ADEQ
OPERATING
AIR PERMIT

Pursuant to the Regulations of the Arkansas Operating Air Permit Program, Regulation 26:

Permit No. : 0617-AOP-R8
Renewal #1
IS ISSUED TO:
Aerojet - General Corporation
East Walton Road, Highland Industrial Park
East Camden, AR 71701
Calhoun County
AFIN: 07-00035

THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

January 31, 2007 AND January 30, 2012

THE PERMITTEE IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

Mike Bates

Mike Bates
Chief, Air Division

August 8, 2007
Date Modified

Table of Contents

List of Acronyms and Abbreviations

A.C.A.	Arkansas Code Annotated
AFIN	ADEQ Facility Identification Number
CFR	Code of Federal Regulations
CO	Carbon Monoxide
HAP	Hazardous Air Pollutant
lb/hr	Pound Per Hour
MVAC	Motor Vehicle Air Conditioner
No.	Number
NO_x	Nitrogen Oxide
PM	Particulate Matter
PM10	Particulate Matter Smaller Than Ten Microns
SNAP	Significant New Alternatives Program (SNAP)
SO_2	Sulfur Dioxide
SSM	Startup, Shutdown, and Malfunction Plan
Tpy	Tons Per Year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

SECTION I: FACILITY INFORMATION

PERMITTEE:	Aerojet - General Corporation
AFIN:	07-00035
PERMIT NUMBER:	0617-AOP-R8
FACILITY ADDRESS:	East Walton Road, Highland Industrial Park East Camden, AR 71701
MAILING ADDRESS:	Post Office Box 1036 Camden, AR 71711-1036
COUNTY:	Calhoun
CONTACT POSITION: TELEPHONE NUMBER:	Victoria Wehling, Principal Environmental Engineer (870) 574-3265
REVIEWING ENGINEER:	Shawn Hutchings
UTM North South (Y):	Zone 15: 3,720 km
UTM East West (X):	Zone 15: 528 km

SECTION II: INTRODUCTION

Summary of Permit Activity

Aerojet – General Corporation, currently operates a manufacturing facility located in the Highland Industrial Park near East Camden, Arkansas. Aerojet manufactures solid rocket propellants and motors, related components for rocket and missile systems, warheads and ordnance, and similar products for the United States Department of Defense. Aerojet also produces the propellants for automobile air bag systems. These energetic materials are utilized in the on-site production operations and are commercially distributed as finished products. Research and Development (R&D) activities for the products are also performed.

This modification adds a 4.19 MMBTU/hr natural gas-fired boiler at Building M-2. This boiler is added to the existing source SN-02 which accounts for all the facility's boilers. Aerojet, with this modification, is also adding a new grit blast machine to SN-67 in building M-2. The source SN-67 is a grouped source accounting for all grit blast emissions from the facility.

Process Description

DESCRIPTION OF GENERIC ROCKET MOTOR PRODUCTION PROGRAM

Aerojet manufactures a number of solid rocket motors for the U.S. Department of Defense (DoD) and other military contractors. These production programs include the following:

- MK-104 Ballistic Missile Defense System
- Army Tactical Missile System (ATACMS)
- Multiple Launch Rocket System (MLRS)
- Patriot (PAC-2) Air Defense Missile System
- Patriot (PAC-3) Air Defense Missile System
- Tactical Tomahawk Cruise Missile System
- Sidewinder Air-To-Air Missile System
- Javelin Air Defense Missile System
- Stinger Portable Air Defense System
- Supersonic Sea-Skimming Target (SSST) Missile System

A generic description of the manufacturing operations for a typical rocket motor program is provided below.

Motor Case Preparation

Production of a typical rocket motor commences with the receipt of pre-manufactured metal motor cases from a vendor. Each case is subsequently cleaned to remove residual oil and grease. Cleaning is performed using one of two degreaser units: the motor case cleaner (vapor degreaser) at Building 2-SH-14 (SN-19) or the aqueous degreaser at Building 2-SH-2 (no SN). As an alternative, the motor case may be manually cleaned. The hand-wipe cleaning activities (SN-37) are conducted at Buildings 2-SH-2 and 2-SH-14.

After cleaning, the rocket motor case is grit blasted at Building 2-SH-2 or 2-SH-14. This operation prepares the interior surface of the metal case for coating. Sand, coal slag, steel grit,

and other materials are used as the abrasive media. The particulate emissions from the grit blast machines (SN-67) are controlled using various devices (cyclones, baghouses, shop vacuums, etc.).

After grit blasting, the case is degreased a second time. Cleaning is again performed using the motor case cleaner (SN-19) at Building 2-SH-14 or the aqueous degreaser at Building 2-SH-2. As an alternative, the case may be hand-wipe cleaned (SN-38) at either location.

Once clean, the rocket motor case is transported to Building M-2. At this time, the case is physically inspected for defects using a "Magnaflux" machine. This equipment is a specially-designed black-light fluoroscope (SN-68). It is used to examine metal components for hairline cracks and other flaws.

After inspection, the rocket motor case is transferred to Building 2-SH -14, 2-SH -15, or M-8 (or remains at M-2) for adhesive application. First, an adhesive primer is applied to the interior surface of the case (SN-39 and SN-76). The coating is applied within enclosed production bays. Depending on the program, the adhesive primer is manually applied using paintbrushes (SN-39) at Buildings 2-SH-14 and 2-SH-15. Aerojet also operates adhesive spray machines at Buildings M-2 and M-8. Each automated unit consists of a spray nozzle mounted on a traveling wand. During application of the adhesive primer (SN -7 6), the wand is slowly drawn through the motor case to provide a uniform coating. Afterwards, the case is either allowed to air dry at ambient temperature or is cured in a steam-heated oven (no SN).

Next, the motor case is coated with an adhesive. Depending on the production program, the coating is manually applied (SN-40) at Buildings 2-SH-14 and 2-SH-15 or is applied using the spray machines (SN-77) at Buildings M-2 and M-8. The motor case is then allowed to air dry or is cured in an oven.

Rubber insulators are fabricated concurrent with preparation of a typical rocket motor case. This production operation is conducted at Buildings 2-SH-14 and M-2. The "case rubber" for the rocket motor is made by "laying up" (wrapping) rubber sheeting around a metal forming tool (a mandrel). The unit is then cured in an oven. The finished rubber piece has a cylindrical shape.

After fabrication, the insulator component is degreased with a solvent. The hand-wipe cleaning operations are performed within enclosed rooms at Building 2-SH-14 (SN-20), Building 2-SH-15 (SN-20), or Building M-2 (SN-74).

After cleaning, the case rubber is installed within the prepared motor case. Tooling is then attached to the case assembly ("tool-up" process). The motor case is subsequently subjected to a series of mechanical and physical tests for quality control purposes. After testing, the entire insulated case assembly is cured within an oven. The tooling is then removed from the motor case ("de-tooling" process). The insulated motor case is subsequently wiped down with a solvent (SN-20 and SN-74).

After degreasing, the rocket motor case is returned to the oven for an extended period of curing (several days). Next, the case is again hand-wipe cleaned (SN-20 and SN-74). An adhesive barrier coating is subsequently applied to the interior surface of the insulated motor case. The coating is manually applied using paintbrushes (SN-41) at Buildings 2-SH-14 and 2-SH-15, or is applied using the spray machines (SN-78) at Buildings M-2 and M-8. The case is then cured

again in an oven (IE). The prepared rocket motor case is subsequently lined with a polyurethane coating.

Lining of Prepared Motor Case

Once prepared, the interior of the typical rocket motor case is lined with a specially formulated polyurethane coating. The liner compounds are prepared for use in the mixer units at Building M-8 (SN-07), Building 2-SH-15 (SN-22), and Building M-2 (SN-28). (The liner mixtures are composed of a polymer, curing agent, bonding agent, and a filler. These materials are not volatile. The coatings are prepared within closed mixer units. As a result, the mixing operations themselves are insignificant sources of air emissions. However, various solvents are used to clean the liner mixers.)

The prepared liner material is first applied by hand to the dome areas of the rocket motor case. The case is then cured in an oven. The remaining interior sections of the cylindrical case are then coated with the liner material. Application is performed using several "sling liner" machines. Each automated unit consists of a rotating applicator head mounted on a traveling wand. During liner application, the wand is slowly drawn through the motor case to provide a uniform coating. The spinning head slings the liner onto the inside of the case. The lined rocket motor case is then cured in an oven. Aerojet operates sling liner machines at Building 2-SH-15 (SN-52), Building M-8 (SN-52), and Building M-2 (SN-75).

Depending on the production program, the liner material may also be applied using a "spray liner machine." Each automated unit consists of a spray nozzle mounted on a traveling wand. During application of the liner, the wand is slowly drawn through the motor case to provide a uniform coating. The lined rocket motor case is then cured in an oven. Aerojet operates spray liner machines at Building M-8 (SN-07), Building M-2 (SN-28), and Building 2-SH-15 (SN-42).

The lined rocket motor case is now ready for loading with solid propellant ("casting" process).

Fabrication of Nozzle Assembly

The "nozzle assembly" for the typical rocket motor is fabricated in a separate series of operations. This component is made of a composite carbon/phenolic resin material plus pre-manufactured metal and plastic hardware. First, sections of carbon-impregnated phenolic resin tape are die cut to the desired sizes and shapes. The cut patterns are then assembled and press molded to form a rigid plastic nozzle. The press machines at Buildings 2-SH-3 or 2-SH-14 (both SN-48) are utilized. After molding, the nozzle unit is machined to attain the proper dimensions. The metalworking lathes (IE) at Building 2-SH-3 (SN-66) are used for this operation.

The nozzle unit is then assembled at Building 2-SH-14 or Building M-2 (or elsewhere). The metal and plastic components are manually glued together using small quantities of epoxy and/or urethane adhesives. The nozzle unit is subsequently wiped down with a solvent. The hand-wipe cleaning operations are performed at Building 2-SH-14 (SN-20) or Building M-2 (SN-74). The entire nozzle assembly is then transported to Building #33 or Building #48 for installation on the motor case.

Fabrication of Igniter Assembly

Launch of a typical rocket motor is initiated using an electrically-fired igniter. Fabrication of the igniter assembly is performed as follows: First, the pre-manufactured metal igniter cup is etched with acid. This bench-top operation is conducted in the Chemistry Lab at Building B-17. Concurrently, the pre-manufactured plastic igniter components are cut to size, hand-wiped with solvent and glued together. The plastic parts are then combined with the etched metal cup to form the igniter assembly. These production operations are performed at Building M-85. The fugitive air emissions from the small-scale cleaning and gluing activities are accounted for in the facility-wide "floor operations" (SN-44).

After assembly, a small charge of propellant is placed within the igniter. The loaded component is then sealed. The finished igniter unit is subsequently shipped to Building #33 or Building #48 for installation within the motor case.

Casting, Curing and Assembly of Finished Rocket Motor

As stated above, the interior of the clean rocket motor case is coated with a primer and an adhesive. A "case rubber" insulator is then installed within the unit. Following an extended oven-curing period, an adhesive barrier coating is applied to the rubber insulator. The interior of the case is then lined with a polyurethane material. After curing, the lined motor case is ready for propellant "casting."

An integral component of Aerojet's manufacturing activities is the formulation of solid rocket propellants that perform to exacting specifications. In general, propellant production involves the combining of various dry energetic materials (premix, oxidizer, and fuel), plus liquid polymers and plasticizers/curing agents, within a mechanical mixer. The ingredients are then consolidated into a uniform propellant formulation. Mixer units are operated at multiple locations throughout the East Camden complex. (All of the dry and liquid ingredients are handled in a controlled manner. The liquid polymers and curing agents are not volatile. No significant air emissions are generated during the mixing operations.)

Once formulated, the rocket fuel is "cast" (loaded) within the prepared rocket motor case. During this operation, the lined case is filled with the propellant/polymer/plasticizer mixture while under vacuum. The fuel mixture is then allowed to cure within the motor case. (The casting and curing activities are insignificant sources of air emissions.)

A number of propellant casting and curing stations are operated throughout the Aerojet facility. Upon receipt at a particular building, the case is "tooled-up" and positioned at the casting station. Preparation of the case may include insertion of a metal mandrel. Use of the forming tool creates a hollow core within the cast propellant. The motor case is then filled with the fuel mixture. After casting, the case is loaded into a steam-heated or electric oven. The propellant is then cured under controlled temperature conditions.

Once cured, the motor case is removed from the oven and allowed to cool. The mandrel is then withdrawn from the cast motor case ("core pull" operation). Next, any propellant residue on the exterior of the case is manually removed for later disposal ("cut back" operation). Finally, the tooling is removed from the motor case.

At this time, the cast and cured rocket motor case is transported to Building #33 or Building #48 for final assembly. First, a primer coat of paint is applied to the exterior of the motor case. The

unit is then allowed to air dry. As an alternative, the case may be cured in a steam-heated oven. Aerojet operates spray paint booths at Building #33 (SN-43) and Building #48 (SN-24). The coatings are applied using air-assisted paint guns. The paint booths are equipped with high-density mesh filters for the control of over-spray. Small-scale painting activities are also conducted at Building #60 (SN-12) and Building M-85 (SN-83).

Afterwards, a topcoat of paint is applied to the rocket motor case within one of the spray booths (SN-24 or SN-43). The unit is then allowed to air dry or is cured in an oven.
The nozzle assembly and igniter are now installed on the motor case. The entire unit is then leak tested for quality control purposes. An inert gas (nitrogen, helium, or argon) is utilized.

After leak testing, the rocket motor case is transported to Building #46. The motor is then x-rayed to check for defects. Other quality control testing is also performed at this time.

The finished rocket motor is then labeled and packaged. These operations are performed at Building #33 or Building #48. The fugitive air emissions from the labeling activities are part of the floor operations (SN-44).

The rocket motors are then stored pending shipment off-site. Other DoD contractors perform the final assembly of most of the rocket motors made by Aerojet.

AIR BAG PROPELLANT MANUFACTURING OPERATIONS

Aerojet makes a variety of propellant formulations for use in automobile air bag systems. For air permitting purposes, these plant-wide production activities are subdivided into two groups: the "old" air bag propellant manufacturing operations (SN-59) and the "new" operations (SN-82). The "old" propellant activities are conducted primarily at Buildings M-2 and M-125. The "new" operations are performed mainly at Buildings A-4, A-5, A-8, A-9, A-90, #70, #71 and #74.

