent with the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Method 52.1, "Gravimetric and Dust-Spot Procedures for Testing Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter, June 4, 1992" (incorporated by reference, see §63.14 of subpart A of this part). The test coating for measuring filter efficiency shall be a high solids bake enamel delivered at a rate of at least 135 grams per minute from a conventional (non-HVLP) air-atomized spray gun operating at 40 pounds per square inch (psi) air pressure; the air flow rate across the filter shall be 150 feet per minute. Owners and operators may use published filter efficiency data provided by filter vendors to demonstrate compliance with this requirement and are not required to perform this measurement. The requirements of this paragraph do not apply to waterwash spray booths that are operated and maintained according to the manufacturer's specifications.
- (ii) Spray booths and preparation stations used to refinish complete motor vehicles or mobile equipment must be fully enclosed with a full roof, and four complete walls or complete side curtains, and must be ventilated at negative pressure so that air is drawn into any openings in the booth walls or preparation station curtains. However, if a spray booth is fully enclosed and has seals on all doors and other openings and has an automatic pressure balancing system, it may be operated at up to, but not more than, 0.05 inches water gauge positive pressure.
- (iii) Spray booths and preparation stations that are used to coat miscellaneous parts and products or vehicle subassemblies must have a full roof, at least three complete walls or complete side curtains, and must be ventilated so that air is drawn into the booth. The walls and roof of a booth may have openings, if needed, to allow for conveyors and parts to pass through the booth during the coating process.
- (iv) Mobile ventilated enclosures that are used to perform spot repairs must enclose and, if necessary, seal against the surface around the area being coated such that paint overspray is retained within the enclosure and directed to a filter to capture paint overspray.
- (3) All spray-applied coatings must be applied with a high volume, low pressure (HVLP) spray gun, electrostatic application, airless spray gun, air-assisted airless spray gun, or an equivalent technology that is demonstrated by the spray gun manufacturer to achieve transfer efficiency comparable to one of the spray gun technologies listed above for a comparable operation, and for which written approval has been obtained from the Administrator. The procedure used to demonstrate that spray gun transfer efficiency is equivalent to that of an HVLP spray gun must be equivalent to the California South Coast Air Quality Management District's "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989" and "Guidelines for Demonstrating Equivalency with District Approved Transfer Efficient Spray Guns, September 26, 2002" (incorporated by reference, see §63.14 of subpart A of this part). The requirements of this paragraph do not apply to painting performed by students and instructors at paint training centers. The requirements of this paragraph do not apply to the surface coating of aerospace vehicles that involves the coating of components that normally require the use of an airbrush or an extension on the spray gun to properly reach limited access spaces; to the application of coatings on aerospace vehicles that contain fillers that adversely affect atomization with HVLP spray guns; or to the application of coatings on aerospace vehicles that normally have a dried film thickness of less than 0.0013 centimeter (0.0005 in.).
- (4) All paint spray gun cleaning must be done so that an atomized mist or spray of gun cleaning solvent and paint residue is not created outside of a container that collects used gun cleaning solvent. Spray gun cleaning may be done with, for example, hand cleaning of parts of the disassembled gun in a container of solvent, by flushing solvent through the gun without atomizing the solvent and paint residue, or by using a fully enclosed spray gun washer. A combination of non-atomizing methods may also be used.

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(5) As provided in §63.6(g), we, the U.S. Environmental Protection Agency, may choose to grant you permission to use an alternative to the emission standards in this section after you have requested approval to do so according to §63.6(g)(2).

(f) Each owner or operator of an affected miscellaneous surface coating source must ensure and certify that all new and existing personnel, including contract personnel, who spray apply surface coatings, as defined in §63.11180, are trained in the proper application of surface coatings as required by paragraph (e)(1) of this section. The training program must include, at a minimum, the items listed in paragraphs (f)(1) through (f)(3) of this section.

(1) A list of all current personnel by name and job description who are required to be trained;

(2) Hands-on and classroom instruction that addresses, at a minimum, initial and refresher training in the topics listed in paragraphs (f)(2)(i) through (2)(iv) of this section.

(i) Spray gun equipment selection, set up, and operation, including measuring coating viscosity, selecting the proper fluid tip or nozzle, and achieving the proper spray pattern, air pressure and volume, and fluid delivery rate.

(ii) Spray technique for different types of coatings to improve transfer efficiency and minimize coating usage and overspray, including maintaining the correct spray gun distance and angle to the part, using proper banding and overlap, and reducing lead and lag spraying at the beginning and end of each stroke.

(iii) Routine spray booth and filter maintenance, including filter selection and installation.

(iv) Environmental compliance with the requirements of this subpart.

(3) A description of the methods to be used at the completion of initial or refresher training to demonstrate, document, and provide certification of successful completion of the required training. Owners and operators who can show by documentation or certification that a painter's work experience and/or training has resulted in training equivalent to the training required in paragraph (f)(2) of this section are not required to provide the initial training required by that paragraph to these painters.

(g) As required by paragraph (e)(1) of this section, all new and existing personnel at an affected motor vehicle and mobile equipment or miscellaneous surface coating source, including contract personnel, who spray apply surface coatings, as defined in §63.11180, must be trained by the dates specified in paragraphs (g)(1) and (2) of this section. Employees who transfer within a company to a position as a painter are subject to the same requirements as a new hire.

(1) If your source is a new source, all personnel must be trained and certified no later than 180 days after hiring or no later than July 7, 2008, whichever is later. Painter training that was completed within five years prior to the date training is required, and that meets the requirements specified in paragraph (f)(2) of this section satisfies this requirement and is valid for a period not to exceed five years after the date the training is completed.

(2) If your source is an existing source, all personnel must be trained and certified no later than 180 days after hiring or no later than January 10, 2011, whichever is later. Painter training that was completed within five years prior to the date training is required, and that meets the requirements specified in paragraph (f)(2) of this section satisfies this requirement and is valid for a period not to exceed five years after the date the training is completed.

(3) Training and certification will be valid for a period not to exceed five years after the date the training is completed, and all personnel must receive refresher training that meets the requirements of this section and be re-certified every five years.

[73 FR 1760, Jan. 9, 2008; 73 FR 8408, Feb. 13, 2008]

§ 63.11174 What parts of the General Provisions apply to me?

(a) Table 1 of this subpart shows which parts of the General Provisions in subpart A apply to you.

(b) 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.

Notifications, Reports, and Records**§ 63.11175 What notifications must I submit?**

(a) Initial Notification. If you are the owner or operator of a paint stripping operation using paint strippers containing MeCl and/or a surface coating operation subject to this subpart, you must submit the initial notification required by §63.9(b). For a new affected source, you must submit the Initial Notification no later than 180 days after initial startup or July 7, 2008, whichever is later. For an existing affected source, you must submit the initial notification no later than January 11, 2010. The initial notification must provide the information specified in paragraphs (a)(1) through (8) of this section.

(1) The company name, if applicable.

(2) The name, title, street address, telephone number, e-mail address (if available), and signature of the owner and operator, or other certifying company official;

(3) The street address (physical location) of the affected source and the street address where compliance records are maintained, if different. If the source is a motor vehicle or mobile equipment surface coating operation that repairs vehicles

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at the customer's location, rather than at a fixed location, such as a collision repair shop, the notification should state this and indicate the physical location where records are kept to demonstrate compliance;

(4) An identification of the relevant standard (i.e., this subpart, 40 CFR part 63, subpart HHHHHH);

(5) A brief description of the type of operation as specified in paragraph (a)(5)(i) or (ii) of this section.

(i) For all surface coating operations, indicate whether the source is a motor vehicle and mobile equipment surface coating operation or a miscellaneous surface coating operation, and include the number of spray booths and preparation stations, and the number of painters usually employed at the operation.

(ii) For paint stripping operations, identify the method(s) of paint stripping employed (e.g., chemical, mechanical) and the substrates stripped (e.g., wood, plastic, metal).

(6) Each paint stripping operation must indicate whether they plan to annually use more than one ton of MeCl after the compliance date.

(7) A statement of whether the source is already in compliance with each of the relevant requirements of this subpart, or whether the source will be brought into compliance by the compliance date. For paint stripping operations, the relevant requirements that you must evaluate in making this determination are specified in §63.11173(a) through (d) of this subpart. For surface coating operations, the relevant requirements are specified in §63.11173(e) through (g) of this subpart.

(8) If your source is a new source, you must certify in the initial notification whether the source is in compliance with each of the requirements of this subpart. If your source is an existing source, you may certify in the initial notification that the source is already in compliance. If you are certifying in the initial notification that the source is in compliance with the relevant requirements of this subpart, then include also a statement by a responsible official with that official's name, title, phone number, e-mail address (if available) and signature, certifying the truth, accuracy, and completeness of the notification, a statement that the source has complied with all the relevant standards of this subpart, and that this initial notification also serves as the notification of compliance status.

(b) Notification of Compliance Status. If you are the owner or operator of a new source, you are not required to submit a separate notification of compliance status in addition to the initial notification specified in paragraph (a) of this subpart provided you were able to certify compliance on the date of the initial notification, as part of the initial notification, and your compliance status has not since changed. If you are the owner or operator of any existing source and did not certify in the initial notification that your source is already in compliance as specified in paragraph (a) of this section, then you must submit a notification of compliance status. You must submit a Notification of Compliance Status on or before March 11, 2011. You are required to submit the information specified in paragraphs (b)(1) through (4) of this section with your Notification of Compliance Status:

(1) Your company's name and the street address (physical location) of the affected source and the street address where compliance records are maintained, if different.

(2) The name, title, address, telephone, e-mail address (if available) and signature of the owner and operator, or other certifying company official, certifying the truth, accuracy, and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of this subpart or an explanation of any noncompliance and a description of corrective actions being taken to achieve compliance. For paint stripping operations, the relevant requirements that you must evaluate in making this determination are specified in §63.11173(a) through (d). For surface coating operations, the relevant requirements are specified in §63.11173(e) through (g).

(3) The date of the Notification of Compliance Status.

(4) If you are the owner or operator of an existing affected paint stripping source that annually uses more than one ton of MeCl, you must submit a statement certifying that you have developed and are implementing a written MeCl minimization plan in accordance with §63.11173(b).

§ 63.11176 What reports must I submit?

(a) Annual Notification of Changes Report. If you are the owner or operator of a paint stripping, motor vehicle or mobile equipment, or miscellaneous surface coating affected source, you are required to submit a report in each calendar year in which information previously submitted in either the initial notification required by §63.11175(a), Notification of Compliance, or a previous annual notification of changes report submitted under this paragraph, has changed. Deviations from the relevant requirements in §63.11173(a) through (d) or §63.11173(e) through (g) on the date of the report will be deemed to be a change. This includes notification when paint stripping affected sources that have not developed and implemented a written MeCl minimization plan in accordance with §63.11173(b) used more than one ton of MeCl in the previous calendar year. The annual notification of changes report must be submitted prior to March 1 of each calendar year when reportable changes have occurred and must include the information specified in paragraphs (a)(1) through (2) of this section.

(1) Your company's name and the street address (physical location) of the affected source and the street address where compliance records are maintained, if different.