In general, an air bag propellant is manufactured by first combining various dry energetic ingredients within an aqueous slurry. The material is then dried using several steam-heated dryers. The powdered propellant is subsequently screened and packaged. Certain energetic materials may be granulated or pressed into pellets.

On occasion, air bag propellants may be formulated within a solvent solution as a safety precaution. Multiple stabilizing agents are used.

The air emissions from the air bag propellant manufacturing operations (using water or solvents) are exhausted directly to the atmosphere via various vents. No pollution control devices are utilized. Depending on the location, the dryers, screening equipment, granulators, and other propellant manufacturing units are equipped with a variety of control devices. These units include cyclones, baghouses, high-density mesh filters, and "wet boxes."

Aerojet operates a small research and development (R&D) laboratory (SN-57) at Building M-85. Experimental air bag propellants and related materials are formulated at this location. Extruder machines (SN-51) are operated at Buildings #39 and M-2. These units are used to covert semi-plastic propellant mixes into pellets and other solid forms.

PROPELLANT TESTING AND TREATMENT UNITS

Aerojet tests rocket and air bag propellant formulations at the East Camden facility. Waste energetic materials are treated on-site. These operations are discussed below:

Rocket Test Facility (RTF)

Rocket motors, air bag initiators, and other energetic devices are test fired for quality control and R&D purposes. These activities are performed at multiple locations throughout the East Camden complex. The rocket test sites include Bays #15, #18, and #45. Air bag propellants are tested at Buildings #16, M-85, and M-125. The RTF (SN-03) encompasses all of these locations.

To prepare for a test event, the rocket motor assembly is fitted with instrumentation and then temperature-conditioned. Once conditioning is complete, the motor is secured to a specially designed test stand. The rocket is then fired from a remote control building. Various test data are recorded during the event. After a cool-down period, the spent motor case is disassembled and evaluated. The test bays and apparatus are not equipped with air pollution control devices.

Air bag igniters, inflators, and other small energetic devices are also test fired for production and R&D purposes. A particular component is assembled, temperature-conditioned, secured to special test equipment, and then fired. Various test data are recorded during the event. The hardware is then disassembled and evaluated. The testing units are not equipped with air pollution control devices.

Thermal Treatment Facility (TTF)

Waste rocket and air bag propellants and propellant-contaminated materials are generated during Aerojet's manufacturing operations. These waste streams are destroyed via open burning in the TTF. It is a permitted hazardous waste treatment unit. The existing facility (SN-04) consists of four large "bum burn pits" and a remote control station. Each pit is equipped with several specially constructed "burn pans" for the combustion of bulk propellant wastes. The TTF also includes two "bum burn cages" for the treatment of small energetic devices (squibs and igniters). To prepare for a thermal treatment event, the waste materials are transported from temporary storage areas to the TTF. The wastes are then placed in the bum burn pans or burn cages. Once preparations are complete, the materials are ignited using an electric current. Ignition is initiated from the remote control building. The wastes are then allowed to burn until combustion has been completed. After the event, the burn pans and burn cages are allowed to cool for 24 hours. The items are then prepared for reuse. The treatment units are not equipped with air pollution control devices.

High Explosives Test Facility (HETF)

This site is used to support the manufacturing operations at the East Camden complex. Ordnance, explosives, and other energetic materials are tested at the HETF (SN-30) for quality control and R&D purposes. The items that are test-fired range from finished automobile air bag systems to various military ordnance to specially-prepared experimental propellant formulations. The tests are conducted under a variety of physical conditions. Denotation or ignition of a particular component may be initiated by dropping the item onto a hard surface, by the impact of

a bullet, by a blasting cap-initiated high-explosive donor charge, or by a controlled bonfire. The test events are initiated and monitored from a control building. Various test data are recorded during each detonation event for subsequent evaluation. The test-firing area and apparatus are not equipped with air pollution control devices.

The HETF is located within the 16-A T Area of the Highland Industrial Park. It is situated approximately ten miles away from the main manufacturing complex.

MISCELLANEOUS MANUFACTURING OPERATIONS AND EQUIPMENT

Aerojet operates several miscellaneous production units at the East Camden facility. The most significant of these items are discussed below:

Lacquer Preparation Operations

"Lacquer" is Aerojet's generic term for various liquid explosive compounds. These products are processed at Building #56. There are two general categories of operations involving lacquer: (1) the preparation of premixed lacquer solutions for use in propellant production and (2) the stabilization of lacquer premix for shipping and/or long-term storage.

When purchased from vendors, the lacquer products are premixed with a solvent, usually methylene chloride or isopropyl alcohol. The solvent acts as a stabilizing agent during transportation. To prepare the lacquer for subsequent use, the solvent is removed by sparging with nitrogen gas. The lacquer is then transferred to the mixing area for processing. All stripping of lacquer premix (SN-11) is performed at Building #56. The sparging operation is a batch process.

The second category of lacquer preparation involves the addition of stabilizing materials to liquid explosives prior to their use, shipment, and/or long-term storage. The stabilization process (SN-11) is also performed at Building #56. The solvents and explosives are combined in a mixing vessel. The resultant lacquer premix is then packaged for use, transportation or storage.

Explosives Dryer

Aerojet uses various energetic materials ("nitramine" compounds) and explosives in its production operations. When purchased from vendors, these products are wetted with isopropyl alcohol. The solvent acts as a stabilizing agent for safety purposes.

Prior to use, the energetic materials are processed in a rotary vacuum dryer (SN-63). This unit is located at Building #57. The dryer operates as follows: The explosive compounds are received in plastic bags. The containers are manually opened, and the materials are placed in the rotary drum dryer. The building is secured once the unit is loaded. The dryer is then heated using a hot-water jacket, while a vacuum pump simultaneously exhausts the dryer chamber. During operation, the chamber is periodically rotated to ensure thorough drying of its contents. Once dry, the energetic materials are ready for further processing. The vacuum pump is equipped with a chiller system, which condenses the solvent in the off-gas stream.

Explosives Grinder

After drying, the nitramine compounds and explosives are milled to the proper particle size. A specialized grinder unit (SN-73) is operated at Building #58 for this purpose. Once prepared, the ground energetic materials are used in the production of rocket propellants and related compounds. The nitramines and explosives grinder is equipped with two baghouses for the control of dust emissions.

Rocket Motor Case Reclamation Facility

Certain rocket motors cannot be fired due to damage or the age of the units. The propellants are removed from these products so that the metal motor cases can be reclaimed. First, the bulk propellant is mechanically removed using an electric-powered lathe ("hogout" operation). The remaining propellant is then extracted using a high-pressure spray of water ("washout operation"). A 300 horsepower diesel-fired internal combustion engine (SN-81) is used to power the water pump for the "hydro-lance machine."

Warhead Manufacturing Operations

Aerojet makes a variety of warheads and other ordnance (SN-84) at Building M-11. The production activities include two coating operations. An asphalt or wax compound is applied to the inside of certain warhead units. The "stress-relaxing liner" prevents the explosive charge inside the case from cracking as the material cools after installation.

Two "melter/applicator machines" are operated for this purpose. The hot liner material is applied to the warhead cases using a hand-held wand. The asphalt or wax coating hardens as the components cool. The lined warhead cases are subsequently filled with an explosive.

SOURCES OF AIR EMISSIONS

The two largest individual sources of air emissions at the East Camden plant are utilized for the testing and disposal of rocket propellants and other energetic materials. These units are the Rocket Test Facility (SN-03) and the Thermal Treatment Facility (SN-04/04R).

Aerojet's manufacturing operations and associated plant activities also represent a number of air emission sources at the East Camden facility. These operations include the following: multiple parts cleaning activities involving solvents; a variety of surface coating operations; parts assembly using specialty adhesives; the production of rocket and air bag propellants, explosives, and other energetic materials; the operation of natural gas-fired combustion equipment; R&D activities; and a number of miscellaneous production operations.

Regulations

The following table contains the regulations applicable to this permit.

Regulations
Arkansas Air Pollution Control Code, Regulation 18, effective February 15, 1999
Regulations of the Arkansas Plan of Implementation for Air Pollution Control, Regulation 19, effective July 15, 2007

Regulations of the Arkansas Operating Air Permit Program, Regulation 26, effective September 26, 2002
40 CFR 63 Subpart GG - National Emission Standards for Aerospace Manufacturing and Rework Facilities
40 CFR 63 Subpart T - National Emission Standards for Halogenated Solvent Cleaning

Aerojet applies surface coatings to rocket motor cases and other metal components which meet the definition of miscellaneous metal parts and products. Therefore, Aerojet is potentially subject to NESHAP for Surface Coating of Miscellaneous Metal Parts and Products (40 CFR 63, Subpart MMMM). However, per 40 CFR 63.3881(c)(10), the NESHAP does not apply to the "surface coating of metal components of aerospace vehicles that meet the applicability criteria for aerospace manufacturing and rework" operations of 40 CFR 63 Subpart GG, the Aerospace MACT.

The following table is a summary of emissions from the facility. This table, in itself, is not an enforceable condition of the permit.

Emission Summary

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
Total Allowable Emissions		PM	11,725.2	241.6
		PM_{10}	11,725.2	241.6
		SO_2	1.1	3.4
		VOC	1,313.1	153.8
		CO	7,228.9	77.2
		NO_X	317.3	73.3
		Lead	148.71	5.61
HAPs		Acetaldehyde*	0.24	1.06
		Acrolein*	0.03	0.14
		Benzene*	0.28	1.23
		1,2 Butylene Oxide*	0.33	0.36
		1,3 Butadiene*	0.02	0.09
		Cadmium	1.48	0.08
		Chlorine	178.32	6.35
		Chromium, Trivalent	12.52	0.5
		Chromium, Hexavalent	0.13	0.01
		Diethylene Glycol Monobutyl Ether Acetate*	7.10	1.42
		Diethylene Glycol Monoethyl Ether Acetate*	14.20	2.84
		Ethyl Acrylate*	16.80	4.48
		Ethyl Benzene*	35.58	7.89
		Formaldehyde*	0.74	1.72
		Hydrogen Chloride	7531.42	123.46
		Hydrogen Fluoride	28.20	0.67
		Methanol*	46.85	10.84
		Methylene Chloride	384.52	96.25
		Methyl Isobutyl Ketone*	140.48	32.53
		PAH*	0.01	0.03
		Phenol*	16.45	3.41
		Propylene*	0.78	3.42
		Tetrachloroethylene	10.38	2.10
		Toluene*	157.98	42.33
		1,1,1 Trichloroethane	166.15	48.25
		Trichloroethylene*	27.60	5.52
		Xylene*	143.72	33.56
Air Contaminants		Acetone**	241.43	48.32
01	Source Deleted			

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
02	Natural Gas-Fired Boilers (8 Units)	PM	0.2	0.8
		PM_{10}	0.2	0.8
		SO_2	0.1	0.1
		VOC	0.2	0.6
		CO	1.8	7.6
		NO_X	2.1	9.0
03	Rocket Test Facility	PM	7,645.7	48.70
		PM_{10}	7,645.7	48.7
		VOC	400.0	2.5
		CO	7,076.7	44.6
		NO_X	66.1	0.5
		Lead	56.80	1.47
		Cadmium	0.46	0.02
		Chlorine	48.00	0.30
		Chromium	4.20	0.11
		Hydrogen Chloride	5,601.55	35.04
		Hydrogen Fluoride	16.20	0.11
04	Thermal Treatment Facility	PM	3,874.40	166.20
		PM_{10}	3,874.4	166.2
		VOC	160.0	7.4
		CO	40.0	1.9
		NO_X	236.0	11.0
		Lead	84.00	3.87
		Cadmium	0.97	0.05
		Chlorine	129.60	6.02
		Chromium, Trivalent	7.90	0.37
		Chromium, Hexavalent	0.13	0.01
		Hydrogen Chloride	1,840.80	84.85
		Hydrogen Fluoride	12.00	0.56
05	Motor Case Cleaner A360	Removed From Service		
06	Nozzle Ring Cleaning Machines	Removed From Service		
07	Liner Mixer and Spray Liner Machine	VOC	8.5	4.3
		Methylene Chloride	11.00	5.50
08	Motor Case Cleaner A426	Removed From Service		
09	Source Deleted			
10	Source Deleted			
11	Lacquer Preparation	VOC	80.1	5.1
		Acetone	80.08	5.03
		Methylene Chloride	80.08	5.03

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
12	Spray Painting Area	VOC	22.5	2.6
		Acetone**	12.19	1.36
		Ethyl Acrylate*	2.10	0.27
		Ethyl Benzene*	1.40	0.18
		Methanol*	2.80	0.35
		Methyl Isobutyl Ketone*	8.40	1.05
		Toluene*	11.90	1.49
		Xylene*	8.40	1.05
13	Ultrasonic Cleaner	VOC	0.2	0.3
		1,2 Butylene Oxide*	0.01	0.01
14	Source Deleted			
15	Source Deleted			
16	Source Deleted			
17	Source Deleted			
18	Source Deleted			
19	Motor Case Cleaner	VOC	6.6	10.7
		1,2 Butylene Oxide *	0.07	0.14
20	Solvent Wipe Rooms	VOC	17.0	2.2
		Methylene Chloride	22.00	2.75
21	Source Deleted			
22	Mix Room	VOC	8.5	4.3
		Methylene Chloride	11.00	5.50
23	Source Deleted			
24	Spray Paint Booth	PM	0.10	0.10
		PM_{10}	0.1	0.1
		VOC	40.8	7.6
		Lead	0.01	0.01
		Acetone**	11.20	2.10
		Chromium Comp.	0.01	0.01
		Ethyl Acrylate*	4.20	0.79
		Ethyl Benzene*	2.80	0.53
		Methanol*	5.60	1.05
		Methyl Isobutyl Ketone*	16.80	3.15
		Toluene*	23.80	4.47
		1,1,1 Trichloroethane	5.43	1.63
		Xylene*	16.80	3.15

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
25	Natural Gas-Fired Boilers (7Units)	PM	0.10	0.40
		PM_{10}	0.1	0.4
		SO_2	0.1	0.1
		VOC	0.1	0.3
		CO	0.9	3.9
		NO_X	1.1	4.6
26	Source Deleted			
27	Source Deleted			
28	Spray Liner Machine and Mixer Unit	VOC	8.5	4.3
		Methylene Chloride	11.00	5.50
29	Source Deleted			
30	High Explosives Test Facility	PM	137.00	5.50
		PM_{10}	137.0	5.5
		VOC	6.0	0.3
		CO	106.0	4.3
		NO_X	1.0	0.1
		Lead	5.88	0.24
		Cadmium	0.05	0.01
		Chlorine	0.72	0.03
		Chromium, Trivalent	0.42	0.02
		Hydrogen Chloride	89.07	3.57
31	Source Deleted			
32	Source Deleted			
33	Comfort Heating Boiler	Source Exempt		
34	Comfort Heating Boiler	Source Exempt		
35	Source Deleted			
36	Vapor Degreaser	VOC	1.1	6.4
		1,2 Butylene Oxide*	0.02	0.09
		Methylene Chloride	1.04	8.25
		1,1,1 Trichloroethane	1.04	8.14
37	Motor Case Cleaning	VOC	8.5	1.5
		Methylene Chloride	11.00	1.93
		1,1,1 Trichloroethane	10.85	1.90
38	Motor Case Cleaning	VOC	8.5	1.5
		Methylene Chloride	11.00	1.93
		1,1,1 Trichloroethane	10.85	1.90

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
39	Adhesive Primer Operations	VOC	20.0	3.0
		Ethyl Benzene*	2.88	0.58
		Formaldehyde*	0.06	0.02
		Methanol*	2.30	0.46
		Methyl Isobutyl Ketone*	7.48	1.50
		Tetrachloroethylene	1.73	0.35
		Toluene*	2.88	0.58
		1,1,1 Trichloroethane	6.33	1.27
		Trichloroethylene*	4.60	0.92
		Xylene*	9.78	1.96
40	Adhesive Operations	VOC	20.0	3.0
		Ethyl Benzene*	2.88	0.58
		Formaldehyde*	0.06	0.02
		Methanol*	2.30	0.46
		Methyl Isobutyl Ketone*	7.48	1.50
		Tetrachloroethylene	1.73	0.35
		Toluene*	2.88	0.58
		1,1,1 Trichloroethane	6.33	1.27
		Trichloroethylene*	4.60	0.92
		Xylene*	9.78	1.96
41	Adhesive Barrier Coating Operations	VOC	20.0	3.0
		Ethyl Benzene*	2.88	0.58
		Formaldehyde*	0.06	0.02
		Methanol*	2.30	0.46
		Methyl Isobutyl Ketone*	7.48	1.50
		Tetrachloroethylene	1.73	0.35
		Toluene*	2.88	0.58
		1,1,1 Trichloroethane	6.33	1.27
		Trichloroethylene*	4.60	0.92
		Xylene*	9.78	1.96
42	Spray Liner Machine	VOC	8.5	2.2
		Methylene Chloride	11.00	2.75

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
43	Spray Paint Booth	PM	0.10	0.10
		PM_{10}	0.1	0.1
		VOC	36.5	8.5
		Lead	0.01	0.01
		Acetone**	11.20	2.80
		Chromium Comp.	0.01	0.01
		Ethyl Acrylate*	4.20	1.05
		Ethyl Benzene*	2.80	0.70
		Methanol*	5.60	1.40
		Methyl Isobutyl Ketone*	16.80	4.20
		Toluene*	23.80	5.95
		Xylene*	16.80	4.20
44	Floor Operations	VOC	116.0	19.7
		Acetone**	49.23	17.16
		1,2 Butylene Oxide*	0.23	0.12
		Diethylene Glycol Monobutyl Ether Acetate*	7.10	1.42
		Diethylene Glycol Monoethyl Ether Acetate*	14.20	2.84
		Ethyl Acrylate*	4.20	2.10
		Ethyl Benzene*	9.90	2.82
		Methanol*	16.25	4.93
		Methylene Chloride	50.40	16.68
		Methyl Isobutyl Ketone*	45.20	14.08
		Phenol*	16.33	3.27
		Toluene*	63.17	24.13
		1,1,1 Trichloroethane	89.15	24.34
		Xylene*	34.55	11.95
45	Motor Case Soak-Out Facility	VOC	6.0	0.8
		Acetone**	6.00	0.75
		Toluene*	6.00	0.75
46	Misc. Parts Soak-Out Facility	Removed From Service		
47	Foam-Blowing Operations	VOC	8.5	1.3
		Methylene Chloride	11.00	1.65
48	Phenolic Molding Operations	VOC	0.1	0.1
		Ammonia**	0.01	0.01
		Formaldehyde*	0.01	0.01
		Phenol*	0.06	0.07

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
49	Hockey Puck Manufacturing	VOC Ammonia** Formaldehyde* Phenol*	0.1 0.01 0.01 0.06	0.1 0.01 0.01 0.07
50	Rubber Molding Operations	Removed From Service		
51	Extruder Operations	Moved To Insignificant Activities		
52	Sling Liner Machines	VOC Methylene Chloride	8.5 11.00	2.2 2.75
53	Barrier Coating	Removed From Service		
54	Squib Powder Manufacturing	VOC Acetone**	4.3 3.30	0.2 0.09
55	MLRS Igniter Assembly	Moved To Insignificant Activities		
56	MK 104 Sample Collection	PM PM_{10}	0.10 0.1	0.50 0.5
57	Air Bag R&D Laboratory	VOC Acetone**	4.3 3.30	1.1 0.83
58	Pill Manufacturing	VOC Acetone** Methylene Chloride	8.5 6.59 11.00	10.7 8.24 13.75
59	Air Bag Propellant Manufacturing	PM PM_{10} VOC Acetone** Methylene Chloride	1.00 1.0 25.5 19.77 33.00	4.40 4.4 5.1 3.96 6.60
60	Ingredient Preparation Room	Insignificant Activity		
61	Screening Operations	Source Deleted		
62	Mixing Operations	VOC Acetone** Methylene Chloride	8.5 6.59 11.00	0.9 0.66 1.10
63	Nitramines and Explosives Dryer	VOC	18.0	0.5
64	Vacuum Ovens	VOC Acetone** Methylene Chloride	8.5 6.59 11.00	0.9 0.66 1.10
65	Negative Pressure Tables	Removed From Service		
66	Lathes	Insignificant Activity		

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
67	Grit Blast Machines	PM	53.3	6.2
		PM_{10}	53.3	6.2
68	Magnaflux Machine	Insignificant Activity		
69	Natural Gas Fired Boilers (8 Units)	PM	0.1	0.50
		PM_{10}	0.1	0.5
		SO_2	0.1	0.1
		VOC	0.1	0.4
		CO	1.1	4.5
		NO_X	1.3	5.4
70	Polymer Tank Farm	Insignificant Activity		
71	Gasoline Storage Tank	VOC	44.1	0.9
72	Diesel Fuel Storage Tanks	VOC	0.1	0.1
73	Nitramines and Explosive Grinder	PM	0.10	0.50
		PM_{10}	0.1	0.5
74	Solvent Wipe Room	VOC	17.0	2.2
		Methylene Chloride	22.00	2.75
75	Sling Liner Machine	VOC	8.5	1.1
		Methylene Chloride	11.00	1.38
76	Adhesive Primer Operations	VOC	20.0	3.0
		Ethyl Benzene*	2.88	0.58
		Formaldehyde*	0.06	0.02
		Methanol*	2.30	0.46
		Methyl Isobutyl Ketone*	7.48	1.50
		Tetrachloroethylene*	1.73	0.35
		Toluene*	2.88	0.58
		1,1,1 Trichloroethane	6.33	1.27
		Trichloroethylene*	4.60	0.92
		Xylene*	9.78	1.96
77	Adhesive Operations	VOC	20.0	3.0
		Ethyl Benzene*	2.88	0.58
		Formaldehyde*	0.06	0.02
		Methanol*	2.30	0.46
		Methyl Isobutyl Ketone*	7.48	1.50
		Tetrachloroethylene*	1.73	0.35
		Toluene*	2.88	0.58
		1,1,1 Trichloroethane	6.33	1.27
		Trichloroethylene*	4.60	0.92
		Xylene*	9.78	1.96

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
78	Adhesive Barrier Coating Operation	VOC	20.0	3.0
		Ethyl Benzene*	2.88	0.58
		Formaldehyde*	0.06	0.02
		Methanol*	2.30	0.46
		Methyl Isobutyl Ketone*	7.48	1.50
		Tetrachloroethylene*	1.73	0.35
		Toluene*	2.88	0.58
		1,1,1 Trichloroethane	6.33	1.27
		Trichloroethylene*	4.60	0.92
		Xylene*	9.78	1.96
79	Natural Gas Combustion Equipment (5 Units)	Source Never Constructed		
80	Warhead Coating Operation	VOC	1.0	0.3
81	Diesel-Powered Pump Rocket at Motor Case Washout Facility	PM	0.70	2.90
		PM_{10}	0.7	2.9
		SO_2	0.7	2.8
		VOC	0.8	3.4
		CO	2.1	8.9
		NO_X	9.3	40.8
		Acetaldehyde*	0.24	1.06
		Acrolein*	0.03	0.14
		Benzene*	0.28	1.23
		1,3 Butadiene*	0.02	0.09
		Formaldehyde*	0.36	1.58
		PAHs*	0.01	0.03
		Propylene Oxide*	0.78	3.42
		Toluene*	0.13	0.57
		Xylene*	0.09	0.40
82	New Air Bag Propellant Manufacturing Operations	PM	1.00	4.40
		PM_{10}	1.0	4.4
		VOC	25.5	5.1
		Acetone**	19.77	3.96
		Methylene Chloride	33.00	6.60

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
83	Spray Painting Area	PM	0.10	0.10
		PM_{10}	0.1	0.1
		VOC	22.5	2.2
		Lead	0.01	0.01
		Acetone**	5.60	0.70
		Chromium Comp.	0.01	0.01
		Ethyl Acrylate*	2.10	0.27
		Ethyl Benzene*	1.40	0.18
		Methanol*	2.80	0.35
		Methyl Isobutyl Ketone*	8.40	1.05
		Toluene*	11.90	1.49
		Xylene*	8.40	1.05
84	Warhead Manufacturing Operations	PM	0.10	0.20
		PM_{10}	0.1	0.2
		SO_2	0.1	0.1
		VOC	10.1	1.7
		CO	0.3	1.3
		NO_X	0.4	1.7
85	Motor Case Cleaning Operations	VOC	25.5	2.2
		Methylene Chloride	11.00	2.75
		1,1,1 Trichloroethane	10.85	2.72

* HAPs included in the VOC totals. Other HAPs are not included in any other totals unless specifically stated.

** Air Contaminants such as ammonia and acetone are not VOCs or HAPs.

SECTION III: PERMIT HISTORY

Permits 538-A and 617-A were issued to Atlantic Research in 1979 and 1980 for the installation of a facility in Highland Industrial Park to manufacture rocket propellants and the assembly of rocket motors.

Permit 617-AR-1 was issued on September 23, 1983. This permit allowed for installation of additional facilities to re-manufacture rocket motors from the U.S. Army Red River Depot in Texarkana.

Permit 617-AR-2 was issued on April 25, 1989. It allowed for production of solid propellant rocket motors and new facilities for painting rocket motor cases.

Permit 617-AR-3 was issued on April 18, 1990. This permit allowed for construction of a new facility to be used to conduct acceptance tests for military and commercial high explosives.

In 1992, ARC submitted an application for modification of its existing SIP permit. At that time, a number of significant process changes, including additional emission sources, were proposed for the East Camden facility. In June 1992, a draft air permit, 617-AR-4, was issued. ARC submitted comments on the draft in July 1992. A final permit was never issued.

In May 1996, a minor modification of 617-AR-3 was approved. It authorized production of the Sidewinder Missile at the East Camden facility. New sources SN-37 through SN-45 were added to the permit.

In October 1997, another minor modification of 617-AR-3 was approved. It authorized production of the AMRAAM warhead (SN-80) and the installation of a new grit blast machine (SN-67) at Building 2-SH-14.

In May 1998, a third minor modification of 617-AR-3 was approved. It authorized installation of a diesel-powered pump (SN-81). This equipment was part of a new facility for the reclamation of rocket motor cases.

In September 1998, a fourth minor modification was approved. It authorized construction of a new facility for the manufacture of air bag propellants (SN-82).

In February 1999, a de minimis change to 617-AR-3 was approved. It authorized production of the PAC-2 Missile. New sources SN-74, SN-75, and SN-79 were added to the permit and SN-67 was modified.

In March 1999, a second de minimis change was approved. It authorized production of the Advanced Tomahawk Missile at the facility. New source SN-83 was added to the permit and Sources SN-39 through SN-42 were modified.

On December 3, 2001, air permit 617-AOP-R0 was issued to ARC. This permit allowed for installation of the new Advanced Tomahawk production program, for modifications to the PAC-2 manufacturing operations, and for expansion of the air bag propellant and component manufacturing operations. This was also the first Title V Operating Permit issued to this facility.

On October 10, 2002, air permit 617-AOP-R1 was issued to Atlantic Research Corporation. This minor modification application allowed for production of the Supersonic Sea-Skimming Target Rocket (SSST) Motor and to add an insignificant activity. A proposed new vent for an existing cutting/grinding operation was also added to the list of insignificant activities. Emissions increases were 1.3 tons per year of carbon monoxide and 0.02 tons per year of hydrogen fluoride.

On May 13, 2003, Atlantic Research Corporation was granted authorization to relocate the Thermal Treatment Facility (SN-04) to a new site within the East Camden facility. There was no change in throughput or emissions.

On July 7, 2003, air permit 0617-AOP-R2 was issued to Atlantic Research Corporation. This minor modification application allowed for a replacement of a 1.7 MMBTU/hr boiler in SN-02 with a new 3.352 MMBTU/hr boiler.

On August 21, 2003, air permit 0617-AOP-R2 was administratively amended to add a new building to SN-82. There was no change in emissions.

On September 9, 2003, Atlantic Research Corporation was granted authorization to replace two 1.7 MMBTU/hr boilers at Building M-2 with a 3.352 MMBTU/hr unit (SN-02). There was no change in overall fuel capacity or emissions.