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(2) The name, title, address, telephone, e-mail address (if available) and signature of the owner and operator, or other certifying company official, certifying the truth, accuracy, and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of this subpart or an explanation of any noncompliance and a description of corrective actions being taken to achieve compliance.

(b) If you are the owner or operator of a paint stripping affected source that has not developed and implemented a written MeCl minimization plan in accordance with §63.11173(b) of this subpart, you must submit a report for any calendar year in which you use more than one ton of MeCl. This report must be submitted no later than March 1 of the following calendar year. You must also develop and implement a written MeCl minimization plan in accordance with §63.11173(b) no later than December 31. You must then submit a Notification of Compliance Status report containing the information specified in §63.11175(b) by March 1 of the following year and comply with the requirements for paint stripping operations that annually use more than one ton of MeCl in §63.11173(d) and 63.11177(f).

§ 63.11177 What records must I keep?

If you are the owner or operator of a surface coating operation, you must keep the records specified in paragraphs (a) through (d) and (g) of this section. If you are the owner or operator of a paint stripping operation, you must keep the records specified in paragraphs (e) through (g) of this section, as applicable.

(a) Certification that each painter has completed the training specified in §63.11173(f) with the date the initial training and the most recent refresher training was completed.

(b) Documentation of the filter efficiency of any spray booth exhaust filter material, according to the procedure in §63.11173(e)(3)(i).

(c) Documentation from the spray gun manufacturer that each spray gun with a cup capacity equal to or greater than 3.0 fluid ounces (89 cc) that does not meet the definition of an HVLP spray gun, electrostatic application, airless spray gun, or air assisted airless spray gun, has been determined by the Administrator to achieve a transfer efficiency equivalent to that of an HVLP spray gun, according to the procedure in §63.11173(e)(4).

(d) Copies of any notification submitted as required by §63.11175 and copies of any report submitted as required by §63.11176.

(e) Records of paint strippers containing MeCl used for paint stripping operations, including the MeCl content of the paint stripper used. Documentation needs to be sufficient to verify annual usage of paint strippers containing MeCl (e.g., material safety data sheets or other documentation provided by the manufacturer or supplier of the paint stripper, purchase receipts, records of paint stripper usage, engineering calculations).

(f) If you are a paint stripping source that annually uses more than one ton of MeCl you are required to maintain a record of your current MeCl minimization plan on site for the duration of your paint stripping operations. You must also keep records of your annual review of, and updates to, your MeCl minimization plan.

(g) Records of any deviation from the requirements in §§63.11173, 63.11174, 63.11175, or 63.11176. These records must include the date and time period of the deviation, and a description of the nature of the deviation and the actions taken to correct the deviation.

(h) Records of any assessments of source compliance performed in support of the initial notification, notification of compliance status, or annual notification of changes report.

§ 63.11178 In what form and for how long must I keep my records?

(a) If you are the owner or operator of an affected source, you must maintain copies of the records specified in §63.11177 for a period of at least five years after the date of each record. Copies of records must be kept on site and in a printed or electronic form that is readily accessible for inspection for at least the first two years after their date, and may be kept off-site after that two year period.

Other Requirements and Information**§ 63.11179 Who implements and enforces this subpart?**

(a) This subpart can be implemented and enforced by us, the U.S. Environmental Protection Agency (EPA), or a delegated authority such as your State, local, or tribal agency. If the Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator and are not transferred to the State, local, or tribal agency.

(c) The authority in §63.11173(e)(5) will not be delegated to State, local, or tribal agencies.

Subpart HHHHHH—**National Emission Standards for Hazardous Air Pollutants:
Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources**

§ 63.11180 What definitions do I need to know?

Terms used in this subpart are defined in the Clean Air Act, in 40 CFR 63.2, and in this section as follows:

Additive means a material that is added to a coating after purchase from a supplier (e.g., catalysts, activators, accelerators).

Administrator means, for the purposes of this rulemaking, the Administrator of the U.S. Environmental Protection Agency or the State or local agency that is granted delegation for implementation of this subpart.

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.

Airless and air-assisted airless spray mean any paint spray technology that relies solely on the fluid pressure of the paint to create an atomized paint spray pattern and does not apply any atomizing compressed air to the paint before it leaves the paint nozzle. Air-assisted airless spray uses compressed air to shape and distribute the fan of atomized paint, but still uses fluid pressure to create the atomized paint.

Appurtenance means any accessory to a stationary structure coated at the site of installation, whether installed or detached, including but not limited to: bathroom and kitchen fixtures; cabinets; concrete forms; doors; elevators; fences; hand railings; heating equipment, air conditioning equipment, and other fixed mechanical equipment or stationary tools; lamp posts; partitions; pipes and piping systems; rain gutters and downspouts; stairways, fixed ladders, catwalks, and fire escapes; and window screens.

Architectural coating means a coating to be applied to stationary structures or their appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs.

Cleaning material means a solvent used to remove contaminants and other materials, such as dirt, grease, or oil, from a substrate before or after coating application or from equipment associated with a coating operation, such as spray booths, spray guns, racks, tanks, and hangers. Thus, it includes any cleaning material used on substrates or equipment or both.

Coating means, for the purposes of this subpart, a material spray-applied to a substrate for decorative, protective, or functional purposes. For the purposes of this subpart, coating does not include the following materials:

- (1) Decorative, protective, or functional materials that consist only of protective oils for metal, acids, bases, or any combination of these substances.
- (2) Paper film or plastic film that may be pre-coated with an adhesive by the film manufacturer.
- (3) Adhesives, sealants, maskants, or caulking materials.
- (4) Temporary protective coatings, lubricants, or surface preparation materials.
- (5) In-mold coatings that are spray-applied in the manufacture of reinforced plastic composite parts.

Compliance date means the date by which you must comply with this subpart.

Deviation means any instance in which an affected source, subject to this subpart, or an owner or operator of such a source fails to meet any requirement or obligation established by this subpart.

Dry media blasting means abrasive blasting using dry media. Dry media blasting relies on impact and abrasion to remove paint from a substrate. Typically, a compressed air stream is used to propel the media against the coated surface.

Electrostatic application means any method of coating application where an electrostatic attraction is created between the part to be coated and the atomized paint particles.

Equipment cleaning means the use of an organic solvent to remove coating residue from the surfaces of paint spray guns and other painting related equipment, including, but not limited to stir sticks, paint cups, brushes, and spray booths.

Facility maintenance means, for the purposes of this subpart, surface coating performed as part of the routine repair or renovation of the tools, equipment, machinery, and structures that comprise the infrastructure of the affected facility and that are necessary for the facility to function in its intended capacity. *Facility maintenance* also includes surface coating associated with the installation of new equipment or structures, and the application of any surface coating as part of janitorial activities. *Facility maintenance* includes the application of coatings to stationary structures or their appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs. *Facility maintenance* also includes the refinishing of mobile equipment in the field or at the site where they are used in service and at which they are intended to remain indefinitely after refinishing. Such mobile equipment includes, but is not limited to, farm equipment and mining equipment for which it is not practical or feasible to move to a dedicated mobile equipment refinishing facility. Such mobile equipment also includes items, such as fork trucks, that are used in a manufacturing facility and which are refinished in that same facility. *Facility maintenance* does not include surface coating of motor vehicles, mobile equipment, or items that routinely leave and return to the facility, such as delivery trucks, rental equipment, or containers used to transport, deliver, distribute, or dispense commercial products to customers, such as compressed gas canisters.

Subpart HHHHHH—**National Emission Standards for Hazardous Air Pollutants:
Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources**

High-volume, low-pressure (HVLP) spray equipment means spray equipment that is permanently labeled as such and used to apply any coating by means of a spray gun which is designed and operated between 0.1 and 10 pounds per square inch gauge (psig) air atomizing pressure measured dynamically at the center of the air cap and at the air horns.

Initial startup means the first time equipment is brought online in a paint stripping or surface coating operation, and paint stripping or surface coating is first performed.

Materials that contain HAP or HAP-containing materials mean, for the purposes of this subpart, materials that contain 0.1 percent or more by mass of any individual HAP that is an OSHA-defined carcinogen as specified in 29 CFR 1910.1200(d)(4), or 1.0 percent or more by mass for any other individual HAP.

Military munitions means all ammunition products and components produced or used by or for the U.S. Department of Defense (DoD) or for the U.S. Armed Services for national defense and security, including military munitions under the control of the Department of Defense, the U.S. Coast Guard, the National Nuclear Security Administration (NNSA), U.S. Department of Energy (DOE), and National Guard personnel. The term military munitions includes: confined gaseous, liquid, and solid propellants, explosives, pyrotechnics, chemical and riot control agents, smokes, and incendiaries used by DoD components, including bulk explosives and chemical warfare agents, chemical munitions, biological weapons, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolition charges, nonnuclear components of nuclear weapons, wholly inert ammunition products, and all devices and components of any items listed in this definition.

Miscellaneous parts and/or products means any part or product made of metal or plastic, or combinations of metal and plastic. Miscellaneous parts and/or products include, but are not limited to, metal and plastic components of the following types of products as well as the products themselves: motor vehicle parts and accessories for automobiles, trucks, recreational vehicles; automobiles and light duty trucks at automobile and light duty truck assembly plants; boats; sporting and recreational goods; toys; business machines; laboratory and medical equipment; and household and other consumer products.

Miscellaneous surface coating operation means the collection of equipment used to apply surface coating to miscellaneous parts and/or products made of metal or plastic, including applying cleaning solvents to prepare the surface before coating application, mixing coatings before application, applying coating to a surface, drying or curing the coating after application, and cleaning coating application equipment, but not plating. A single surface coating operation may include any combination of these types of equipment, but always includes at least the point at which a coating material is applied to a given part. A surface coating operation includes all other steps (such as surface preparation with solvent and equipment cleaning) in the affected source where HAP are emitted from the coating of a part. The use of solvent to clean parts (for example, to remove grease during a mechanical repair) does not constitute a miscellaneous surface coating operation if no coatings are applied. A single affected source may have multiple surface coating operations. Surface coatings applied to wood, leather, rubber, ceramics, stone, masonry, or substrates other than metal and plastic are not considered miscellaneous surface coating operations for the purposes of this subpart.

Mobile equipment means any device that may be drawn and/or driven on a roadway including, but not limited to, heavy-duty trucks, truck trailers, fleet delivery trucks, buses, mobile cranes, bulldozers, street cleaners, agriculture equipment, motor homes, and other recreational vehicles (including camping trailers and fifth wheels).

Motor vehicle means any self-propelled vehicle, including, but not limited to, automobiles, light duty trucks, golf carts, vans, and motorcycles.

Motor vehicle and mobile equipment surface coating means the spray application of coatings to assembled motor vehicles or mobile equipment. For the purposes of this subpart, it does not include the surface coating of motor vehicle or mobile equipment parts or subassemblies at a vehicle assembly plant or parts manufacturing plant.

Non-HAP solvent means, for the purposes of this subpart, a solvent (including thinners and cleaning solvents) that contains less than 0.1 percent by mass of any individual HAP that is an OSHA-defined carcinogen as specified in 29 CFR 1910.1200(d)(4) and less than 1.0 percent by mass for any other individual HAP.

Paint stripping and/or miscellaneous surface coating source or facility means any shop, business, location, or parcel of land where paint stripping or miscellaneous surface coating operations are conducted.