On October 4, 2003, air permit 0617-AOP-R2 was transferred from Atlantic Research Corporation to Aerojet-General Corporation.

On July 15, 2004, air permit 0617-AOP-R2 was administratively amended to add two insignificant activities. These activities were the Six-Bladed Saw, Camfer, and Drill Machine and the Composite Case Grinding Machine. There was no change in emissions.

On June 29, 2005, air permit 0617-AOP-R3 was issued to Aerojet – General Corporation. This permit involved several minor modifications for this facility. They were the following:

1. Production of a new propellant, ARCOMP 408, at the facility. This product is an ignition material for automobile air bag inflators. As part of the ARCOMP 408 program, three additional production buildings (#70, #71, and #74) were installed at the East Camden facility. These units are considered part of the New Air Bag Manufacturing Operations (SN-82). Production of ARCOMP 408 did not change any of the currently permitted emission rates.

2. An increase in the throughput of the waste air bag propellants burned in the Thermal Treatment Facility (SN-04). Throughput was increased by 25,000 lb/year. This change increased PM and PM_{10} by 6.04 tons per year, NO_X by 0.01 tons per year, and Hydrogen Chloride by 0.01 tons per year.

3. Correct the number of boilers listed in the group Process Boilers (SN-25). During an internal compliance audit, Aerojet determined that the inventory of gas-fired process equipment used to prepare the original Operating Permit application was not accurate. A total of 7, rather than 4, boilers should have been included. The correct heat input capacity of the equipment is 10.06 MMBTU/hr instead of 4.20.

4. Install a new Grit Blast Machine as part of SN-67. In addition, the existing Liner Spray Machine (SN-28) was to be replaced with an equivalent unit.

On December 1, 2005, air permit 0617-AOP-R4 was issued to Aerojet- General Corporation. This minor modification application allowed for installation of new processes and equipment for the production of warheads and ordnance at Building M-11 (SN-84). These items included two coating operations (application of asphalt and wax liners), two propane-fired "melter/applicator machines," and a natural gas-fired boiler. This change increased PM by 0.2 tons per year, SO_2 by 0.1 tons per year, VOCs by 1.7 tons per year, CO by 1.3 tons per year, and NO_X by 1.7 tons per year. This permit also added two steam-heated ovens to the Insignificant Activities section.

On April 3, 2006, air permit 0617-AOP-R5 was issued to Aerojet - General Corporation. This minor modification application allowed for processing new rocket propellants that contain two hazardous air pollutants (Cadmium and Chromium) during the testing and treatment activities at the Rocket Test Facility (SN-03), the Thermal Treatment Facility (SN-04), and the High Explosives Test Facility (SN-30). In addition, Aerojet proposed to install a new spray liner machine (SN-07) and grit blast machine (SN-67) to support multiple rocket motor manufacturing programs. Finally, Aerojet proposed to implement new motor case cleaning activities (SN-85) to support several production programs. This included construction of a solvent wipe room and installation of a motor case flush-cleaning apparatus. The rocket propellant part of this modification resulted in permitted emissions increases of 0.05 tpy of Cadmium, 0.01 tpy of Chlorine, 0.54 tpy of Chromium, and 0.01 tpy of Hydrogen Chloride and permitted emissions decrease of 0.68 tpy of lead and 0.32 tpy of 1,3 Dioxolane. The new SN-85 part of this modification resulted in permitted increases of 1.6 tpy of VOC, 1.58 tpy of Methylene Chloride, 1.58 tpy of Methyl Ethyl Ketone, and 1.58 tpy of 1,1,1-Trichloroethane.

On July 3, 2006, air permit 0617-AOP-R6 was issued to Aerojet – General Corporation. This minor modification was issued to replace one of the two natural gas-fired process boilers at Building #48 (SN-25). The new unit has a heat input capacity of 2.00 MMBTU/hr and replaces the 1.55 MMBTU/hr boiler. In addition, the source description for SN-02 was corrected. Increases from this modification were 0.2 tons per year of CO and 0.2 tons per year of NO_X.

Permit 617-AOP-R7 was issued on January 7, 2007. This modification is the first Title V Permit renewal for this facility. In addition, the facility made the following changes:

- Decreased hourly and annual throughput limits of rocket propellant at the Rocket Test Facility (SN-03),
- Decreased annual throughput limits for air bag propellants at the Rocket Test Facility (SN-03),
- Eliminated individual throughput limits for Arcadene #428 propellant facility wide (Arcadene #428 will be included in the general rocket propellant now),
- Decreased annual throughput limit for explosives in the High Explosives Test Facility (SN-30),
- Eliminated individual throughput limits for air bag propellants at the High Explosives Test Facility (SN-30) (air bag propellants will be included in the general explosives limit),

- Removed Rubber Molding Operations (SN-50), Barrier Coating Operation (SN-53), and Negative Pressure Tables (SN-65) from the permit,
- Recalculated and Moving Extruder Operations (SN-51) and MLRS Igniter Assembly (SN-55) to the Insignificant Activities Table,
- Removed the composite solvent "CompSol" from the permit,
- Revised formulation limits for individual solvents, paints, primers, adhesives, barrier coatings, and other process materials plantwide, and
- Increased annual throughput limits for paints, thinners, primers, adhesives, barrier coatings, and other process materials plantwide.

This modification decreased PM/PM_{10} emissions by 6.6 tons per year, VOC emissions by 44.6 tons per year, CO emissions by 19.7 tons per year and SO_2 emissions by 0.1 tons per year. It increased emissions of NO_X emissions by 3.5 tons per year and lead emissions by 2.28 tons per year.

SECTION IV: SPECIFIC CONDITIONS

SN-02- Natural Gas-Fired Boilers (8 Units)

Source Description

Aerojet operates a total of eight natural gas-fired boiler units in Building M-2 and Building M-8. These boilers are used to produce the steam and/or hot water for the operations in these buildings. Building M-2 uses one 1.7 MMBTU/hr unit, two 3.352 MMBTU/hr units, and one 4.185 MMBTU/hr unit. Building M-8 uses two 2.0 MMBTU/hr units and two 2.1 MMBTU/hr units. All of these units are less than 10 MMBTU/hr each and are therefore not subject to New Source Performance Standard Subpart Dc.

Specific Conditions

1. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations and burning only natural gas. [§19.501 et seq. of Regulation #19, effective July 15, 2007 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	0.2	0.8
SO_2	0.1	0.1
VOC	0.2	0.6
CO	1.8	7.6
NO_x	2.1	9.0

2. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations and by burning only natural gas. [§18.801 of Regulation #18, effective February 15, 1999, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	0.2	0.8

3. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. Compliance will be demonstrated by only burning natural gas.

SN	Limit	Regulatory Citation
02	5%	§18.501 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

SN-03-Rocket Test Facility

Source Description

In the Rocket Test Area, Aerojet test fires a certain number of rocket motors, air bag initiators, and other propellant devices as part of its Quality Assurance/Quality Control (QA/AC) Program. The testing sites include Bay 15, Bay 18, Bay 45, Building 16, Building 19, and the production and development Test Bays 1 and 2 at Building M-85. The amount of energetic material tested ranges from less than one pound to 20,000 pounds per event.

This source is not subject to National Emission Standards for Hazardous Air Pollutants for Engine Test Cells/Stands (40 CFR 63, Subpart PPPPP) because this source is considered to be an existing affected source since it was installed prior to the regulatory deadline of May 14, 2002.

Specific Conditions

4. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #6, #8, #10, #12, #14, and #16 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	7,645.7	48.7
VOC	400.0	2.5
CO	7,076.7	44.6
NO_x	66.1	0.5
Lead	58.80	1.47

5. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #6, #8, #10, #12, #14, and #16, and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	7,655.70	48.70
Cadmium	0.46	0.02
Chlorine	48.00	0.30
Chromium	4.20	0.11
Hydrogen Chloride	5,601.55	35.04
Hydrogen Fluoride	16.20	0.11

6. The permittee shall not burn in excess of 20,000 pounds of any rocket propellant in SN-03 during any one hour period. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E]

7. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Specific Condition #6. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

8. The permittee shall not burn in excess of 250,000 pounds of any rocket propellant in SN-03 during any consecutive twelve month period. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E]

9. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Specific Condition #8. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

10. The permittee shall not burn in excess of 100.0 pounds of air bag propellant in SN-03 during any one hour period. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E]

11. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Specific Condition #10. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

12. The permittee shall not burn in excess of 5,000 pounds of air bag propellant in SN-03 during any consecutive twelve month period. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E]

13. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Specific Condition #12. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

14. The permittee shall not burn in excess of 3,000 pounds of rocket propellants that contain cadmium, chromium, and/or lead in SN-03 during any consecutive one-hour period. [§18.801 of Regulation #18, §19.501 et seq. of Regulation #19, 40 CFR Part 52 Subpart E, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

15. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Specific Condition #14. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7.

[§18.1004 of Regulation #18, §19.05 of Regulation #19, 40 CFR Part 52 Subpart E, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

16. The permittee shall not burn in excess of 150,000 pounds of rocket propellants that contain cadmium, chromium, and/or lead in SN-03 during any consecutive twelve month period. [§18.801 of Regulation #18, §19.501 et seq. of Regulation #19, 40 CFR Part 52 Subpart E, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

17. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Specific Condition #16. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§18.1004 of Regulation #18, §19.05 of Regulation #19, 40 CFR Part 52 Subpart E, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

SN-04 - Thermal Treatment Facility

Source Description

The Thermal Treatment Area is where Aerojet destroys various scrap propellants and other waste energetic materials. Reactive wastes generated at Aerojet are first assembled in a number of marked accumulation points near the point of generation. The wastes are then collected and transported to the Thermal Treatment Area. The wastes are placed in one of four pits and destroyed by open burning. The Thermal Treatment Area is a permitted hazardous waste treatment facility.

Specific Conditions

18. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #20, #22, #24, and #26, and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	3,874.4	166.2
VOC	160.0	7.4
CO	40.0	1.9
NO_x	236.0	11.0
Lead	84.00	3.87

19. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #20, #22, #24, and #26 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	3,874.40	166.20
Cadmium	0.97	0.05
Chlorine	129.60	6.02
Chromium, Trivalent	7.90	0.37
Chromium, Hexavalent	0.13	0.01
Hydrogen Chloride	1,840.80	84.85
Hydrogen Fluoride	12.00	0.56

20. The permittee shall not burn in excess of 8,000 pounds of waste rocket propellant in SN-04 during any one hour period. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E]

21. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Specific Condition #20. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

22. The permittee shall not burn in excess of 737,100 pounds of waste rocket propellant in SN-04 during any consecutive twelve month period. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E]

23. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Specific Condition #22. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

24. The permittee shall not burn in excess of 8,000 pounds of waste air bag propellant in SN-04 during any one hour period. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E]

25. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Specific Condition #24. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

26. The permittee shall not burn in excess of 235,000 pounds of waste air bag propellant in SN-04 during any consecutive twelve month period. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E]

27. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Specific Condition #26. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

SN-07 - Liner Mixer and Spray Liner Machine

Source Description

The Liner Mixer and Spray Machine are used to prepare and apply liner materials to the insides of the rocker motor cases. This equipment is located in Building M-8. The motor cases may be either insulated or bare metal. The liner materials are mixed in a closed mixer and then mechanically applied to the interior of the degreased motor case. The batch lining operation is performed one component at a time. Plantwide Condition #7 lists available solvents and VOC/HAP compositions.

Specific Conditions

28. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	8.5	4.3

29. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§18.801 of [Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Methylene Chloride	11.00	5.50

SN-11 - Lacquer Preparation

Source Description

Various liquid explosives are called "lacquer" by Aerojet. Lacquer preparation is done in Building C-56. Preparation of liquid explosive compounds involves the use of organic solvents for stabilizing agents. These solvents include: acetone, methylene chloride, ethyl alcohol, and isopropyl alcohol. Lacquer received from outside venders is premixed with any of those solvents before transportation. These solvents are removed from the lacquer before use by nitrogen gas stripping. Lacquer preparation also includes adding solvents to liquid explosives prior to their use, shipment, and/or long-term storage. Plantwide Condition #7 lists available solvents and VOC/HAP compositions.

Specific Conditions

30. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #32, Plantwide Condition #7, and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	80.1	5.1

31. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #32, Plantwide Condition #7, and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Acetone	80.08	5.03
Methylene Chloride	80.08	5.03

32. The permittee shall not use in excess of 40,000 pounds of lacquer premix in SN-11 during any consecutive twelve month period. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E]

33. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Specific Condition #32. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

SN-12 - Spray Paint Booth

Source Description

This spray painting area is located at Building C-60. Only a limited amount of surface coating is performed at this location. The paints are applied using aerosol spray cans. The painting area is equipped with a vent hood for general ventilation. In addition to painting, solvents are used to clean various components prior to further processing. The cleaning agents are applied with wiping cloths. Alternative solvents will also be used. Plantwide Condition #7 lists available solvents and VOC/HAP compositions and Plantwide Condition #11 lists available paint VOC/HAP compositions. Plantwide Condition #19 lists available adhesive VOC/HAP compositions.

Specific Conditions

34. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #9, #11, and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	22.5	2.6

35. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #9, #11, #17, and #19 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Acetone	12.19	1.36
Ethyl Acrylate	2.10	0.27
Ethyl Benzene	1.40	0.18
Methanol	2.80	0.35
Methyl Isobutyl Ketone	8.40	1.05
Toluene	11.90	1.49
Xylene	8.40	1.05

SN-13 - Ultrasonic Cleaner

Source Description

The Ultrasonic Cleaner is used to clean/degrease a variety of small parts. The cleaner consists of a one-liter beaker set in an ultrasonic waterbath. This open-top, batch vapor degreaser has a surface area of 1.95 square feet. It is located in Building M-85. Plantwide Condition #7 lists available solvents and VOC/HAP compositions. This source is not subject to 40 CFR 63, Subpart T because a halogenated solvent is not used in this equipment.

Specific Conditions

36. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	0.2	0.3

37. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§18.801 and Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
1,2 Butylene Oxide	0.01	0.01

38. The permittee shall not use any halogenated solvens at this source. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-19 - Motor Case Cleaner

Source Description

This Motor Case Cleaner is used to clean/degrease rocket motor cases prior to further processing. This source is located in Building 2-SH-14 and has a capacity of 1,200 gallons of solvent. It is an open-top, batch degreaser with a working area of 44.0 square feet. Various solvents will be used in the degreaser. Plantwide Condition #7 lists available solvents and VOC/HAP compositions. This source is not subject to 40 CFR 63, Subpart T because a halogenated solvent is not used in this equipment.

Specific Conditions

39. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	6.6	10.7

40. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
1,2 Butylene Oxide	0.07	0.14

41. The permittee shall not use any halogenated solvents at this source. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-20 - Solvent Wipe Rooms

Source Description

One wipe room is operated in Building 2-SH-14, and one wipe room is operated in Building 2-SH-15. These rooms are used for motor case degreasing prior to application of the case liner. Other parts cleaning activities are also done. The solvents are manually applied using wiping cloths, and the components are allowed to air-dry. Plantwide Condition #7 lists available solvents and VOC/HAP compositions. This source is not subject to 40 CFR 63, Subpart T because it is a hand-wipe cleaning activity.

Specific Conditions

42. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	17.0	2.2

43. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Methylene Chloride	22.00	2.75

SN-22 - Mix Room

Source Description

This mix room, located in Building 2-SH-15, is used to mix ingredients during the preparation of motor case liner materials. Plantwide Condition #7 lists available solvents and VOC/HAP compositions.

Specific Conditions

44. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	8.5	4.3

45. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Methylene Chloride	11.00	5.50

SN-24 - Spray Paint Booth

Source Description

This paint booth is located in Building 48. It is used to paint various rocket components. Parts cleaning may also be performed in this spray booth. Plantwide Condition #7 lists available solvents and VOC/HAP compositions, and Plantwide Condition #11 lists available paint VOC/HAP compositions.

Specific Conditions

46. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #9, and #11 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	0.10	0.10
VOC	40.8	7.6
Lead	0.01	0.01

47. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #9, and #11 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	0.10	0.10
Acetone	11.20	2.10
Chromium Compounds	0.01	0.01
Ethyl Acrylate	4.20	0.79
Ethyl Benzene	2.80	0.53
Methanol	5.60	1.05
Methyl Isobutyl Ketone	16.80	3.15
Toluene	23.80	4.47
1,1,1 Trichloroethane	5.43	1.63
Xylene	16.80	3.15

SN-25 - Natural Gas-Fired Boilers (7 Units)

Source Description

There are seven natural gas-fired boilers in this group, one in Building 47, two in Building 48, two in Building M-85, one in Building 66, and one in Building M-125. These units produce steam and/or hot water for the production operations at these buildings. The boiler in Building 47 has a capacity of 2.35 MMBTU/hr. Building 48 contains boilers with capacities of 0.75 MMBTU/hr and 2.00 MMBTU/hr. The two in Building M-85 are rated at 2.00 MMBTU/hr each. The one in Building 66 has a capacity of 1.15 MMBTU/hr. The boiler in Building M-125 is rated at 0.26 MMBTU/hr. All of these units are less than 10 MMBTU/hr each and are therefore not subject to New Source Performance Standard Subpart Dc.

Specific Conditions

48. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by burning only natural gas and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	0.1	0.4
SO_2	0.1	0.1
VOC	0.1	0.3
CO	0.9	3.9
NO_x	1.1	4.6

49. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by burning only natural gas and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	0.10	0.40

50. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method #9. Compliance will be demonstrated by only burning natural gas.

SN	Limit	Regulatory Citation
25	5%	§18.501 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

SN-28 - Spray Liner Machine and mixer unit

Source Description

The Liner Spray Machine is used to apply a liner material to the insides of the rocker motor cases. This equipment is located in Building M-2. The motor cases may be either insulated or bare metal. The liner material is mechanically applied to the interior of the degreased motor case. Plantwide Condition #7 lists available solvents and VOC/HAP compositions. This source has been replaced by like equipment in 2005.

Specific Conditions

51. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§19.501 et seq. of Regulation 19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	8.5	4.3

52. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Methylene Chloride	11.00	5.50

SN-30 - High Explosives Test Facility

Source Description

Aerojet conducts performance-testing of energetic materials at the High Explosive Test Facility as part of its QA/QC Program. This facility is located in the 16-AT Area of the Highland Industrial Park approximately nine miles from the main Aerojet complex. The explosives are detonated with initiation by impact of a bullet, by falling, or by a cap-initiated high-explosive donor charge. Testing is also initiated by controlled bonfire and under proof-of-fire conditions. Test items range from finished air bag systems to military ordnance to R&D test samples.

Specific Conditions

53. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #55 and #57 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	137.0	5.5
VOC	6.0	0.3
CO	106.0	4.3
NO_x	1.0	0.1
Lead	5.88	0.24

54. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #55 and #57, and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	137.00	5.50
Cadmium	0.05	0.01
Chlorine	0.72	0.03
Chromium, Trivalent	0.42	0.02
Hydrogen Chloride	89.07	3.57

55. The permittee shall not use in excess of 300 pounds of energetic materials in SN-30 during any one hour period. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E]

56. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Specific Condition #55 These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to Department as required in General Provision #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

57. The permittee shall not use in excess of 24,000 pounds of energetic materials in SN-30 during any consecutive 12 month period. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E]

58. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Specific Condition #57. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to Department as required in General Provision #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

SN-36 - Vapor Degreaser

Source Description

This batch vapor degreaser in Building 2-SH-4 is used to remove residual oil and grease from various rocket motor parts. This machine has a capacity of 25 gallons of solvent and a working surface area of 6.9 square feet. Plantwide Condition #7 lists available solvents and VOC/HAP compositions.

Specific Conditions

59. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	1.1	6.4

60. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
1,2 Butylene Oxide	0.02	0.09
Methylene Chloride	1.04	8.25
1,1,1 Trichloroethane	1.04	8.14

61. This solvent cleaning operation is subject to the provisions of 40 CFR Part 63, Subpart T - National Emission Standards for Halogenated Solvent Cleaning. A copy of 40 CFR Part 63, Subpart T has been included in Appendix B of this permit. The requirements of this subpart are outlined in Plantwide Conditions #24 through #36. [§19.304 of Regulation #19 and 40 CFR. §63.460(a)]

SN-37 - Motor Case Cleaning

Source Description

This operation, located in Building 2-SH-2 or Building 2-SH-14, consists of removing residual preservative oil from rocket motor cases. Plantwide Condition #7 lists available solvents and VOC/HAP compositions. This source is not subject to 40 CFR 63, Subpart T because these provisions do not regulate the use of halogenated solvents in hand-wipe cleaning activities.

Specific Conditions

62. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	8.5	1.5

63. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Methylene Chloride	11.00	1.93
1,1,1 Trichloroethane	10.85	1.90

SN-38 - Motor Case Cleaning

Source Description

This operation, located in Building 2-SH-2 or Building 2-SH-14, consists of removing dust from rocket motor cases after they have been grit blasted. Plantwide Condition #7 lists available solvents and VOC/HAP compositions. This source is not subject to 40 CFR 63 Subpart T because these provisions do not regulate the use of halogenated solvents in hand-wipe cleaning activities.

Specific Conditions

64. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	8.5	1.5

65. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Methylene Chloride	11.00	1.93
1,1,1 Trichloroethane	10.85	1.90

SN-39 - Adhesive Primer Operations

Source Description

Adhesive Primer Operations are located in Building 2-SH-14 and 2-SH-15. Interior surfaces of clean, dry rocket motor cases are coated with an adhesive primer. Thinning of the primer is done using methyl ethyl ketone. The primer is applied by hand. Plantwide Condition #7 lists available solvents and VOC/HAP compositions. Plantwide Condition #19 lists available adhesive VOC/HAP compositions.

Specific Conditions

66. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #17, and #19 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	20.0	3.0

67. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #17, and #19 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Ethyl Benzene	2.88	0.58
Formaldehyde	0.06	0.02
Methanol	2.30	0.46
Methyl Isobutyl Ketone	7.48	1.50
Tetrachloroethylene	1.73	0.35
Toluene	2.88	0.58
1,1,1 Trichloroethane	6.33	1.27
Trichloroethylene	4.60	0.92
Xylene	9.78	1.96

SN-40 - Adhesive Operations

Source Description

Following the application of the adhesive primer, adhesive is applied to the interior surfaces of the rocket motor cases. Adhesive Operations (SN-40) is located in Building 2-SH-14 and 2-SH-15. The adhesive is applied by hand. Plantwide Condition #7 lists available solvents and VOC/HAP compositions. Plantwide Condition #19 lists available adhesive VOC/HAP compositions.

Specific Conditions

68. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #17, and #19 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	20.0	3.0

69. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #17, and #19 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Ethyl Benzene	2.88	0.58
Formaldehyde	0.06	0.02
Methanol	2.30	0.46
Methyl Isobutyl Ketone	7.48	1.50
Tetrachloroethylene	1.73	0.35
Toluene	2.88	0.58
1,1,1 Trichloroethane	6.33	1.27
Trichloroethylene	4.60	0.92
Xylene	9.78	1.96

SN-41 - Adhesive Barrier Coating Operations

Source Description

Following the adhesive application, an adhesive barrier coating is applied to the interior surfaces of the rocket motor cases. This operation is performed in Building 2-SH-14. The barrier coating is applied by spray nozzles mounted on an automated, traveling wand. Plantwide Condition #7 lists available solvents and VOC/HAP compositions. Plantwide Condition #19 lists available adhesive VOC/HAP compositions.

Specific Conditions

70. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #17, and #19 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	20.0	3.0

71. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #17, and #19 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Ethyl Benzene	2.88	0.58
Formaldehyde	0.06	0.02
Methanol	2.30	0.46
Methyl Isobutyl Ketone	7.48	1.50
Tetrachloroethylene	1.73	0.35
Toluene	2.88	0.58
1,1,1 Trichloroethane	6.33	1.27
Trichloroethylene	4.60	0.92
Xylene	9.78	1.96

SN-42 - Spray Liner Ma

Source Description

In Building 2-SH-15, a liner material is mechanically applied to the adhesive surface of rocket motor casings. Various solvents are used to flush the equipment. Plantwide Condition #7 lists available solvents and VOC/HAP compositions.

Specific Conditions

72. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	8.5	2.2

73. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Methylene Chloride	11.00	2.75

SN-43 - Spray Paint Booth

Source Description

This paint booth is located in Building D-33. This booth is used to surface coat various rocket components. Plantwide Condition #7 lists available solvents and VOC/HAP compositions, and Plantwide Condition #11 lists available paint VOC/HAP compositions.

Specific Conditions

74. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #9, and #11 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	0.1	0.1
VOC	36.5	8.5
Lead	0.01	0.01

75. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #9, and #11 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	0.10	0.10
Acetone	11.20	2.80
Chromium Compounds	0.01	0.01
Ethyl Acrylate	4.20	1.05
Ethyl Benzene	2.80	0.70
Methanol	5.60	1.40
Methyl Isobutyl Ketone	16.80	4.20
Toluene	23.80	5.95
Xylene	16.80	4.20

SN-44 - Floor Operations

Source Description

This source consists of various touch-up painting, bonding, labeling, and cleaning activities located throughout the facility. All of these activities are done by hand. Plantwide Condition #7 lists available solvents and VOC/HAP compositions, and Plantwide Condition #11 lists available paint VOC/HAP compositions. Plantwide Condition #15 lists available VOC/HAP compositions for miscellaneous materials. Plantwide Condition #19 lists available adhesive VOC/HAP compositions. This source is not subject to 40 CFR 63, Subpart T because these provisions do not regulate the use of halogenated solvents in hand-wipe cleaning activities.

Specific Conditions

76. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #9, #11, #13, #15, #17, and #19 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	116.0	19.7

77. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #9, #11, #13, #15, #17, and #19 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Acetone	49.23	17.16
1,2 Butylene Oxide	0.23	0.12
Diethylene Glycol Monobutyl Ether Acetate	7.10	1.42
Diethylene Glycol Monoethyl Ether Acetate	14.20	2.84
Ethyl Acrylate	4.20	2.10
Ethyl Benzene	9.90	2.82
Methanol	16.25	4.93
Methylene Chloride	50.40	16.68
Methyl Isobutyl Ketone	45.20	14.08
Phenol	16.33	3.27
Toluene	63.17	24.13

Pollutant	lb/hr	tpy
1,1,1 Trichloroethane	89.15	24.34
Xylene	34.55	11.95

SN-45 - Motor Case Soak-Out Facility

Source Description

Some rocket motors are rejected due to manufacturing imperfections. Solvents are used in Building 2-SH-22 to remove the liner materials in the cases. These cases can then be reprocessed. Plantwide Condition #7 lists available solvents and VOC/HAP compositions. This source is not subject to 40 CFR 63, Subpart T because it does not use one of the listed solvents.

Specific Conditions

78. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	6.0	0.8

79. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Acetone	6.00	0.75
Toluene	6.00	0.75

SN-47 - Foam-Blowing Operations

Source Description

Various polyurethane foam components are made in Building 2-SH-4. The foam is produced using a two-part formulation combined in a 50-50 ratio. The foam is then forced into metal molds where it is cured. The mixer is purged with various solvents when the parts are changed. Plantwide Condition #7 lists available solvents and VOC/HAP compositions.

Specific Conditions

80. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #82, Plantwide Condition #7, and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	8.5	1.3

81. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #82, Plantwide Condition #7, and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Methylene Chloride	11.00	1.65

82. The permittee shall not exceed 40,000 pounds of polyurethane resin parts A & B in SN-47 during any consecutive twelve month period. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E]

83. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Specific Condition #82. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

SN-48 - Phenolic Molding Operations

Source Description

Phenolic Molding Operations are located in Buildings 2-SH-3 and 2-SH-14. These operations are used to make exit cone inlets, throat insulations, forward and aft igniter mounts, retention rings, launch motor insulators, rupture disks, nozzle bodies, and various other molded parts at this facility. The resin materials are received in powder form. During parts production the powder is first placed in metal molds, which are inserted in press machines. Electric heat and pressure are then applied to melt the phenolic resin.