Paint stripping means the removal of dried coatings from wood, metal, plastic, and other substrates. A single affected source may have multiple paint stripping operations.

Painter means any person who spray applies coating.

Plastic refers to substrates containing one or more resins and may be solid, porous, flexible, or rigid. Plastics include fiber reinforced plastic composites.

Subpart HHHHHH—**National Emission Standards for Hazardous Air Pollutants:
Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources**

Protective oil means organic material that is applied to metal for the purpose of providing lubrication or protection from corrosion without forming a solid film. This definition of protective oil includes, but is not limited to, lubricating oils, evaporative oils (including those that evaporate completely), and extrusion oils.

Quality control activities means surface coating or paint stripping activities that meet all of the following criteria:

- (1) The activities associated with a surface coating or paint stripping operation are intended to detect and correct defects in the final product by selecting a limited number of samples from the operation, and comparing the samples against specific performance criteria.
- (2) The activities do not include the production of an intermediate or final product for sale or exchange for commercial profit; for example, parts that are surface coated or stripped are not sold and do not leave the facility.
- (3) The activities are not a normal part of the surface coating or paint stripping operation; for example, they do not include color matching activities performed during a motor vehicle collision repair.
- (4) The activities do not involve surface coating or stripping of the tools, equipment, machinery, and structures that comprise the infrastructure of the affected facility and that are necessary for the facility to function in its intended capacity; that is, the activities are not facility maintenance.

Research and laboratory activities means surface coating or paint stripping activities that meet one of the following criteria:

- (1) Conducted at a laboratory to analyze air, soil, water, waste, or product samples for contaminants, or environmental impact.
- (2) Activities conducted to test more efficient production processes, including alternative paint stripping or surface coating materials or application methods, or methods for preventing or reducing adverse environmental impacts, provided that the activities do not include the production of an intermediate or final product for sale or exchange for commercial profit.
- (3) Activities conducted at a research or laboratory facility that is operated under the close supervision of technically trained personnel, the primary purpose of which is to conduct research and development into new processes and products and that is not engaged in the manufacture of products for sale or exchange for commercial profit.

Solvent means a fluid containing organic compounds used to perform paint stripping, surface prep, or cleaning of surface coating equipment.

Space Vehicle means 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).

Spray-applied coating operations means coatings that are applied using a hand-held device that creates an atomized mist of coating and deposits the coating on a substrate. For the purposes of this subpart, spray-applied coatings do not include the following materials or activities:

- (1) Coatings applied from a hand-held device with a paint cup capacity that is equal to or less than 3.0 fluid ounces (89 cubic centimeters).
- (2) Surface coating application using powder coating, hand-held, non-refillable aerosol containers, or non-atomizing application technology, including, but not limited to, paint brushes, rollers, hand wiping, flow coating, dip coating, electrodeposition coating, web coating, coil coating, touch-up markers, or marking pens.
- (3) Thermal spray operations (also known as metallizing, flame spray, plasma arc spray, and electric arc spray, among other names) in which solid metallic or non-metallic material is heated to a molten or semi-molten state and propelled to the work piece or substrate by compressed air or other gas, where a bond is produced upon impact.

Surface preparation or Surface prep means use of a cleaning material on a portion of or all of a substrate prior to the application of a coating.

Target HAP are compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd).

Target HAP containing coating means a spray-applied coating that contains any individual target HAP that is an Occupational Safety and Health Administration (OSHA)–defined carcinogen as specified in 29 CFR 1910.1200(d)(4) at a concentration greater than 0.1 percent by mass, or greater than 1.0 percent by mass for any other individual target HAP compound. For the purpose of determining whether materials you use contain the target HAP compounds, you may rely on formulation data provided by the manufacturer or supplier, such as the material safety data sheet (MSDS), as long as it represents each target HAP compound in the material that is present at 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other target HAP compounds.

Transfer efficiency means the amount of coating solids adhering to the object being coated divided by the total amount of coating solids sprayed, expressed as a percentage. Coating solids means the nonvolatile portion of the coating that makes up the dry film.

Truck bed liner coating means any coating, excluding color coats, labeled and formulated for application to a truck bed to protect it from surface abrasion.

Subpart HHHHHH—

National Emission Standards for Hazardous Air Pollutants:
Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources

Table 1 to Subpart HHHHHH of Part 63—Applicability of General Provisions to Subpart HHHHHH of Part 63

Citation	Subject	Applicable to subpart HHHHHH	Explanation
§63.1(a)(1)–(12)	General Applicability	Yes	
§63.1(b)(1)–(3)	Initial Applicability Determination	Yes	Applicability of subpart HHHHHH is also specified in §63.11170.
§63.1(c)(1)	Applicability After Standard Established	Yes	
§63.1(c)(2)	Applicability of Permit Program for Area Sources	Yes	(63.11174(b) of Subpart HHHHHH exempts area sources from the obligation to obtain Title V operating permits.
§63.1(c)(5)	Notifications	Yes	
§63.1(e)	Applicability of Permit Program to Major Sources Before Relevant Standard is Set	No	(63.11174(b) of Subpart HHHHHH exempts area sources from the obligation to obtain Title V operating permits.
§63.2	Definitions	Yes	Additional definitions are specified in §63.11180.
§63.3(a)–(c)	Units and Abbreviations	Yes	
§63.4(a)(1)–(5)	Prohibited Activities	Yes	
§63.4(b)–(c)	Circumvention/Fragmentation	Yes	
§63.5	Construction/Reconstruction of major sources	No	Subpart HHHHHH applies only to area sources.
§63.6(a)	Compliance With Standards and Maintenance Requirements—Applicability	Yes	
§63.6(b)(1)–(7)	Compliance Dates for New and Reconstructed Sources	Yes	§63.11172 specifies the compliance dates.
§63.6(c)(1)–(5)	Compliance Dates for Existing Sources	Yes	§63.11172 specifies the compliance dates.
§63.6(e)(1)–(2)	Operation and Maintenance	Yes	
§63.6(e)(3)	Startup, Shutdown, and Malfunction Plan	No	No startup, shutdown, and malfunction plan is required by subpart HHHHHH.
§63.6(f)(1)	Compliance Except During Startup, Shutdown, and Malfunction	Yes	
§63.6(f)(2)–(3)	Methods for Determining Compliance	Yes	
§63.6(g)(1)–(3)	Use of an Alternative Standard	Yes	
§63.6(h)	Compliance With Opacity/Visible Emission Standards	No	Subpart HHHHHH does not establish opacity or visible emission standards.
§63.6(i)(1)–(16)	Extension of Compliance	Yes	
§63.6(j)	Presidential Compliance Exemption	Yes	
§63.7	Performance Testing Requirements	No	No performance testing is required by subpart HHHHHH.
§63.8	Monitoring Requirements	No	Subpart HHHHHH does not require the use of continuous monitoring systems.
§63.9(a)–(d)	Notification Requirements	Yes	§63.11175 specifies notification requirements.
§63.9(e)	Notification of Performance Test	No	Subpart HHHHHH does not require performance tests.
§63.9(f)	Notification of Visible Emissions/Opacity Test	No	Subpart HHHHHH does not have opacity or visible emission standards.
§63.9(g)	Additional Notifications When Using CMS	No	Subpart HHHHHH does not require the use of continuous monitoring systems.

Subpart HHHHHH—

National Emission Standards for Hazardous Air Pollutants:
Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources

Citation	Subject	Applicable to subpart HHHHHH	Explanation
§63.9(h)	Notification of Compliance Status	No	§63.11175 specifies the dates and required content for submitting the notification of compliance status.
§63.9(i)	Adjustment of Submittal Deadlines	Yes	
§63.9(j)	Change in Previous Information	Yes	§63.11176(a) specifies the dates for submitting the notification of changes report.
§63.10(a)	Recordkeeping/Reporting—Applicability and General Information	Yes	
§63.10(b)(1)	General Recordkeeping Requirements	Yes	Additional requirements are specified in §63.11177.
§63.10(b)(2)(i)–(xi)	Recordkeeping Relevant to Startup, Shutdown, and Malfunction Periods and CMS	No	Subpart HHHHHH does not require startup, shutdown, and malfunction plans, or CMS.
§63.10(b)(2)(xii)	Waiver of recordkeeping requirements	Yes	
§63.10(b)(2)(xiii)	Alternatives to the relative accuracy test	No	Subpart HHHHHH does not require the use of CEMS.
§63.10(b)(2)(xiv)	Records supporting notifications	Yes	
§63.10(b)(3)	Recordkeeping Requirements for Applicability Determinations	Yes	
§63.10(c)	Additional Recordkeeping Requirements for Sources with CMS	No	Subpart HHHHHH does not require the use of CMS.
§63.10(d)(1)	General Reporting Requirements	Yes	Additional requirements are specified in §63.11176.
§63.10(d)(2)–(3)	Report of Performance Test Results, and Opacity or Visible Emissions Observations	No	Subpart HHHHHH does not require performance tests, or opacity or visible emissions observations.
§63.10(d)(4)	Progress Reports for Sources With Compliance Extensions	Yes	
§63.10(d)(5)	Startup, Shutdown, and Malfunction Reports	No	Subpart HHHHHH does not require startup, shutdown, and malfunction reports.
§63.10(e)	Additional Reporting requirements for Sources with CMS	No	Subpart HHHHHH does not require the use of CMS.
§63.10(f)	Recordkeeping/Reporting Waiver	Yes	
§63.11	Control Device Requirements/Flares	No	Subpart HHHHHH does not require the use of flares.
§63.12	State Authority and Delegations	Yes	
§63.13	Addresses of State Air Pollution Control Agencies and EPA Regional Offices	Yes	
§63.14	Incorporation by Reference	Yes	Test methods for measuring paint booth filter efficiency and spray gun transfer efficiency in §63.11173(e)(2) and (3) are incorporated and included in §63.14.
§63.15	Availability of Information/Confidentiality	Yes	
§63.16(a)	Performance Track Provisions—reduced reporting	Yes	
§63.16(b)–(c)	Performance Track Provisions—reduced reporting	No	Subpart HHHHHH does not establish numerical emission limits.

APPENDIX D

AIR POLLUTANT EMISSIONS FACTORS FOR DIFFERENT MATERIALS – FIT Center

Pollutant	Engineered Wood Products		Wood Waste Products		Untreated Wood Products		Fuel Oil		Methane	
	Emission Factor	Unit	Emission Factor	Unit	Emission Factor	Unit	Emission Factor	Unit	Emission Factor	Unit
PM ^[1]	0.41	lb/MM Btu	0.42	lb/MM Btu	0.42	lb/MM Btu	1.70	lb/1000 gals	7.60	lb/MMCF
PM-10 ¹	0.35	lb/MM Btu	0.38	lb/MM Btu	0.38	lb/MM Btu	1.70	lb/1000 gals	7.60	lb/MMCF
NOX	1.29	lb/MM Btu	0.49	lb/MM Btu	0.49	lb/MM Btu	18.00	lb/1000 gals	100.00	lb/MMCF
VOC	0.03	lb/MM Btu	0.02	lb/MM Btu	0.02	lb/MM Btu	2.49	lb/1000 gals	5.50	lb/MMCF
CO	0.61	lb/MM Btu	0.60	lb/MM Btu	0.60	lb/MM Btu	5.00	lb/1000 gals	84.00	lb/MMCF
SO2	0.00	lb/MM Btu	0.03	lb/MM Btu	0.03	lb/MM Btu	100.00	lb/1000 gals	0.60	lb/MMCF
Lead			0.00	lb/MM Btu	0.00	lb/MM Btu				
Total HAPs	0.05	lb/MM Btu	0.04	lb/MM Btu	0.04	lb/MM Btu	0.04	lb/1000 gals	0.00	
Pollutant	Vegetable Oil		Heptane		Plastic		Isopropyl Alcohol		Propane	
	Emission Factor	Unit	Emission Factor	Unit	Emission Factor	Unit	Emission Factor	Unit	Emission Factor	Unit
PM	1.70	lb/1000 gals	0.70	lb/1000 gals	100.00	lb/ton	0.70	lb/1000 gals	0.70	lb/1000 gals
PM-10	1.70	lb/1000 gals	0.70	lb/1000 gals	100.00	lb/ton	0.70	lb/1000 gals	0.70	lb/1000 gals
NOX	18.00	lb/1000 gals	13	lb/1000 gals	4.00	lb/ton	13	lb/1000 gals	13	lb/1000 gals
VOC	2.49	lb/1000 gals	1.0	lb/1000 gals	32.00	lb/ton	1.0	lb/1000 gals	1.0	lb/1000 gals
CO	5.00	lb/1000 gals	8	lb/1000 gals	125.00	lb/ton	8	lb/1000 gals	8	lb/1000 gals
SO2	100.00	lb/1000 gals	0.016	lb/1000 gals	0.00	lb/ton	0.016	lb/1000 gals	0.016	lb/1000 gals
Lead	0.00	lb/1000 gals			0.00	lb/ton				
Total HAPs	4.09E-02	lb/1000 gals			0.04	lb/ton				

Note: Heat input of wood products is 16 MMBtu/ton; heat input of No.2 fuel oil is 138.5 MMBtu/1000 gallons; heat input of vegetable oil is 136 MMBtu/1000 gallons.

^[1] Scrubber's control efficiency is assumed at 90%. For other pollutants, the control efficiency is assumed zero.

APPENDIX E

Compliance Procedures for FIT Center

APPENDIX E

FIT Center -- Compliance Procedures [1]

Compliance will be demonstrated by using the amount of each fuel burned multiplied by the appropriate emission factors included in Appendix B. The amount of each fuel burned will be determined by using both mass balance and engineering judgment.

For heptane, alcohols and fuel oil

The emissions will be calculated by using mass balance. The amount of each fuel added to a test will be weighed and the amount of each fuel sent out as liquid waste will be subtracted off from the amount used and it will be assumed that the difference was emitted

- a. Fuel burned = (weight of initial fuel used)- (weight of fuel sent out as waste)

For test involving just one type of solid fuel

The emissions will be calculated by using mass balance. The amount of each fuel added to a test will be weighed. The facility will then either

- 2 Assume that all of the material was burned
 - a. Fuel burned = weight of initial fuel used
- 3 Use engineering judgment to estimate the amount of the product was burned and then subtract that from the initial material in the test;
 - a. Fuel burned = (weight of fuel used) – (estimate of fuel burned based on engineering judgment); or
- 4 Weigh the material after the test, assume all of the suppressant that was used remains on the material burned and subtract the final weight from the initial weight. This will require measuring the amount of suppressant that was used.
 - a. Fuel burned = (weight of fuel used) – (weight of material after burn complete) – (weight of suppressant used)

For tests involving multiple fuels

Some of the test will require evaluating how a suppressant works in an office or home setting. These types of tests may include office chairs, tables, rugs, drapes, mattresses or other material that contains multiple fuel types and non flammable items such as metals. It will be necessary to determine how much of each type of fuel is included in each test, and then use the methodologies above to determine how

[1]As the facility gains experience with operations and fuel mixes, these procedures may be revised with Palm Beach County Health Department approval.

much of each fuel was actually consumed. The facility believes there are two ways to determine the amount of each fuel in the test.

1. The first way would be to estimate the amount of each fuel using engineering judgment.
2. The second way would be to take apart items such as a mattress or a chair being used and weigh the amount of each fuel and non combustible included in the product.
3. The facility plans to evaluate both methods initially and develop a library of fuel mixes based on the product and compare the actual weights to the estimated weights of each product. Over time, the facility hopes to use the library along with engineering judgment to calculate the weight percentage of each fuel in the test.

APPENDIX F
EMISSIONS FACTORS FOR NO_x and CO AT VARIOUS LOADS DURING TESTING OF FT4000 GAS
TURBINES (EU 090)

FT4000 Testing and Emissions Factors for NO_x and CO at various loads

		Heat Input	Carbon Monoxide Emissions	Nitrogen Oxides Emissions
FT4000 Test Condition	Load	(MMBtu/hr)	(lb/hr)	(lb/hr)
Base load, wet injection	100	638.9	98	51
75 percent power, wet injection	75	450.5	135	36
50 percent power, wet injection	50	297.9	136	24
25 percent power, wet injection	25	161.2	89	13
Base load, dry	100	559.9	12	316
75 percent power, dry	75	401.6	10	160
50 percent power, dry	50	326.8	11	85
25 percent power, dry	25	147.2	12	40
Idle, dry	0	53.8	9	7

APPENDIX RR

Reporting Requirements

RR1. Reporting Schedule. This table summarizes information for convenience purposes only. It does not supersede any of the terms or conditions of this permit.

Report	Reporting Deadline(s)	Related Condition(s)
Plant Problems/Permit Deviations	Immediately upon occurrence (See RR2.d.)	RR2, RR3
Malfunction Excess Emissions Report	Quarterly (if requested)	RR3
Semi-Annual Monitoring Report	Every 6 months	RR4
Annual Operating Report	April 1	RR5
Annual Emissions Fee Form and Fee	March 1	RR6
Annual Statement of Compliance	Within 60 days after the end of each calendar year (or more frequently if specified by Rule 62-213.440(2), F.A.C., or by any other applicable requirement); and Within 60 days after submittal of a written agreement for transfer of responsibility, or Within 60 days after permanent shutdown.	RR7
Notification of Administrative Permit Corrections	As needed	RR8
Notification of Startup after Shutdown for More than One Year	Minimum of 60 days prior to the intended startup date or, if emergency startup, as soon as possible after the startup date is ascertained	RR9
Permit Renewal Application	225 days prior to the expiration date of permit	TV17
Test Reports	Maximum 45 days following compliance tests	TR8

{Permitting Note: See permit Section III. Emissions Units and Specific Conditions, for any additional Emission Unit-specific reporting requirements.}

RR2. Reports of Problems.

- a. Plant Operation-Problems. If the permittee is temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall immediately notify the Department. Notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules.
- b. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - (1) A description of and cause of noncompliance; and
 - (2) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.
- c. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.
- d. "Immediately" shall mean the same day, if during a workday (i.e., 8:00 a.m. - 5:00 p.m.), or the first business day after the incident, excluding weekends and holidays; and, for purposes of Rule 62-4.160(15) and 40 CFR 70.6(a)(3)(iii)(B), "promptly" or "prompt" shall have the same meaning as "immediately".

[Rule 62-4.130, Rule 62-4.160(8), Rule 62-4.160(15), and Rule 62-213.440(1)(b), F.A.C.; 40 CFR 70.6(a)(3)(iii)(B)]

- RR3. Reports of Deviations from Permit Requirements.** The permittee shall report in accordance with the requirements of Rule 62-210.700(6), F.A.C. (below), and Rule 62-4.130, F.A.C. (condition RR2.), deviations from permit requirements, including those attributable to upset conditions as defined in the permit. Reports shall include the probable cause of such deviations, and any corrective actions or preventive measures taken.
Rule 62-210.700(6): In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department or the appropriate Local Program in accordance with Rule 62-4.130, F.A.C. (See condition RR2.). A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.
[Rules 62-213.440(1)(b)3.b., and 62-210.700(6)F.A.C.]
- RR4. Semi-Annual Monitoring Reports.** The permittee shall submit reports of any required monitoring at least every six (6) months. All instances of deviations from permit requirements must be clearly identified in such reports. [Rule 62-213.440(1)(b)3.a., F.A.C.]
- RR5. Annual Operating Report.**
- The permittee shall submit to the Compliance Authority, each calendar year, on or before April 1, a completed DEP Form No 62-210.900(5), "Annual Operating Report for Air Pollutant Emitting Facility", for the preceding calendar year.
 - Emissions shall be computed in accordance with the provisions of Rule 62-210.370(2), F.A.C.
[Rules 62-210.370(2) & (3), and 62-213.440(3)(a)2., F.A.C.]
- RR6. Annual Emissions Fee Form and Fee.** Each Title V source permitted to operate in Florida must pay between January 15 and March 1 of each year, an annual emissions fee in an amount determined as set forth in Rule 62-213.205(1), F.A.C.
- If the Department has not received the fee by February 15 of the year following the calendar year for which the fee is calculated, the Department will send the primary responsible official of the Title V source a written warning of the consequences for failing to pay the fee by March 1. If the fee is not postmarked by March 1 of the year due, the Department shall impose, in addition to the fee, a penalty of 50 percent of the amount of the fee unpaid plus interest on such amount computed in accordance with Section 220.807, F.S. If the Department determines that a submitted fee was inaccurately calculated, the Department shall either refund to the permittee any amount overpaid or notify the permittee of any amount underpaid. The Department shall not impose a penalty or interest on any amount underpaid, provided that the permittee has timely remitted payment of at least 90 percent of the amount determined to be due and remits full payment within 60 days after receipt of notice of the amount underpaid. The Department shall waive the collection of underpayment and shall not refund overpayment of the fee, if the amount is less than 1 percent of the fee due, up to \$50.00. The Department shall make every effort to provide a timely assessment of the adequacy of the submitted fee. Failure to pay timely any required annual emissions fee, penalty, or interest constitutes grounds for permit revocation pursuant to Rule 62-4.100, F.A.C.
 - Any documentation of actual hours of operation, actual material or heat input, actual production amount, or actual emissions used to calculate the annual emissions fee shall be retained by the owner for a minimum of five (5) years and shall be made available to the Department upon request.
 - A completed DEP Form 62-213.900(1), "Major Air Pollution Source Annual Emissions Fee Form", must be submitted by a responsible official with the annual emissions fee.
[Rules 62-213.205(1), (1)(g), (1)(i) & (1)(j), F.A.C.]

RR7. Annual Statement of Compliance.