Specific Conditions

84. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #86 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	0.1	0.1

85. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #86 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Ammonia	0.01	0.01
Formaldehyde	0.01	0.01
Phenol	0.06	0.07

86. The permittee shall not process more than 500,000 pounds of phenolic resin in SN-48 and SN-49 combined during any consecutive twelve month period. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E,]

87. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Specific Condition #86. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

SN-49 - Hockey Puck Manufacturing

Source Description

Certain rocket components manufactured by Aerojet are phenolic billets. These parts, commonly called "hockey pucks," are produced using a press machine at Building 2-SH-3. Phenolic resin molding compounds are also used in this operation. The powdered resin material is conveyed into a bin, and then loaded into a consolidation billet press. Heat and pressure are applied to form the "hockey pucks."

Specific Conditions

88. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #86 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	0.1	0.1

89. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #86 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Ammonia	0.01	0.01
Formaldehyde	0.01	0.01
Phenol	0.06	0.07

SN-52 - Sling Liner Machines

Source Description

Two sling liner machines are operated at Building 2-SH-15 and M-8 to apply a liner to the inside of rocket motor cases. The liner is a solvent-free, carbon-filled polyurethane rubber. The rubber solution is pumped through a rotating head which slings the liner onto the interior of the motor case. The lined components are then placed in a curing oven. Once cured, the rocket motor cases are subjected to additional processing. The machines are cleaned using various solvents. Plantwide Condition #7 lists available solvents and VOC/HAP compositions.

Specific Conditions

90. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	8.5	2.2

91. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Methylene Chloride	11.00	2.75

SN-54 - Squib Powder Manufacturing

Source Description

Squibs are small explosive devices. The energetic material for these units is manufactured in the Hood Room at Building M-85. A slurry of ground potassium perchlorate, titanium powder, and a solvent is hand-mixed in a pan. The slurry is then air-dried underneath the hood. After the composition has dried, it is packaged for use in the squib loading area. Plantwide Condition #7 lists available solvents and VOC/HAP compositions.

Specific Conditions

92. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	4.3	0.2

93. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Acetone	3.30	0.09

SN-56 - MK 104 Sample Collection

Source Description

Material samples from the nozzle assembly for the MK 104 missile are collected as part of the manufacturing process. These samples are obtained in a trailer next to Building 2-SH-4 for physical testing in the Chemistry Lab in Building 17. Sample collection consists of cutting and grinding the nozzle assembly in order to obtain the desired materials. The grinding operations, which generate particulate emissions, are performed under a vent hood.

Specific Conditions

94. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	0.1	0.5

95. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	0.10	0.50

SN-57 - Air Bag R&D Laboratory

Source Description

Aerojet manufactures small pellets which are commonly referred to as "Auto-Ignition Pills" (AIPs). The pills act as safety devices by preventing explosion of the air bag units in the event of a fire. Research and Development of new formulations for AIPs, "gas-generating" pills, and other similar products are conducted in Building M-85. These activities are performed on an intermittent basis depending on production requirements.

Specific Conditions

96. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	4.3	1.1

97. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Acetone	3.30	0.83

SN-58 - Pill Manufacturing

Source Description

The production of Auto-Ignition Pills (AIPs) and other products used in the manufacture of air bag systems may be performed in Buildings M-85, and/or M-2. In these operations, dry ingredients are combined in a solvent-based slurry and mixed in a ball mill. The slurry is then dried. Once dry, the AIP powder formulations are packaged and transferred to the pill press. Plantwide Condition #7 lists available solvents and VOC/HAP compositions.

Specific Conditions

98. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	8.5	10.7

99. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Acetone	6.59	8.24
Methylene Chloride	11.00	13.75

SN-59 - Air Bag Propellant Manufacturing

Source Description

Various proprietary propellant formulations for air bag systems are manufactured at Buildings M-2, and M-125. Dry ingredients for air bag propellants are screened, combined in a slurry, and mixed in a granulator. The slurry is then dried using a vibrating fluidized-bed dryer. Once dry, the propellant formulations are packaged and transferred to various departments for further processing. Plantwide Condition #7 lists available solvents and VOC/HAP compositions.

Specific Conditions

100. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	1.0	4.4
VOC	25.5	5.1

101. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	1.00	4.40
Acetone	19.77	3.96
Methylene Chloride	33.00	6.60

102. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method #9.

SN	Limit	Regulatory Citation
59	5%	§18.501 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

103. The permittee shall conduct weekly observations of the opacity from source SN-59 and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that

the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN-62 - Mixing Operations

Source Description

Aerojet manufactures energetic materials which will perform in specifically engineered ways. These materials are formulated in the mixing operations. The mixing process involves adding various dry ingredients to a particular mixer unit in an orderly, controlled manner and then consolidating these ingredients into a uniform formulation. Mixer units are operated at Buildings A-2, A-3, A-11, B-22, B-23, B-24, B-25, C-51, and M-125. The mixer capacities range from one-gallon to 420-gallons. On occasion, various ingredients are mixed in solvents as a safety precaution. The mix ingredients may also be packaged in a variety of solvents. Plantwide Condition #7 lists available solvents and VOC/HAP compositions.

Specific Conditions

104. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	8.5	0.9

105. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Acetone	6.59	0.66
Methylene Chloride	11.00	1.10

SN-63 - Nitramines and Explosives Dryer

Source Description

Various nitramines and explosive compounds are used in Aerojet's production operations. When received from the vendor, these materials are wetted with isopropyl alcohol which acts as a stabilizer. A rotary vacuum dryer is operated at Building C-58 in order to dry the energetic materials prior to their use. The explosive compounds are received in plastic bags and are manually opened. The materials are placed in the dryer and the building is secured. The dryer is then heated using a hot-water jacket, while a vacuum pump simultaneously exhausts the dryer chamber. During operation, the dryer chamber is periodically rotated to ensure thorough drying of its contents. Plantwide Condition #7 lists available solvents and VOC/HAP compositions.

Specific Conditions

106. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	18.0	0.5

SN-64 - Vacuum Ovens

Source Description

Vacuum ovens are operated at Buildings 2-SH-4 and A-3. The units are utilized to dry various production materials prior to use. The compounds, which are wetted with either water or solvent, are placed in pans and then inserted into a particular oven. A vacuum is then applied to the oven in order to extract the water or solvent from the process material. Plantwide Condition #7 lists available solvents and VOC/HAP compositions.

Specific Conditions

107. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	8.5	0.9

108. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Acetone	6.59	0.66
Methylene Chloride	11.00	1.10

SN-67 - Grit Blast Machines

Source Description

The grit blast machines are used to prepare the interior and/or exterior surfaces of rocket motor cases and other components for the subsequent application of various surface coatings. The machines use sand, coal slag, and/or steel grit as the abrasive materials. Two units are located in Building 2-SH-2, two are located in Building 2-SH-3, one is located in Building 2-SH-4, five are located in Building 2-SH-14, two are located in Building M-85, one is located in Building M-82, three are located in Building M-2, one is located in Building #36 and one is located in Building #33. An emissions bubble is in effect for the grit blast machines.

Specific Conditions

109. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #113 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	53.3	6.2

110. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #113 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	53.3	6.20

111. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method #9.

SN	Limit	Regulatory Citation
67	5%	§18.501 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

112. The permittee shall conduct weekly observations of the opacity from each building at source SN-67 and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to

Department personnel upon request. [§18.501 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

113. The permittee shall not exceed 300,000 pounds of blasting media in SN-67 during any consecutive twelve month period. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E]

114. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Specific Condition #113. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

SN-69 - Natural Gas-Fired Boilers (8 Units)

Source Description

Aerojet operates natural gas-fired boilers in Buildings M-142, M-125, 2-SH-15, and 2-SH-2. The boilers are used to produce the steam and/or hot water for the production operations in these buildings. Building M-142 uses one 0.15 MMBTU/hr unit. Building M-125 uses two 2.10 MMBTU/hr units and one 2.0 MMBTU/hr unit. Building 2-SH-15 uses three 1.34 MMBTU/hr units. Building 2-SH-2 uses one 2.00 MMBTU/hr unit. All of these units are less than 10 MMBTU/hr each and are therefore not subject to New Source Performance Standard Subpart Dc.

Specific Conditions

115. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by burning only natural gas and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	0.1	0.5
SO_2	0.1	0.1
VOC	0.1	0.4
CO	1.1	4.5
NO_x	1.3	5.4

116. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by burning only natural gas and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	0.10	0.50

117. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method #9. Compliance will be demonstrated by only burning natural gas.

SN	Limit	Regulatory Citation
69	5%	§18.501 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

SN-71 - Gasoline Storage Tank

Source Description

Aerojet operates one above ground tank for gasoline storage. The vessel is located near Building 1. The storage tank has a capacity of 4,000 gallons.

Specific Conditions

118. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #119 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	44.1	0.9

119. The permittee shall not exceed 50,000 gallons of gasoline in SN-71 during any consecutive twelve month period. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E]

120. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Specific Condition #119. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

SN-72 - Diesel Fuel Storage Tanks

Source Description

Aerojet operates three above-ground tanks for the storage of diesel fuel. The vessels are located near Building 1. The tanks have a capacity of 500 gallons each.

Specific Conditions

121. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #122 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	0.1	0.1

122. The permittee shall not exceed 40,000 gallons of diesel fuel in SN-72 during any consecutive twelve month period. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E]

123. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Specific Condition #122. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

SN-73 - Nitramines and Explosives Grinder

Source Description

Various nitramines and explosive compounds are conveyed to Building C-57 for particle-size reduction. A grinder unit is operated for this purpose. Once prepared, the ground energetic materials are utilized for the production of propellants and/or explosives.

Specific Conditions

124. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	0.1	0.5

125. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	0.10	0.50

126. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method #9. Compliance with this condition will be demonstrated by the permittee's established standard operating procedures for processing energetic materials.

SN	Limit	Regulatory Citation
73	5%	§18.501 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

SN-74 - Solvent Wipe Room

Source Description

Aerojet operates a solvent wipe room at Building M-2. The facility consists an enclosed bay equipped with a vent hood. The wipe room is used for the hand-wipe degreasing of the rocket motor cases before and after installation of the case rubber. Several solvents are used as the cleaning agents and are manually applied using spray bottles and/or wiping cloths. This source is not subject to 40 CFR 63, Subpart T because it is a hand-wipe cleaning activity.

Specific Conditions

127. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	17.0	2.2

128. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Methylene Chloride	22.00	2.75

SN-75 - Sling Liner Machine

Source Description

Various rocket motor cases are lined with specially-formulated in Building M-2. The coating is fed through a traveling wand to a rotating applicator head. The spinning head slings the liner onto the inside of the motor case. During liner application, the wand is slowly drawn through the case to provide a uniform coating. The lined rocket motor cases are then cured in an oven. Plantwide Condition #7 lists available solvents and VOC/HAP compositions.

Specific Conditions

129. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	8.5	1.1

130. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Methylene Chloride	11.00	1.38

SN-76 - Adhesive Primer Operations

Source Description

Adhesive Primer Operations are located in Buildings M-8 and/or M-2. Interior surfaces of clean, dry rocket motor cases are coated with an adhesive primer. The primer is applied using spray nozzles mounted on an automated, traveling wand. Plantwide Condition #7 lists available solvents and VOC/HAP compositions. Plantwide Condition #19 lists available adhesive VOC/HAP compositions.

Specific Conditions

131. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #17, and #19 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	20.0	3.0

132. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #17, and #19 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Ethyl Benzene	2.88	0.58
Formaldehyde	0.06	0.02
Methanol	2.30	0.46
Methyl Isobutyl Ketone	7.48	1.50
Tetrachloroethylene	1.73	0.35
Toluene	2.88	0.58
1,1,1 Trichloroethane	6.33	1.27
Trichloroethylene	4.60	0.92
Xylene	9.78	1.96

SN-77 - Adhesive Operations

Source Description

Following the application of the adhesive primer, adhesive is applied to the interior surfaces of the rocket motor cases. Adhesive Operations (SN-77) is located in Buildings M-8 and/or M-2. The adhesive is applied by spray nozzles mounted on an automated, traveling wand. Plantwide Condition #7 lists available solvents and VOC/HAP compositions. Plantwide Condition #19 lists available adhesive VOC/HAP compositions.

Specific Conditions

133. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #17, and #19 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	20.0	3.0

134. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #17, and #19 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Ethyl Benzene	2.88	0.58
Formaldehyde	0.06	0.02
Methanol	2.30	0.46
Methyl Isobutyl Ketone	7.48	1.50
Tetrachloroethylene	1.73	0.35
Toluene	2.88	0.58
1,1,1 Trichloroethane	6.33	1.27
Trichloroethylene	4.60	0.92
Xylene	9.78	1.96

SN-78 - Adhesive Barrier Coating Operations

Source Description

Following the adhesive application, a two-part adhesive barrier coating is applied to the interior surfaces of the rocket motor cases. This operation is performed in Buildings M-8 and/or M-2. The barrier coating is applied by spray nozzles mounted on an automated, traveling wand. Plantwide Condition #7 lists available solvents and VOC/HAP compositions. Plantwide Condition #19 lists available adhesive VOC/HAP compositions.

Specific Conditions

135. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #17, and #19 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	20.0	3.0

136. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #17, and #19 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Ethyl Benzene	2.88	0.58
Formaldehyde	0.06	0.02
Methanol	2.30	0.46
Methyl Isobutyl Ketone	7.48	1.50
Tetrachloroethylene	1.73	0.35
Toluene	2.88	0.58
1,1,1 Trichloroethane	6.33	1.27
Trichloroethylene	4.60	0.92
Xylene	9.78	1.96

SN-80 - Warhead Coating Operation

Source Description

The inside surface of the warhead cases are coated with a thin film of a Teflon-based release-agent. A propellant mixture is then cast (i.e., loaded) into the prepared cases in Building C-50. The units are subsequently cured in a steam or hot water-heated oven in Building C-61. Plantwide Condition #7 lists available solvents and VOC/HAP compositions and Plantwide Condition #11 lists available paint VOC/HAP compositions.

Specific Conditions

137. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #9, #11 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	1.0	0.3

SN-81 - Diesel-Powered Pump at Rocket Motor Case Washout Facility

Source Description

Solid propellant is removed from off-specification/ unusable rocket motor cases so that the metal cases can be reused. The propellant is extracted using a high-pressure spray of water. The pump for the "hydrolance" machine is powered by a diesel-fired internal combustion engine. This pump has a maximum power rating of 300 hp and consumes 15 gallons of fuel per hour.

Specific Conditions

138. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #142 and equipment limitations. [§19.501 et seq. Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	0.7	2.9
SO_2	0.7	2.8
VOC	0.8	3.4
CO	2.1	8.9
NO_x	9.3	40.8

139. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #142 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	0.70	2.90
Acetaldehyde	0.24	1.06
Acrolein	0.03	0.14
Benzene	0.28	1.23
1,3 Butadiene	0.02	0.09
Formaldehyde	0.36	1.58
PAHs	0.01	0.03
Propylene Oxide	0.78	3.42
Toluene	0.13	0.57

Pollutant	lb/hr	tpy
Xylene	0.09	0.40

140. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method #9.

SN	Limit	Regulatory Citation
81	20%	§18.501 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

141. The permittee shall conduct daily observations of the opacity from source SN-81 on those days when the equipment is in operation and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

142. The permittee shall not use in excess of 131,400 gallons of diesel fuel in SN-81 during any consecutive twelve month period. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E]

143. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Specific Condition #142. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

SN-82 - New Air Bag Propellant Manufacturing Operations

Source Description

Various proprietary propellant formulations for air bag systems are manufactured at Buildings A-4, A-5, A-8, A-9, A-90, 70, 71, and 74. Dry ingredients for air bag propellants are screened, combined with solvents in a slurry, and mixed in a granulator. The slurry is then dried using a vibrating fluidized-bed dryer. Once dry, the propellant formulations are packaged and transferred to various departments for further processing. Plantwide Condition #7 lists available solvents and VOC/HAP compositions.

Specific Conditions

144. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	1.0	4.4
VOC	25.5	5.1

145. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	1.00	4.40
Acetone	19.77	3.96
Methylene Chloride	33.00	6.60

146. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method #9.

SN	Limit	Regulatory Citation
82	5%	§18.501 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

147. The permittee shall conduct weekly observations of the opacity from source SN-82 and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible

emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [§18.501 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN-83 - Spray Painting Area

Source Description

A spray painting area is operated at Building M-85. A limited amount of surface coating is performed at this location. The paints may be applied using brushes, aerosol spray cans or a spray paint gun. The painting area is equipped with a vent hood for general ventilation. The hood is equipped with high-density dust filters for the control of paint over-spray. Plantwide Condition #7 lists available solvents and VOC/HAP compositions, and Plantwide Condition #11 lists available paint VOC/HAP compositions.

Specific Conditions

148. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #9, and #11 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	0.10	0.10
VOC	22.5	2.2
Lead	0.01	0.01

149. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Conditions #7, #9, and #11 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Acetone	5.60	0.70
Chromium Compounds	0.01	0.01
Ethyl Acrylate	2.10	0.27
Ethyl Benzene	1.40	0.18
Methanol	2.80	0.35
Methyl Isobutyl Ketone	8.40	1.05
Toluene	11.90	1.49
Xylene	8.40	1.05

SN-84 - Warhead Manufacturing Operations

Source Description

Aerojet makes a variety of warheads and ordnance at Building M-11. A barrier coating (asphalt or wax) is first applied to the inside of the prepared metal cases. The components are then filled with explosives. The units are subsequently cured in a steam-heated oven. The warheads and ordnance are then moved to other buildings for finishing and final assembly. Two propane-fired "melter/applicator machines" are used to apply the barrier coatings. A small natural gas-fired boiler provides steam and hot water for the production equipment.

Specific Conditions

150. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #153 and #155, equipment limitations, and by burning only natural gas and propane. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	0.1	0.2
SO_2	0.1	0.1
VOC	10.1	1.7
CO	0.3	1.3
NO_x	0.4	1.7

151. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations and by burning only natural gas and propane. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	0.10	0.20

152. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method #9. Compliance will be demonstrated by burning only natural gas and propane.

SN	Limit	Regulatory Citation
84	5%	§18.501 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

153. The permittee shall not use in excess of 15,000 pounds of asphalt coating in SN-84 during any consecutive twelve month period. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E]

154. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Specific Condition #153. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

155. The permittee shall not use in excess of 15,000 pounds of wax coatings in SN-84 during any consecutive twelve month period. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E]

156. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Specific Condition #155. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

SN-85 - Motor Case Cleaning Operations

Source Description

Metal rocket motor cases are cleaned at Building M-8 to prepare them for adhesive bonding, surface coating, and/or lining. Residual oil and grease are removed by hand-wipe cleaning. Certain motor cases are cleaned using a special flushing-cleaning apparatus. Plantwide Condition #7 lists available solvents and VOC/HAP compositions. This source is not subject to 40 CFR 63, Subpart T because these provisions do not regulate the use of halogenated solvents in hand-wipe cleaning activities. In addition, the motor case flush-cleaning apparatus is not subject to Subpart T because halogenated solvents are not used in this equipment.

Specific Conditions

157. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	25.5	2.2

158. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #7 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Methylene Chloride	11.00	2.75
1,1,1-Trichloroethane	10.85	2.72

SECTION V: COMPLIANCE PLAN AND SCHEDULE

Aerojet will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future regulations that may apply and determine their applicability with any necessary action taken on a timely basis.

SECTION VI: PLANTWIDE CONDITIONS

1. The permittee shall notify the Director in writing within thirty (30) days after commencing construction, completing construction, first placing the equipment and/or facility in operation, and reaching the equipment and/or facility target production rate. [§19.704 of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

2. If the permittee fails to start construction within eighteen months or suspends construction for eighteen months or more, the Director may cancel all or part of this permit. [§19.410(B) Regulation #19 and 40 CFR Part 52, Subpart E]

3. The permittee must test any equipment scheduled for testing, unless stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) new equipment or newly modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial start up of the permitted source or (2) operating equipment according to the time frames set forth by the Department or within 180 days of permit issuance if no date is specified. The permittee must notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. The permittee shall submit the compliance test results to the Department within thirty (30) days after completing the testing. [§19.702 of Regulation #19 and/or §18.1002 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

4. The permittee must provide: [§19.702 of Regulation #19 and/or §18.1002 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

    a. Sampling ports adequate for applicable test methods;
    b. Safe sampling platforms;
    c. Safe access to sampling platforms; and
    d. Utilities for sampling and testing equipment.

5. The permittee must operate the equipment, control apparatus and emission monitoring equipment within the design limitations. The permittee shall maintain the equipment in good condition at all times. [§19.303 of Regulation #19 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

6. This permit subsumes and incorporates all previously issued air permits for this facility. [Regulation #26 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

7. The permittee shall not use in excess of the solvent throughput rates or exceed the VOC and HAP content limits listed in the following table at sources SN-07, SN-11, SN-12, SN-13, SN-19, SN-20, SN-22, SN-24, SN-28, SN-36 through SN-45, SN-47, SN-52, SN-54, SN-57, SN-58, SN-59, SN-62 through SN-64, SN-74 through SN-78, SN-80, SN-82, SN-83, and SN-85. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR Part 70.6, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Solvent	Total lb/year	VOC Content
Generic Solvent (All VOC-based, non-HAP solvents)	171,000	8.50 lb/gal
Acetone	51,000	Non-VOC
Freon TF	23,000	Non-VOC
Methylene Chloride	171,100	Non-VOC, HAP
N-Propyl Bromide	66,000	Non-VOC
Toluene	14,500	100% VOC, HAP
1,1,1 Trichloroethane	50,000	Non-VOC, HAP

8. The permittee shall maintain records and MSDS sheets which demonstrate compliance with the throughput and formulation limits set in Plantwide Condition #7. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR Part 52 Subpart E, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

9. The permittee shall not use in excess of 59,500 pounds of surface coating materials (primers, paints, catalysts, thinners, and related compounds) in SN-12, SN-24, SN-43, SN-44, SN-80 or SN-83 combined during any consecutive twelve month period. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E]

10. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Specific Condition #9. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

11. The surface coating compounds processed at sources SN-12, SN-24, SN-43, SN-44, SN-80 and SN-83, shall not exceed the VOC and HAP content listed in the following table. The maximum density of the paint is 14.00 pounds per gallon. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR Part 70.6, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Component	Weight Percent
VOC	100%
Acetone*	40.0%
Chromium Compounds	11.0%

Component	Weight Percent
Ethyl Acrylate	15.0%
Ethyl Benzene	10.0%
Lead Compounds	0.8%
Methyl Isobutyl Ketone	60.0%
Toluene	85.0%
Xylene	60.0%

* Not a VOC

12. The permittee shall maintain records and MSDS sheets which demonstrate compliance with the formulation limits set in Plantwide Condition #11. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR Part 52 Subpart E, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

13. The permittee shall not use in excess of 28,400 pounds of miscellaneous materials (inks, spray paints, mold release agents, contact adhesives, sealants, and related compounds) in SN-44 during any consecutive twelve month period. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E]

14. The permittee shall maintain records which demonstrate compliance with the throughput limit set in Plantwide Condition #13. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

15. The miscellaneous materials processed at SN-44 shall not exceed the VOC and HAP content limits listed in the following table. The maximum density of the miscellaneous materials is 14.20 pounds per gallon. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR Part 70.6, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Component	Weight Percent
VOC	100%
Acetone*	35.0%
Ethyl Benzene	10.0%
Glycol Ethers	45.0%
Methanol	15.0%
Methylene Chloride*	40.0%

Component	Weight Percent
Methyl Isobutyl Ketone	40.0%
Phenol	23.0%
Toluene	35.0%
1,1,1 Trichloroethane*	95.0%
Xylene	25.0%
*Not a VOC	

16. The permittee shall maintain records and MSDS sheets which demonstrate compliance with the formulation limits set in Plantwide Condition #15. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§18.1004 of Regulation #18, §19.705 of Regulation #19, 40 CFR Part 52 Subpart E, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

17. The permittee shall not use in excess of 27,600 pounds of adhesives, adhesive primers, adhesive catalysts, barrier coatings, and related compounds in SN-39, SN-40, SN-41, SN-76, SN-77 and/or SN-78 combined during any consecutive twelve month period. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E]

18. The permittee shall maintain records which demonstrate compliance with the throughput limits set in Plantwide Condition #17. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

19. The adhesives, adhesive primers, adhesive catalysts, barrier coatings, and related compounds processed at sources SN-39, SN-40, SN-41, SN-76, SN-77 and SN-78 shall not exceed the VOC and HAP content limits listed in the following table. The maximum density of the adhesive products is 11.50 pounds per gallon. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52 Subpart E]

Component	Weight Percent
VOC	100%
Ethyl Benzene	25.0%
Formaldehyde	0.5%
Lead Compounds	5.0%
Methanol	20.0%
Methyl Isobutyl Ketone	65.0%

Component	Weight Percent
Tetrachloroethylene	15.0%
Toluene	25.0%
1,1,1 Trichloroethane*	55.0%
Trichloroethylene	40.0%
Xylene	85.0%

* Not a VOC

20. The permittee shall maintain records and MSDS sheets which demonstrate compliance with the formulation limits set in Plantwide Condition #19. These records may be used by the Department for enforcement purposes. Records shall be updated on a monthly basis, shall be kept on site, and shall be provided to the Department in accordance with General Condition #7. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E]

21. The permittee shall be allowed to trade emissions within the permitted facility without requiring a permit modification. The permittee shall provide written notice to the Department a minimum of seven (7) days prior to any such emissions trade. This notice shall provide the following information: [§26.803 and §26.804 of Regulation #26]

    1. The date when the proposed change(s) will occur,
    2. A description of the change(s),
    3. The pollutants currently emitted which are subject to the emissions trade,
    4. Any associated change(s) in facility emissions, and
    5. The permit requirements with which the source will comply.

    The notice shall also refer to the emissions trading provisions of the State Implementation Plan (SIP) with which the source will comply, and that provide for the emissions trade. Absent any notification to the contrary, after seven days, the facility may proceed with the emissions trade without receiving prior written approval from the Air Division.

22. The concentrations of HAPS and/or other regulated air contaminants in the chemicals processed on-site shall not exceed the weight-percent values specified in Plantwide Conditions #7, #11, #15, and #19. The substitution of alternative brands or formulations of cleaning solvents, surface coating materials, adhesives and/or other process chemicals, which contain different components in amounts equal to or less than the air contaminant and HAP contents described therein, is acceptable, provided that the American Conference of Governmental Industrial Hygienist (ACGIH) Threshold Limit Values (TLVs), as listed on the current MSDS or in the ACGIH handbook titled "Threshold Limits Values (TLVs) and Biological Exposure Indices (BEIs)" of the new components must be equal to or higher than the TLVs of the compounds for which the substitutions are being made. These substitutions can be performed on a one-to-one basis or on a multiple substitution basis. The substitution values shall be documented in accordance with Plantwide Condition #25 below. These records shall be maintained on-site and shall be made available to Department personnel upon request. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

23. The permittee shall maintain records which demonstrate compliance with the requirements for chemical substitutions specified in Plantwide Condition #22 above. These documents shall list the name of each HAP and/or other air contaminant contained in the material formulation, the weight-percent of each compound, and its TLV. The records shall be updated once per year and any time when a different process chemical is utilized. The documents shall be maintained on-site and shall be made available to Department personnel upon request. [§19.705 of Regulation #19 and 40 CFR Part 52 Subpart E,]

40 CFR 63 Subpart T (Halogenated Solvents) Requirements

24. Any batch vapor, in-line vapor, in-line cold, and batch cold solvent cleaning machine that uses any solvent containing methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, or chloroform, or any combination of these halogenated HAP solvents, in a total concentration greater than 5 percent by weight as a cleaning or drying agent is subject to the requirements of this Subpart.[§19.304 of Regulation #19 and 40 CFR §63.460(a)]

25. The permittee shall maintain a log of solvent additions and deletions for SN-36. [§19.304 of Regulation #19 and 40 CFR §63.464(a)(1)(i)]

26. The permittee shall ensure that the emissions from SN-36 are equal to or less than 30.7 pounds per square foot per month on a rolling three-month basis. [§19.304 of Regulation #19 and 40 CFR §63.464(a)(1)(ii)]