- a. The permittee shall submit a Statement of Compliance with all terms and conditions of the permit that includes all the provisions of 40 CFR 70.6(c)(5)(iii), incorporated by reference at Rule 62-204.800, F.A.C., using DEP Form No. 62-213.900(7). Such statement shall be accompanied by a certification in accordance with Rule 62-213.420(4), F.A.C., for Title V requirements and with Rule 62-214.350, F.A.C., for Acid Rain requirements. Such statements shall be submitted (postmarked) to the Department and EPA:
 - (1) Annually, within 60 days after the end of each calendar year during which the Title V permit was effective, or more frequently if specified by Rule 62-213.440(2), F.A.C., or by any other applicable requirement; and
 - (2) Within 60 days after submittal of a written agreement for transfer of responsibility as required pursuant to 40 CFR 70.7(d)(1)(iv), adopted and incorporated by reference at Rule 62-204.800, F.A.C., or within 60 days after permanent shutdown of a facility permitted under Chapter 62-213, F.A.C.; provided that, in either such case, the reporting period shall be the portion of the calendar year the permit was effective up to the date of transfer of responsibility or permanent facility shutdown, as applicable.
- b. In lieu of individually identifying all applicable requirements and specifying times of compliance with, non-compliance with, and deviation from each, the responsible official may use DEP Form No. 62-213.900(7) as such statement of compliance so long as the responsible official identifies all reportable deviations from and all instances of non-compliance with any applicable requirements and includes all information required by the federal regulation relating to each reportable deviation and instance of non-compliance.
- c. The responsible official may treat compliance with all other applicable requirements as a surrogate for compliance with Rule 62-296.320(2), Objectionable Odor Prohibited.

[Rules 62-213.440(3)(a)2. & 3. and (b), F.A.C.]

RR8. Notification of Administrative Permit Corrections.

- a. A facility owner shall notify the Department by letter of minor corrections to information contained in a permit. Such notifications shall include:
 - (1) Typographical errors noted in the permit;
 - (2) Name, address or phone number change from that in the permit;
 - (3) A change requiring more frequent monitoring or reporting by the permittee;
 - (4) A change in ownership or operational control of a facility, subject to the following provisions:
 - (a) The Department determines that no other change in the permit is necessary;
 - (b) The permittee and proposed new permittee have submitted an Application for Transfer of Air Permit, and the Department has approved the transfer pursuant to Rule 62-210.300(7), F.A.C.; and
 - (c) The new permittee has notified the Department of the effective date of sale or legal transfer.
 - (5) Changes listed at 40 CFR 72.83(a)(1), (2), (6), (9) and (10), adopted and incorporated by reference at Rule 62-204.800, F.A.C., and changes made pursuant to Rules 62-214.340(1) and (2), F.A.C., to Title V sources subject to emissions limitations or reductions pursuant to 42 USC ss. 7651-7651o;
 - (6) Changes listed at 40 CFR 72.83(a)(11) and (12), adopted and incorporated by reference at Rule 62-204.800, F.A.C., to Title V sources subject to emissions limitations or reductions pursuant to 42 USC ss. 7651-7651o, provided the notification is accompanied by a copy of any EPA determination concerning the similarity of the change to those listed at Rule 62-210.360(1)(e), F.A.C.; and
 - (7) Any other similar minor administrative change at the source.
- b. Upon receipt of any such notification, the Department shall within 60 days correct the permit and provide a corrected copy to the owner.
- c. After first notifying the owner, the Department shall correct any permit in which it discovers errors of the types listed at Rules 62-210.360(1)(a) and (b), F.A.C., and provide a corrected copy to the owner.
- d. For Title V source permits, other than general permits, a copy of the corrected permit shall be provided to EPA and any approved local air program in the county where the facility or any part of the facility is located.

[Rule 62-210.360, F.A.C.]

RR9. Notification of Startup. The owners or operator of any emissions unit or facility which has a valid air operation permit which has been shut down more than one year, shall notify the Department in writing of the intent to start up such emissions unit or facility, a minimum of 60 days prior to the intended startup date.

- a. The notification shall include information as to the startup date, anticipated emission rates or pollutants released, changes to processes or control devices which will result in changes to emission rates, and any other conditions which may differ from the valid outstanding operation permit.
- b. If, due to an emergency, a startup date is not known 60 days prior thereto, the owner shall notify the Department as soon as possible after the date of such startup is ascertained.

[Rule 62-210.300(5), F.A.C.]

- RR10. Report Submission.** The permittee shall submit all compliance related notifications and reports required of this permit to the Compliance Authority. {See front of permit for address and phone number.}
- RR11. EPA Report Submission.** Any reports, data, notifications, certifications, and requests required to be sent to the United States Environmental Protection Agency, Region 4, should be sent to: Air, Pesticides & Toxics Management Division, United States Environmental Protection Agency, Region 4, Sam Nunn Atlanta Federal Center, 61 Forsyth Street SW, Atlanta, GA 30303-8960. Phone: 404/562-9077.
- RR12. Acid Rain Report Submission.** Acid Rain Program Information shall be submitted, as necessary, to: Department of Environmental Protection, 2600 Blair Stone Road, Mail Station #5510, Tallahassee, Florida 32399-2400. Phone: 850/488-6140. Fax: 850/922-6979.
- RR13. Report Certification.** All reports shall be accompanied by a certification by a responsible official, pursuant to Rule 62-213.420(4), F.A.C. [Rule 62-213.440(1)(b)3.c, F.A.C.]
- RR14. Certification by Responsible Official (RO).** In addition to the professional engineering certification required for applications by Rule 62-4.050(3), F.A.C., any application form, report, compliance statement, compliance plan and compliance schedule submitted pursuant to Chapter 62-213, F.A.C., shall contain a certification signed by a responsible official that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Any responsible official who fails to submit any required information or who has submitted incorrect information shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary information or correct information. [Rule 62-213.420(4), F.A.C.]
- RR15. Confidential Information.** Whenever an applicant submits information under a claim of confidentiality pursuant to Section 403.111, F.S., the applicant shall also submit a copy of all such information and claim directly to EPA. Any permittee may claim confidentiality of any data or other information by complying with this procedure. [Rules 62-213.420(2), and 62-213.440(1)(d)6., F.A.C.]
- RR16. Forms and Instructions.** The forms used by the Department in the Title V source operation program are adopted and incorporated by reference in Rule 62-213.900, F.A.C. The forms are listed by rule number, which is also the form number, and with the subject, title, and effective date. Copies of forms may be obtained by writing to the Department of Environmental Protection, Division of Air Resource Management, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, by contacting the appropriate permitting authority or by accessing the Department's web site at: <http://www.dep.state.fl.us/air/rules/forms.htm>.
- Major Air Pollution Source Annual Emissions Fee Form (Effective 10/12/2008).
 - Statement of Compliance Form (Effective 06/02/2002).
 - Responsible Official Notification Form (Effective 06/02/2002).
- [Rule 62-213.900, F.A.C.: Forms (1), (7) and (8)]

APPENDIX TR

Test Requirements

Unless otherwise specified in the permit, the following testing requirements apply to each emissions unit for which testing is required. The terms “stack” and “duct” are used interchangeably in this appendix.

- TR1. Required Number of Test Runs.** For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured; provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five-day period allowed for the test, the Secretary or his or her designee may accept the results of two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(1), F.A.C.]
- TR2. Operating Rate During Testing.** Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. [Rule 62-297.310(2), F.A.C.]
- TR3. Calculation of Emission Rate.** For each emissions performance test, the indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule. [Rule 62-297.310(3), F.A.C.]
- TR4. Applicable Test Procedures.**
- a. *Required Sampling Time.*
 - (1) Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.
 - (2) **Opacity Compliance Tests.** When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:
 - (a) For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.
 - (b) The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.
 - (c) The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.
 - b. *Minimum Sample Volume.* Unless otherwise specified in the applicable rule or test method, the minimum sample volume per run shall be 25 dry standard cubic feet.
 - c. *Required Flow Rate Range.* For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.
 - d. *Calibration of Sampling Equipment.* Calibration of the sampling train equipment shall be conducted in accordance

with the schedule shown in Table 297.310-1, F.A.C.

TABLE 297.310-1 CALIBRATION SCHEDULE			
ITEM	MINIMUM CALIBRATION FREQUENCY	REFERENCE INSTRUMENT	TOLERANCE
Liquid in glass thermometer	Annually	ASTM Hg in glass ref. thermometer or equivalent or thermometric points	+/-2%
Bimetallic thermometer	Quarterly	Calib. liq. in glass	5° F
Thermocouple	Annually	ASTM Hg in glass ref. thermometer, NBS calibrated reference and potentiometer	5° F
Barometer	Monthly	Hg barometer or NOAA station	+/-1% scale
Pitot Tube	When required or when damaged	By construction or measurements in wind tunnel D greater than 16" and standard pitot tube	See EPA Method 2, Fig. 2-2 & 2-3
Probe Nozzles	Before each test or when nicked, dented, or corroded	Micrometer	+/- 0.001" mean of at least three readings; Max. deviation between readings, 0.004"
Dry Gas Meter and Orifice Meter	1. Full Scale: When received, when 5% change observed, annually	Spirometer or calibrated wet test or dry gas test meter	2%
	2. One Point: Semiannually		
	3. Check after each test series	Comparison check	5%

- e. *Allowed Modification to EPA Method 5.* When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.

[Rule 62-297.310(4), F.A.C.]

TR5. Determination of Process Variables.

- a. **Required Equipment.** The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
- b. **Accuracy of Equipment.** Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

TR6. Sampling Facilities. Permittees that are required to sample mass emissions from point sources shall install stack sampling ports and provide sampling facilities that meet the requirements of this condition. Sampling facilities include sampling ports, work platforms, access to work platforms, electrical power, and sampling equipment support. All stack sampling facilities must also comply with all applicable Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E.

- a. **Permanent Test Facilities.** The owner or operator of an emissions unit for which a compliance test, other than a visible emissions test, is required on at least an annual basis, shall install and maintain permanent

stack sampling facilities.

- b. Temporary Test Facilities. The owner or operator of an emissions unit that is not required to conduct a compliance test on at least an annual basis may use permanent or temporary stack sampling facilities. If the owner chooses to use temporary sampling facilities on an emissions unit, and the Department elects to test the unit, such temporary facilities shall be installed on the emissions unit within 5 days of a request by the Department and remain on the emissions unit until the test is completed.
- c. Sampling Ports.
 - (1) All sampling ports shall have a minimum inside diameter of 3 inches.
 - (2) The ports shall be capable of being sealed when not in use.
 - (3) The sampling ports shall be located in the stack at least 2 stack diameters or equivalent diameters downstream and at least 0.5 stack diameter or equivalent diameter upstream from any fan, bend, constriction or other flow disturbance.
 - (4) For emissions units for which a complete application to construct has been filed prior to December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 15 feet or less. For stacks with a larger diameter, four sampling ports, each 90 degrees apart, shall be installed. For emissions units for which a complete application to construct is filed on or after December 1, 1980, at least two sampling ports, 90 degrees apart, shall be installed at each sampling location on all circular stacks that have an outside diameter of 10 feet or less. For stacks with larger diameters, four sampling ports, each 90 degrees apart, shall be installed. On horizontal circular ducts, the ports shall be located so that the probe can enter the stack vertically, horizontally or at a 45 degree angle.
 - (5) On rectangular ducts, the cross sectional area shall be divided into the number of equal areas in accordance with EPA Method 1. Sampling ports shall be provided which allow access to each sampling point. The ports shall be located so that the probe can be inserted perpendicular to the gas flow.
- d. Work Platforms.
 - (1) Minimum size of the working platform shall be 24 square feet in area. Platforms shall be at least 3 feet wide.
 - (2) On circular stacks with 2 sampling ports, the platform shall extend at least 110 degrees around the stack.
 - (3) On circular stacks with more than two sampling ports, the work platform shall extend 360 degrees around the stack.
 - (4) All platforms shall be equipped with an adequate safety rail (ropes are not acceptable), toe board, and hinged floor-opening cover if ladder access is used to reach the platform. The safety rail directly in line with the sampling ports shall be removable so that no obstruction exists in an area 14 inches below each sample port and 6 inches on either side of the sampling port.
- e. Access to Work Platform.
 - (1) Ladders to the work platform exceeding 15 feet in length shall have safety cages or fall arresters with a minimum of 3 compatible safety belts available for use by sampling personnel.
 - (2) Walkways over free-fall areas shall be equipped with safety rails and toe boards.
- f. Electrical Power.
 - (1) A minimum of two 120-volt AC, 20-amp outlets shall be provided at the sampling platform within 20 feet of each sampling port.
 - (2) If extension cords are used to provide the electrical power, they shall be kept on the plant's property and be available immediately upon request by sampling personnel.
- g. Sampling Equipment Support.
 - (1) A three-quarter inch eyebolt and an angle bracket shall be attached directly above each port on vertical stacks and above each row of sampling ports on the sides of horizontal ducts.
 - (a) The bracket shall be a standard 3 inch x 3 inch x one-quarter inch equal-legs bracket which is 1 and one-half inches wide. A hole that is one-half inch in diameter shall be drilled through the exact center of the horizontal portion of the bracket. The horizontal portion of the bracket shall be located 14 inches above the centerline of the sampling port.
 - (b) A three-eighth inch bolt which protrudes 2 inches from the stack may be substituted for the required bracket. The bolt shall be located 15 and one-half inches above the centerline of the sampling port.
 - (c) The three-quarter inch eyebolt shall be capable of supporting a 500 pound working load. For stacks that are less than 12 feet in diameter, the eyebolt shall be located 48 inches above the horizontal portion of the angle bracket. For stacks that are greater than or equal to 12 feet in diameter, the eyebolt shall be located 60 inches above the horizontal portion of the angle bracket. If the eyebolt is more than 120 inches above the platform, a length of chain shall be attached to it to bring the free end of the chain to within safe reach from the platform.
 - (2) A complete monorail or dual rail arrangement may be substituted for the eyebolt and bracket.

- (3) When the sample ports are located in the top of a horizontal duct, a frame shall be provided above the port to allow the sample probe to be secured during the test.

[Rule 62-297.310(6), F.A.C.]

TR7.Frequency of Compliance Tests. The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

a. **General Compliance Testing.**

- (1) The owner or operator of a new or modified emissions unit that is subject to an emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining an operation permit for such emissions unit.
- (2) For excess emission limitations for particulate matter specified in Rule 62-210.700, F.A.C., a compliance test shall be conducted annually while the emissions unit is operating under soot blowing conditions in each federal fiscal year during which soot blowing is part of normal emissions unit operation, except that such test shall not be required in any federal fiscal year in which a fossil fuel steam generator does not burn liquid and/or solid fuel for more than 400 hours other than during startup.
- (3) The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to sub-subparagraph 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:
 - (a) Did not operate; or
 - (b) In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours.
- (4) During each federal fiscal year (October 1 – September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:
 - (a) Visible emissions, if there is an applicable standard;
 - (b) Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and
 - (c) Each NESHAP pollutant, if there is an applicable emission standard.
- (5) An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.
- (6) For fossil fuel steam generators on a semi-annual particulate matter emission compliance testing schedule, a compliance test shall not be required for any six-month period in which liquid and/or solid fuel is not burned for more than 200 hours other than during startup.
- (7) For emissions units electing to conduct particulate matter emission compliance testing quarterly pursuant to paragraph 62-296.405(2)(a), F.A.C., a compliance test shall not be required for any quarter in which liquid and/or solid fuel is not burned for more than 100 hours other than during startup.
- (8) Any combustion turbine that does not operate for more than 400 hours per year shall conduct a visible emissions compliance test once per each five-year period, coinciding with the term of its air operation permit.
- (9) The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
- (10) An annual compliance test conducted for visible emissions shall not be required for units exempted from air permitting pursuant to subsection 62-210.300(3), F.A.C.; units determined to be insignificant pursuant to subparagraph 62-213.300(2)(a)1., A.C., or paragraph 62-213.430(6)(b), F.A.C.; or units permitted under the General Permit provisions in paragraph 62-210.300(4)(a) or Rule 62-213.300, F.A.C., unless the general permit specifically requires such testing.

- b. **Special Compliance Tests.** When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

- c. *Waiver of Compliance Test Requirements.* If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of paragraph 62-297.310(7)(b), F.A.C., shall apply.

[Rule 62-297.310(7), F.A.C.]

TR8. Test Reports.

- a. The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test.
- b. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed.
- c. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information.
- (1) The type, location, and designation of the emissions unit tested.
 - (2) The facility at which the emissions unit is located.
 - (3) The owner or operator of the emissions unit.
 - (4) The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
 - (5) The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
 - (6) The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
 - (7) A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
 - (8) The date, starting time and duration of each sampling run.
 - (9) The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
 - (10) The number of points sampled and configuration and location of the sampling plane.
 - (11) For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
 - (12) The type, manufacturer and configuration of the sampling equipment used.
 - (13) Data related to the required calibration of the test equipment.
 - (14) Data on the identification, processing and weights of all filters used.
 - (15) Data on the types and amounts of any chemical solutions used.
 - (16) Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
 - (17) The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
 - (18) All measured and calculated data required to be determined by each applicable test procedure for each run.
 - (19) The detailed calculations for one run that relate the collected data to the calculated emission rate.
 - (20) The applicable emission standard and the resulting maximum allowable emission rate for the emissions unit plus the test result in the same form and unit of measure.
 - (21) A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rule 62-297.310(8), F.A.C.]

APPENDIX GG**40 CFR Part 63 Subpart GG—National Emission Standards for Aerospace Manufacturing and Rework Facilities****§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

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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 repainting 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.

§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

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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

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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

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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 commercial purposes, except in a de minimis 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

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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

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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.

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(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.

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(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.

§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

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(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. H₂O) 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:

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- (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 nonflammable 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.

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Cleaning solvent	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 ₂ O and 68 °F). These cleaners also contain no HAP.

§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.

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(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 all times. 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.

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(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.

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(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.

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§63.746 Standards: Depainting operations.

Not Applicable

§63.747 Standards: Chemical milling maskant application operations

Not Applicable

§63.748 Standards: Handling and storage of waste

Not Applicable

§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) or the vapor pressure requirement specified in §63.744(b)(2).

(1) *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.

(2) *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.

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(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

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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* **Not Applicable**

(g) *Inorganic HAP emissions—depainting operations.* **Not Applicable**

(h) *Chemical milling maskant application operations*—**Not Applicable**

(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

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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:

$$PP_c = \frac{\sum_{i=1}^n \frac{(W_i)(VP_i)/MW_i}{\frac{W_w}{MW_w} + \sum_{e=1}^n \frac{W_e}{MW_e} + \sum_{i=1}^n \frac{W_i}{MW_i}}}{\frac{W_w}{MW_w} + \sum_{e=1}^n \frac{W_e}{MW_e} + \sum_{i=1}^n \frac{W_i}{MW_i}}$$

where:

W_i = Weight of the "i"th VOC compound, grams. W_w = Weight of water, grams.

W_e = Weight of non-HAP, non VOC 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:

$$V_{wi} = \frac{D_{ci}W_{wi}}{D_w} \quad \text{Eq. 1}$$

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.

$$M_H = D_{ci}W_H \quad \text{Eq. 2}$$

where:

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MHi = mass (lb) of organic HAP in one gal of coating i. Dci = density (lb of coating per gal of coating) of coating i.

WHi = weight fraction (expressed as a decimal) of organic HAP in coating i.

$$H_i = \frac{M_H}{(1 - V_{wi})} \quad \text{Eq. 3}$$

where:

H_i = mass of organic HAP emitted per volume of coating i (lb/gal) less water as applied. M_H = 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. Not Applicable*

(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:

$$V_{wi} = \frac{D_a W_{wi}}{D_w} \quad \text{Eq. 5}$$

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.

$$M_{vi} = D_{ci} W_{vi} \quad \text{Eq. 6}$$

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.

$$G_i = \frac{M_{vi}}{(1 - V_{wi}) - V_{wi}} \quad \text{Eq. 7}$$

where:

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G_i = mass of VOC emitted per volume of coating i (lb/gal) (less water and exempt solvents) as applied. MV_i = mass (lb) of VOC in one gal of coating i .

V_{wi} = volume (gal) of water in one gal of coating i .

VX_i = 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. Not Applicable*

(g) *Overall VOC and/or organic HAP control efficiency—carbon adsorber. Not Applicable*

(h) *Overall VOC and/or organic HAP control efficiency—control devices other than carbon adsorbers.*

Not Applicable

(i)(1) *Alternative application method—primers and topcoats. Not Applicable*

(j) *Spot stripping and decal removal. Not Applicable*

(k) *Organic HAP content level determination—compliant chemical milling maskants. Not Applicable*

(l) *Organic HAP content level determination—averaged chemical milling maskants. Not Applicable*

(m) *VOC content level determination—compliant chemical milling maskants. Not Applicable*

(n) *VOC content level determination—averaged chemical milling maskants. Not Applicable*

(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 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.

§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. Not Applicable*

(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).

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- (d) *Particulate filters and waterwash booths—depainting operations.* **Not Applicable**
- (e) *Use of an alternative monitoring method* **Not Applicable**
- (f) *Reduction of monitoring data.* (1) The data may be recorded in reduced or nonreduced form (e.g., parts per million (ppm) pollutant and % O₂ or 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).

§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

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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) (Hi) and the mass of VOC emitted per unit volume of coating as applied (less water and exempt solvents) (Gi) 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 Hi and Gi; 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 Hi 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) (Ha) and of VOC emitted per unit volume of coating as applied (less water and exempt solvents) (Ga) 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 Ha and Ga.
- (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.

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(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. Not Applicable*

(f) *Chemical milling maskant application operations. Not Applicable*

§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

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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.* **Not Applicable**

(e) *Chemical milling maskant application operation.* Not Applicable

§§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.

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(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.

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.
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	

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Reference	Applies to affected sources in subpart GG	Comment
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.
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
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	

APPENDIX GG**40 CFR Part 63 Subpart GG—National Emission Standards for Aerospace Manufacturing and Rework Facilities**

Reference	Applies to affected sources in subpart GG	Comment
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	
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
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
63.9(b)(3)	Yes	
63.9(b)(4)	Yes	

APPENDIX GG**40 CFR Part 63 Subpart GG—National Emission Standards for Aerospace Manufacturing and Rework Facilities**

Reference	Applies to affected sources in subpart GG	Comment
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
63.9(g)(1)	No	
63.9(g)(2)	No	The standards in subpart GG do not include opacity
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
63.10(d)(4)	Yes	
63.10(d)(5)	Yes	
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
63.10(f)	Yes	
63.11	Yes	
63.12	Yes	
63.13	Yes	
63.14	Yes	
63.15	Yes	

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

APPENDIX GG**40 CFR Part 63 Subpart GG—National Emission Standards for Aerospace Manufacturing and Rework Facilities**

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).

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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 repainting operations and generally to allow the use of less hazardous repainting methods.

Lacquer—A clear or pigmented coating formulated with a nitrocellulose or synthetic resin to dry by evaporation without a chemical reaction. Lacquers are resolvable 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.

APPENDIX GG**40 CFR Part 63 Subpart GG—National Emission Standards for Aerospace Manufacturing and Rework Facilities**

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.

APPENDIX GG**40 CFR Part 63 Subpart GG—National Emission Standards for Aerospace Manufacturing and Rework Facilities**

Wing coating—A corrosion-resistant topcoat that is resilient enough to withstand the flexing of the wings.

Statement of Basis

**STATEMENT OF BASIS
AIR POLLUTION OPERATION PERMIT
TITLE V PERMIT NO. 0990021-042-AV**

United Technologies Corporation
Facility ID No. 0990021
Palm Beach County, Florida

Facility Description:

Pratt & Whitney (P&W), a division of United Technologies Corporation (UTC); Sikorsky Aircraft Corporation (SAC), a subsidiary of UTC; and Fire Innovation Test (FIT) Center; operate adjacent facilities located on a combined 7,000-acre site in rural northwest Palm Beach County, Florida. Pratt & Whitney West Palm Beach is the company's principal jet engine test facility, primarily dedicated to research and development. P&W has over 50 test stands specifically designed to perform evaluations of rocket engines, jet engines, as well as individual components for each type of engine. Jet engines are tested for research and development programs. No jet engine manufacturing is performed at West Palm Beach.

Health Department issued a Title V air operation permit to P&W on July 17, 2004 (FDEP Permit No. 0990021-006-AV), and the facility was designated as a major source of criteria pollutants, including nitrogen oxides (NOx), volatile organic compounds (VOCs), and carbon monoxide (CO).

SAC, which is located on the same campus but in wholly separate buildings, operates the Development Flight Center (DFC), which is the company's site for helicopter development testing. SAC also operates the Florida Assembly Flight Operation (FAFO), which assembles helicopters from parts delivered to the facility (in space rented from P&W). SAC was issued a Federally Enforceable State Operating Permit (FESOP) by Health Department on February 2, 2007 (FDEP Permit No. 0990185-004-AF) and is designated as a synthetic minor source for hazardous air pollutants (HAPs).

Pursuant to Title V Permit no. 0990021-013-AV, issued on February 03, 2011, P&W and SAC were combined into one permit.

The Fire, Innovation & Testing (FIT) center began operations on February 15, 2012 at UTC campus. The FIT center is intended to provide UTC Fire & Security (UTCFS) the ability to test current and future fire suppression products. The Health Department issued an air construction permit no. 0990021-027-AC in December 2010 for this project. Indoor fire testing is performed in an approximately 70 ft x 70 ft enclosed building with a 50 ft high ceiling. The test fuel packages will consist of variety of materials such as wood, plastics, heptane, fuel oil (Number 2), vegetable oil, isopropyl alcohol, acetone, methane, propane, and other hydrocarbon fuels.

The Title V permit revision (0990021-029-AV) was issued on January 30, 2013 that included the FIT center in facility's Title V permit.

Based on the permit application received on June 13, 2013, this facility **is not** a major source of hazardous air pollutants (HAPs).

UTC sold its Rocketdyne operations to Aerojet, and the emissions units 015, 016, 018, 040, 066, and 080 are transferred to Aerojet's permit. Title V permit revision no. 0990021-036-AV was issued to remove these emissions units from permit.

Project Description:

This Title V permit revision no. 0990021-042-AV incorporates the conditions of the permits 0990021-037-AC and 0990021-039-AC. Permit No. 0990021-039-AC is an extended permit to Permit No. 0990021-031-AC, which authorized construction of a Hot Acoustic Rig (HAR, EU 089) at the existing B-6 test stand at P&W. Permit No. 0990021-037-AC is a modified permit to Permit No. 0990021-032-AC, which authorized testing of FT4000 (EU 090)

Statement of Basis

using natural gas and operation of Reciprocating Internal Combustion Engines (RICE, EU 091) at A-4 test stand. AC Permit No. 0990021-037-AC reduces the number of hours of the FT4000 and RICE testing.

This permit revision adds the applicability of 40 CFR 63 Subpart GG to the emissions units 070, 071 and 073, since the permittee determined that these emissions units still support the jet engine manufacturing, although the engines are not assembled at the site. Although, the facility's status is changed from 'major' to 'synthetic minor' for hazardous air pollutants pursuant to permit no. 0990021-020-AC, the regulations of 40 CFR 63 Subpart GG still apply because of the NESHAP policy of 'once in always in.'

This permit revision also modifies the emissions unit 088 – Jet Engine Parts Coating Process by incorporating a new coating process step to add a second coating, which produces minimal volatile organic compounds.

In addition, This Title V permit revision changes to testing requirements for fourteen Detroit Diesel RICE engines (EUs 092-105), pursuant to the approval from the Department of Environmental Protection (FDEP) issued on October 2, 2014. This approval allows the permittee to test two engines, instead of all 14 engines, during each performance test. Also, the conditions C-41 to C-43 for these generators are removed since these conditions apply only till May 3, 2014.

Regulatory Classifications

Regulatory classifications for this facility include the following designations:

PROGRAM	PROGRAM DESCRIPTION	CLASSIFICATION
PSD	Prevention of Significant Deterioration Rule 62-212.400, F.A.C	Major Source
NSR-NAA	New Source Review for Nonattainment Areas Rule 62-212.500, F.A.C.	Not Applicable
RACT (NOx)	Diesel Electrical Generators subject to Rule 62-296.570, F.A.C	
NSPS	New Source Performance Standards	Not Applicable
NESHAP	Some of the reciprocating internal combustion engines (RICE) – such as EU 091 – are subject to the regulations of 40 CFR Part 60 Subpart JJJJ "New Source Performance Standards for Spark Ignition (SI) Engines." A few newer generators are subject to the regulations of 40 CFR Part 60 Subpart IIII "New Source Performance for Stationary Internal Combustion Engines." Appendix ICE contains the details of the generators and the applicable regulations. The generators are subject to 40 CFR Part 63 Subpart ZZZZ "National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines." The emissions units 071, 072 and 073 are subject to 40 CFR 63 Subpart GG "National Emission Standards for Aerospace Manufacturing and Rework Facilities." The painting and stripping operations are subject to the requirements of 40 CFR Part 63 Subpart HHHHHH , "National Emission Standard for Hazardous Air Pollutants for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources."	Synthetic Minor Source
Title V Operating Permit	Federal Operating Permit Program Rule 62-213, F.A.C	Major Source

Statement of Basis

LIST OF EMISSIONS UNITS

FOLLOWING IS THE LIST OF EMISSION UNITS AT THE FACILITY.

EU No.	R / U*/I**	Brief Description
<i>Following emission units are located at Pratt & Whitney Rocketdyne (except as noted)</i>		
009	U	Diesel storage tanks
010	U	Jet fuel storage tanks
012	R	Jet fuel storage tank (F-8-CFF)
014	R	Paint spray booth (PS-1-TMC) used for refinishing support equipment
015	I	Closed-loop flush cleaning (BF-1-RL-10) using Vertrel MCA <i>[This emissions unit is sold and is removed per applicants' request]</i>
016	I	Boiler (BO-12-E6) fired by natural gas – 42 MMBTU/hr Heat Input <i>[This emissions unit is sold and is removed per applicants' request]</i>
018	I	Acid gas scrubbing system (AS-2-MPL) for plating operations <i>[This emissions unit is sold and is removed per applicants' request]</i>
022	I	Boilers (BO-1-MBH, BO-2-MBH) fired by natural gas – 54 MMBTU/hr Heat Input per Boiler. <i>[This EU is demolished and is removed per applicant's request]</i>
031	U	Diesel storage tanks (DL-19-SEGF and DL-20-SEGF)
037	U	AST Gasoline storage tanks
040	I	Heat treatment furnaces (FU-3-MHT and FU-4-MHT) fired by natural gas <i>[This emissions unit is sold and is removed per applicants' request]</i>
045	U	Water evaporator (EV-1-MW)
049	U	Plasma spray booths
059	U	Air and fuel heaters fired with natural gas
064	R	Paint spray booth (PSB-1-RTF)
065	U	Diesel engines powering fire protection pumps and cooling water pumps during rocket engine testing and emergency electrical generators
066	I	Boiler (BO-14-E8) fired by propane subject – 6.7 MMBTU/Hr Heat Input <i>[This emissions unit is sold and is removed per applicants' request]</i>
068	I	Emergency electrical generating facility <i>*The emissions Unit (EU 068) is split into different emissions units – one for each engine. Originally, these emissions unit consisted of 8 generators (2 engines per each generator). But, one of the generators is shut down indefinitely. Hence, 14 new EUs are created for 14 engines (7 generators).</i>
069	U	JP-8 Fueled Jet engine test stands – Test Area A/C
070	R	Aerospace hand-wiping operations
071	R	Aerospace spray gun cleaning operations
072	U	Aerospace flush cleaning operations
073	R	Aerospace primer and topcoat application operations (PS – 2 – MM)
074	U	Aerospace waste storage and handling operations
077	R	Combustion turbine test stands – Fired by Natural Gas
078	I	Vertrel Vapor Degreaser <i>[This EU is demolished and is removed per applicant's request]</i>
079	R	Two JP8 fired Turbine Engines powering air compressors used for jet engine tests (also known as RAM Test Facility)
080	I	E-8 Rocket Engine Test Stand – Methane Fuel Operations <i>[This emissions unit is sold and is removed per applicants' request]</i>
088	U	Engine Parts Coating Process
089	U	Hot Acoustic Rig (HAR) at Test Stand B-6. The HAR utilizes propane, air and water in evaluating design and performance of aircraft components

Statement of Basis

EU No.	R / U*/I**	Brief Description
		at the B-6 test area. The EU consists of two propane burners, three propane storage tanks, with a capacity of 1000 gallons each. SCC # 1-02-010-02: 1000 gallons of propane burned
090	R	FT4000 Gas Turbine Testing at Test Stand A4
091	R	FT4000 Compressor Reciprocating Internal Combustion Engine (RICE)
092	R	2100 hp Detroit Diesel Engine (Generator 1A)
093	R	2100 hp Detroit Diesel Engine (Generator 1B)
094	R	2100 hp Detroit Diesel Engine (Generator 2A)
095	R	2100 hp Detroit Diesel Engine (Generator 2B)
096	R	2100 hp Detroit Diesel Engine (Generator 3A)
097	R	2100 hp Detroit Diesel Engine (Generator 3B)
098	R	2100 hp Detroit Diesel Engine (Generator 4A)
099	R	2100 hp Detroit Diesel Engine (Generator 4B)
100	R	2100 hp Detroit Diesel Engine (Generator 5A)
101	R	2100 hp Detroit Diesel Engine (Generator 5B)
102	R	2100 hp Detroit Diesel Engine (Generator 6A)
103	R	2100 hp Detroit Diesel Engine (Generator 6B)
104	R	2100 hp Detroit Diesel Engine (Generator 7A)
105	R	2100 hp Detroit Diesel Engine (Generator 7B)
<i>Following emission units are located at Sikorsky Aircraft Corporation</i>		
081	R	SYK - Spray Booth (PS-14-SIK) for aerospace coating operations [Previously EU 006 in Sikorsky permit]
082	R	SYK - Spray Booth (PS-16-SIK) for aerospace coating operations [Previously EU 008 in Sikorsky permit]
083	R	SYK - Boiler (BO-4-SIK)] fired by natural gas– 2.93 MMBTU/Hr Heat Input [Previously EU 009 in Sikorsky permit]
084	U	Alodine tank – about 10 gallon capacity
<i>Following emission unit is used to track VOC emissions from miscellaneous activities at P&W and Sikorsky</i>		
085	U	Miscellaneous VOC/HAP Emissions Sources
<i>Following emission units are located at the FIT Center</i>		
086	R	Fire Innovation and Test Center
087	R	810 KW Diesel Generator – [see Appendix ICE]

* (R)egulated and (U)nregulated: An unregulated emissions unit is an emissions unit which emits no “emissions-limited pollutant” and which is subject to no unit-specific work practice standard, though it may be subject to regulations applied on a facility-wide basis (e.g., unconfined emissions, odor, general opacity) or to regulations that require only that it be able to prove exemption from unit-specific emissions or work practice standards. Such emissions units and/or activities are neither “regulated nor exempt.”

** I = Inactive

APPLICATION TIMELINE:

Application for Title V permit revision (0990021-042-AV) received	12/12/2014
Intent to Issue and the Draft permit issued	02/19/2015
Public notice published	04/19/2015
Proposed permit issued	05/28/2015

Statement of Basis

Regulatory Applicability

Halogenated solvent vapor cleaning machines subject to NESHAP Subpart T - At the time the current Title V Air Operation Permit was issued, trichloroethylene was still used in two vapor cleaning machines (EU006 and EU024) subject to this NESHAP. As of November 8, 2002, both of these halogenated vapor cleaners have been closed and demolished. Trichloroethylene is no longer used for any parts cleaning at the facility, therefore, there are no emission units subject to 40 CFR 63, Subpart T.

Aerospace manufacture and rework activities subject to NESHAP, Subpart GG - This permit revision adds the applicability of 40 CFR 63 Subpart GG to the emissions units 070, 071 and 073, since the permittee determined that these emissions units still support the jet engine manufacturing, although the engines are not assembled at the site. Although, the facility's status is changed from 'major' to 'synthetic minor' for hazardous air pollutants pursuant to permit no. 0990021-020-AC, the regulations of 40 CFR 63 Subpart GG still apply because of the NESHAP policy of 'once in always in.'

Fuel storage tanks subject to NSPS, Subpart Kb - In the original Title V permit there were three existing fuel storage tanks subject only to the record keeping requirements (tank size and liquid vapor pressure) of this NESHAP. Recent changes in Subpart Kb, have eliminated these recordkeeping requirements for tanks with this capacity. There are no emission units subject to 40 CFR 60, Subpart Kb.

Small boilers subject to a BACT determination - Rule 62-296.406, F.A.C. requires a BACT determination for particulate matter and sulfur dioxide for boilers with a heat input of less than 250 MMBtu/hr. The facility operates two boilers with heat inputs of 54 MMBtu/hr (EU 022), and 2.93 MMBtu/hr (EU 083). [The other two boilers were sold to Aerojet]. The Department has determined that BACT for these small sources is use of natural gas or propane. Records are required for the fuel consumption. An annual visible emissions test is not required when the facility documents exclusive use of pipeline quality natural gas or commercial grade propane.

Emergency electrical generating station subject to NO_x RACT, and 40 CFR 63 Subpart ZZZZ "National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)" - The facility operates an emergency electrical generating station to provide minimal electrical power needs in the event of a power outage. This station consists of 14 identical diesel engines (two engines are inoperative) with a pair of engines powering a single generator. These engines are currently subject to Rule 62-296.570, F.A.C., major source NO_x RACT. Information from the manufacturer indicates that these engines are capable of complying with this regulation. Because these engines are only operated for emergency purposes and monthly testing, this rule requires no testing unless an engine operates 400 hours or more in any 12 month period. Pursuant to regulations finalized on March 03, 2010, these emission units are subject to 40 CFR part 63 subpart ZZZZ.

A newly permitted RICE (EU 091) is also subject to 40 CFR 63 Subpart ZZZZ. Some of the exempt generators are subject to both 40 CFR 60 subpart ZZZZ and 40 CFR 60 subpart IIII.

Miscellaneous spray booths - The facility operates four spray/fume control booths used to refinish support equipment, apply adhesives to wood laminate models, and coat nonproduction prototype parts. Each booth has been through a preconstruction review and has a limit on the amount of VOC usage. Compliance is demonstrated by record keeping coating, thinner, cleaner, and adhesive usage. The recently promulgated 40 CFR 63, Subpart MMMM - National Emission Standards for Hazardous Air Pollutants for Surface Coating Operations of Miscellaneous Metal Parts and Products are not applicable to research facilities or to facilities subject to Subpart GG National Emission Standards for Hazardous Air Pollutants for aerospace manufacturing and rework facilities.

40 CFR 63 Subpart HHHHHH - Two paint spray booths (EUs 081 and 082) are subject to 40 CFR 63 Subpart HHHHHH "National Emission Standard for Hazardous Air Pollutants for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources."

Statement of Basis

Jet engine test stands - Also included as an “unregulated” emissions unit are ten existing jet engine test stands. The jet engine test stands were constructed prior to the PSD baseline date. In the early 1970s, several test stands were issued air pollution “operation” permits which described the stands and estimated emissions, but did not limit operation. In a January 16, 1980 letter, the Department of Environmental Regulation made the following determination for the existing jet engine test stands:

- The Department would not require air pollution permits for the individual test stands nor the relocatable jet engines.
- The Department would not specify conditions in other permits that would affect the scheduling or utilization of individual test stands or relocatable jet engines.
- The Department would require the permittee to report jet fuel consumption on a facility-wide basis. The main concern at this time was reporting an accurate emissions inventory for tracking "reasonable further progress" towards attainment of the ozone standard.

However, recent guidance from the EPA (listed below) indicates that jet engine test stands are considered stationary sources of air pollution.

12-31-95: EPA-AEB to Georgia Department of Natural Resources: Aerospace Ground Equipment, Hush Houses, and Jet Engine Test Cells

03-12-96: EPA-AEB to Georgia Department of Natural Resources: Aerospace Ground Equipment, Hush Houses, and Jet Engine Test Cells

09-23-96: EPA-APT to Mr. John R. McDowell, PE: Title V Applicability Issues Related to the Cincinnati/Northern Kentucky International Airport

Therefore, the Health Department established the jet engine test stands as existing, “unregulated” stationary emissions units with no limits on operation.

On December 4, 2001, the Health Department issued construction permit 0990021-005-AC for the modification of the existing combustion turbine test stands. The applicant proposed to conduct both Research and Development (R&D) and Quality Assurance/Quality Control (QA/QC) activities on its stationary combustion turbine product line while firing natural gas and/or distillate oil. The applicant requested that the construction permit contain a federally-enforceable cap on emissions from the modified activities at levels below those that would trigger a major modification under Rule 62-212.400, F.A.C. The permit contains two emission limits; 39.9 tons per year for NO_x and 99.9 tons per year for CO, as well as natural gas usage limit corresponding to these emissions levels.

The Health Department, in reviewing the project also concluded that those test stands not undergoing an expansion of the natural gas firing or distillate oil firing capacities would remain unchanged and unregulated. Based on discussions with the DEP, it was concluded that the R&D and QA/QC activities would not be subject to Rule 62-296.570, F.A.C. - state emission standards for gas turbines located at major NO_x sources within Palm Beach County, Compliance with the emission caps will be demonstrated through a emissions inventory and record keeping system. The emissions inventory will be supported by historical Pratt & Whitney emissions data obtain through R&D and QA/QC activities. The data will be subject to a Quality Assurance Plan (QAP) that will be implemented once actual emissions equal or exceed eighty (80) percent of the emission caps.

The emissions unit has been identified as a Source Category potentially subject to the National Emission Standards for Hazardous Air Pollutants for Engine Test Cells/Stands (40 CFR Part 63, Subpart P). In accordance with 40 CFR 63.9290 (d) of this Subpart, any portion of the affected source used exclusively for testing rocket engines is **not** subject to requirements of Subpart P or subpart A of Part 63. 40 CFR 63.9290(d)(1) also exempts the test stands that are used exclusively for testing the combustion turbine engines.

Statement of Basis

Two JP8 fired Turbine Engines: Permit No. 090021-012-AC was issued on 11/17/2008 to modify the permit for turbine engines. The operating hours of these engines are restricted to 375 hrs each per year. The potential emissions of NOx and CO from these engines are estimated to be 36.7 and 42.5 tons per year respectively. This modification of these engines remain as a minor modification under PSD regulations since the project's maximum increase in criteria pollutant emissions for CO and NOx will remain below 100 and 40 tons per year --the PSD significant emission rates.

Single Chrome Conversion Tank: The tank at the facility is a 10-gallon tank, is covered and is mounted on a bench, and hence it is not subject to 40 CFR 63 Subpart WWWW "National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations." The status of this EU is changed from 'regulated' to 'unregulated.'

Fire and Innovation Test (FIT) Center: The Fire, Innovation & Testing (FIT) center began operations on February 15, 2012 at UTC campus. The FIT center is intended to provide UTC Fire & Security (UTCFS) the ability to test current and future fire suppression products. The Health Department issued an air construction permit no. 0990021-027-AC in December 2010 and a permit modification (0990021-030-AC) was issued in November 2012. Indoor fire testing is performed in an approximately 70 ft x 70 ft enclosed building with a 50 ft high ceiling. The test fuel packages will consist of variety of materials such as wood, plastics, heptane, fuel oil (Number 2), vegetable oil, isopropyl alcohol, acetone, methane, propane, and other hydrocarbon fuels. The permit limits the emissions of particulate matter to 3.45 tons per year; nitrogen oxides to 15 tons per year; carbon monoxide to 14.8 tons per year; volatile organic compounds to 39.26 tons per year, and sulfur dioxide to 2.5 tons per year. Control efficiency of UHF units was assumed to be zero for all pollutants except for particulate matter (90%). The potential emissions from this project are below significant emissions rate as defined in Rule 62-210.200, F.A.C.

Some of the reciprocating internal combustion engines (RICE) – such as EU 091 – are subject to the regulations of **40 CFR Part 60 Subpart JJJJ** "New Source Performance Standards for Spark Ignition (SI) Engines."

Summary

Based on the Title V permit revision application received 12/12/2014, this facility is a major source of criteria air pollutants. The facility is a synthetic-minor source of hazardous air pollutants (HAPs). There are no emission units subject to Compliance Assurance Monitoring (CAM) requirements at this facility. This Title V air operation permit revision is being issued to satisfy the requirements of Chapter 403, F.S. and Chapter 213, F.A.C., as well as to maintain an accurate emissions inventory for Palm Beach County.