27. The permittee shall demonstrate compliance with Plant-wide Condition #26 on a monthly basis as described in 40 CFR §63.465(b) and (c). [§19.304 of Regulation #19 and 40 CFR §63.464(b)]

28. If the applicable 3-month rolling average emission limit is not met, then an exceedance has occurred. All exceedances shall be reported as required in §63.468(h). [§19.304 of Regulation #19 and 40 CFR §63.464(c)]

29. The permittee shall on the first operating day of every month ensure that the solvent cleaning machine system contains only clean liquid solvent. This includes, but is not limited to, fresh unused solvent, recycled solvent, and used solvent that has been cleaned of soils. A fill line must be indicated during the first month the measurements are made. The solvent level within the machine must be returned to the same fill-line each month immediately prior to calculating monthly emissions as specified in §63.465(c). The solvent cleaning machine does not have to be emptied and filled with fresh unused solvent prior to the calculations. [§19.304 of Regulation #19 and 40 CFR §63.465(b)]

30. The permittee shall on the first operating day of every month determine solvent emissions at SN-36. [§19.304 of Regulation #19 and 40 CFR §63.465(c)(1)]

31. The permittee shall on the first operating day of every month determine the monthly solvent emissions, Ei, for the previous monthly reporting period using Equation #2 in

Subpart T, and the records of all solvent additions and deletions for the reporting period. [§19.304 of Regulation #19 and 40 CFR §63.465(c)(1)]

32. The permittee shall determine the total amount of halogenated HAP solvent removed from the solvent cleaning machine in solid waste, SSRi, for the previous monthly reporting period using the method specified in §63.465(c)(2)(i) or §63.465(c)(2)(ii). [§19.304 of Regulation #19 and 40 CFR §63.465(c)(2)]

33. The permittee shall on the first operating day of every month determine the monthly rolling average, EA, for the 3-month period ending with the most recent reporting period using Equation #4 in Subpart T. [§19.304 of Regulation #19 and 40 CFR §63.465(c)(3)]

34. The permittee shall maintain records of the following items either in electronic or written format for a period of 5 years: [§19.304 of Regulation #19 and 40 CFR §63.467(c)]

    1. The dates and amounts of solvent that are added to the solvent cleaning machine.

    2. The solvent composition of wastes removed from the cleaning machine as determined using the procedure described in §63.465(c)(2).

    3. Calculation sheets showing how monthly emissions and the rolling 3-month average emissions from the solvent cleaning machine were determined, and the results of all calculations.

35. The permittee shall submit a solvent emission report every year. This solvent emission report shall contain the following information: [§19.304 of Regulation #19 and 40 CFR §63.468(g)]

    1. The size and type of each unit subject to this subpart.

    2. The average monthly solvent consumption for the solvent cleaning machine in kilograms per month.

    3. The 3-month monthly rolling average solvent emission estimates calculated each month using the method as described in §63.465(c).

36. The permittee shall submit an exceedance report to the Administrator semiannually except when, the Administrator determines on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the source or, and exceedance occurs. Once an exceedance has occurred, the permittee shall follow a quarterly reporting format until a request to reduce reporting frequency under §63.468(i) is approved. Exceedance reports shall be delivered or postmarked by the 30th day following the end of each calendar half or quarter, as appropriate. The exceedance report shall include the following information: [§19.304 of Regulation #19 and 40 CFR §63.468(h),]

1. Information on the actions taken to comply with §63.464(a)(1). This information shall include records of written or verbal orders for replacement parts, a description of the repairs made, and additional monitoring conducted to demonstrate that monitored parameters have returned to accepted levels.

2. If an exceedance has occurred, the reason for the exceedance and description of the actions taken.

3. If no exceedances of a parameter have occurred, or a piece of equipment has not been inoperative, out of control, repaired or adjusted, such information shall be stated in the report.

40 CFR 63 Subpart GG (Aerospace) Requirements

37. All wastes that are determined to be hazardous wastes under the Resource Conservation and Recovery Act of 1976 (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. [§19.304 of Regulation #19 and 40 CFR §63.741(e)]

38. Any specialty coatings used by the facility are exempt from the requirements of this subpart. These specialty coatings must meet the definition set forth in 40 CFR §63.742. A listing of all specialty coatings used at this facility and the justification why it is exempt must be kept on site and made available to Department personnel upon request. [§19.304 of Regulation #19 and 40 CFR §63.741(f)]

39. Any adhesives, adhesive primers, and sealants used by the facility are exempt from the requirements of this subpart. Subpart GG does not regulate research and development, quality control, and laboratory testing activities. The requirements of this subpart do not apply to primers, topcoats, cleaning solvents, and other process chemicals that contain HAP and VOC concentrations at less than 0.1 percent for carcinogens and 1.0 percent for non-carcinogens. [§19.304 of Regulation #19 and 40 CFR §63.741(f)]

40. The requirements for primers and topcoats specified 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 the facility does not exceed 50 gallons, and that the combined annual total of all such primers and topcoats used at the facility does not exceed 200 gallons. Primers and topcoats exempted under §63.741(f), §63.745(f)(3), and §63.745(g)(4) are not included in the 50 gallon and 200 gallon limits. [§19.304 of Regulation #19 and 40 CFR §63.741(g)]

41. The permittee shall comply with the requirements of Plant-wide Conditions #42, #43, and #44 unless the cleaning solvent used is identified in Table 1 of Subpart GG or contains HAP and VOC concentrations below the de minimis levels specified in §63.741(f). [§19.304 of Regulation #19 and 40 CFR §63.744(a)]

42. The permittee shall place solvent-laden cloth, paper, or any other absorbent applicators used for cleaning aerospace vehicles or components in bags or other closed containers

immediately after use. The permittee shall ensure that these bags and containers are kept closed at all times except when depositing or removing these materials from the container. The permittee shall use bags and containers of such design as to contain the vapors of the cleaning solvent. Cotton-tipped swabs used for very small cleaning operations are exempt from this requirement. [§19.304 of Regulation #19 and 40 CFR §63.744(a)(1)]

43. The permittee shall store fresh and spent cleaning solvents used in aerospace cleaning operations in closed containers. [§19.304 of Regulation #19 and 40 CFR §63.744(a)(2)]

44. The permittee shall conduct the handling and transfer of cleaning solvents used in aerospace cleaning operations 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. [§19.304 of Regulation #19 and 40 CFR §63.744(a)(3)]

45. The following cleaning operations are exempt from the requirements of §63.744(b): cleaning and surface activation prior to adhesive bonding. [§19.304 of Regulation #19 and 40 CFR §63.744(e)]

46. 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 coating or any other materials that require the spray guns to be cleaned shall use one or more of the techniques, or their equivalents, specified in the following methods. Spray gun cleaning operations using cleaning solvent solutions that contain HAP and VOC concentrations below the de minimis levels specified in §63.741(f) are exempt from the requirements of this condition. [§19.304 of Regulation #19 and 40 CFR §63.744(c)]

    1. Non-atomized Cleaning: The permittee shall clean the spray gun by placing solvent in the pressure pot and forcing the solvent through the gun with the atomizing cap in place. The practice must be performed without the use of atomizing air pressure. The solvent must be directed into a waste container. The container must be kept closed when not in use. [§19.304 of Regulation #19 and 40 CFR §63.744(c)(2)]

    2. Disassembled Gun Cleaning: The permittee shall clean the spray gun by disassembling the unit and cleaning it by hand in a vat. As an alternative, the spray gun may be cleaned by soaking the components in a vat. The solvent container must be kept closed except during use (when cleaning by hand) or when inserting or removing the spray gun parts (if cleaning is accomplished by soaking). The vat must be kept closed when soaking the components. [§19.304 of Regulation #19 and 40 CFR §63.744(c)(3)]

    3. Atomized Cleaning: The permittee shall clean the spray gun by placing solvent in the pressure pot and forcing the solvent through the unit using air pressure. The resulting atomized spray must be

directed into a waste container that is fitted with a device designed to capture the atomized cleaning solvent emissions. [§19.304 of Regulation #19 and 40 CFR §63.744(c)(4)]

47. 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 or into a system with an equivalent emission control. The container or collection system shall be kept closed except when in use. [§19.304 of Regulation #19 and 40 CFR §63.744(d)]

48. The permittee of each facility subject to this subpart that produces a waste that contains HAP shall conduct the handling and transfer of the waste to, or from containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills. [§19.304 of Regulation #19 and 40 CFR §63.748, except as provided in §63.741(e)]

49. Each owner or operator of a new or existing cleaning operation subject to this subpart 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. [§19.304 of Regulation #19 and 40 CFR §63.752(b)(1),]

50. 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, the permittee shall record: [§19.304 of Regulation #19 and 40 CFR §63.752(b)(2)]

    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.

51. 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), the permittee shall record: [§19.304 of Regulation #19 and 40 CFR §63.752(b)(4)]

    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 exemption applies.

52. The permittee of a cleaning operation subject to this subpart shall submit semiannual reports occurring every 6 months from the date of the notification of compliance status that identify the following: [§19.304 of Regulation #19 and 40 CFR §63.753(b)(1)]

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 six months, and, as appropriate, their composite vapor pressure or a 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; and

iv. 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.

Acid Rain (Title IV)

53. The Director prohibits the permittee to cause any emissions exceeding any allowances the source lawfully holds under Title IV of the Act or the regulations promulgated under the Act. No permit revision is required for increases in emissions allowed by allowances acquired pursuant to the acid rain program, if such increases do not require a permit revision under any other applicable requirement. This permit establishes no limit on the number of allowances held by the permittee. However, the source may not use allowances as a defense for noncompliance with any other applicable requirement of this permit or the Act. The permittee will account for any such allowance according to the procedures established in regulations promulgated under Title IV of the Act. [§26.701 of Regulation #26 and 40 CFR 70.6(a)(4)]

Title VI Provisions

54. The permittee must comply with the standards for labeling of products using ozone-depleting substances. [40 CFR Part 82, Subpart E]

a. All containers containing a class I or class II substance stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced to interstate commerce pursuant to §82.106.
b. The placement of the required warning statement must comply with the requirements pursuant to §82.108.
c. The form of the label bearing the required warning must comply with the requirements pursuant to §82.110.
d. No person may modify, remove, or interfere with the required warning statement except as described in §82.112.

55. The permittee must comply with the standards for recycling and emissions reduction, except as provided for MVACs in Subpart B. [40 CFR Part 82, Subpart F]

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
c. Persons performing maintenance, service repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
d. Persons disposing of small appliances, MVACs, and MVAC like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC like appliance" as defined at §82.152)
e. Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to §82.156.
f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

56. If the permittee manufactures, transforms, destroys, imports, or exports a class I or class II substance, the permittee is subject to all requirements as specified in 40 CFR Part 82, Subpart A, Production and Consumption Controls.

57. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC 22 refrigerant.

58. The permittee can switch from any ozone depleting substance to any alternative listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G.

Permit Shield

59. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements, as of the date of permit issuance, included in and specifically identified in the following table of this condition. The permit specifically identifies the following as applicable requirements based upon the information submitted by the permittee in an application dated June 1 2006.

Applicable Regulations

Source No.	Regulation	Description
Facility	19	Regulations of the Arkansas Plan of Implementation for Air Pollution Control, Regulation 19, effective July 15, 2007
Facility	26	Regulations of the Arkansas Operating Air Permit Program, Regulation 26, effective September 26, 2002
Facility	40 CFR 63, Subpart A	General Provisions of the NESHAPs for Source Categories
SN-36	40 CFR 63, Subpart T	National Emission Standards for Halogenated Solvent Cleaning
Facility	40 CFR 63, Subpart GG	National Emission Standards for Aerospace Manufacturing and Rework Facilities

The permit specifically identifies the following as inapplicable based upon information submitted by the permittee in an application dated June 1 2006.

Inapplicable Regulations

Source No.	Regulation	Description
Facility	40 CFR 60, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
Facility	40 CFR 60, Subpart K	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced after June 11, 1973, and Prior to May 19, 1978
Facility	40 CFR 60, Subpart Ka	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced after May 18, 1978, and Prior to July 23, 1984
Facility	40 CFR 60, Subpart Kb -	Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984
Facility	40 CFR 61, Subpart D	National Emission Standard for Beryllium Rocket Motor Firing
Facility	40 CFR 52.21	Prevention of Significant Deterioration (PSD)
Facility	40 CFR 64	Compliance Assurance Monitoring

SECTION VII: INSIGNIFICANT ACTIVITIES

The following sources are insignificant activities. Any activity that has a state or federal applicable requirement shall be considered a significant activity even if this activity meets the criteria of §26.304 of Regulation 26 or listed in the table below. Insignificant activity determinations rely upon the information submitted by the permittee in an application dated June 6, 2006.

Description	Category
DOA Storage Tank (3,500 gallons, negligible vapor pressure)	Group A, Number 3
Extruder Operations (SN-51) at Buildings #39 and M-85	Group A, Number 13
MLRS Igniter Assembly (SN-55) at Building M-85	Group A, Number 13
SN-60 Ingredient Preparation Room	Group A, Number 13
SN-66 Lathes at Building 2-SH-3	Group A, Number 13
SN-70 Polymer Tank Farm	Group A, Number 13
Wall Vent for Parts Fabrication Room Production Trailer at Building 2-SH-4	Group A, Number 13
Six-Bladed Saw and Chamfer and Drill Machine at Building M-8	Group A, Number 13
Composite Case Grinding Machine at Building M-8	Group A, Number 13

SECTION VIII: GENERAL PROVISIONS

1. Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute. [40 CFR 70.6(b)(2)]

2. This permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later. [40 CFR 70.6(a)(2) and §26.701(B) of the Regulations of the Arkansas Operating Air Permit Program (Regulation 26), effective September 26, 2002]

3. The permittee must submit a complete application for permit renewal at least six (6) months before permit expiration. Permit expiration terminates the permittee's right to operate unless the permittee submitted a complete renewal application at least six (6) months before permit expiration. If the permittee submits a complete application, the existing permit will remain in effect until the Department takes final action on the renewal application. The Department will not necessarily notify the permittee when the permit renewal application is due. [Regulation 26, §26.406]

4. Where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, et seq. (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, the permit incorporates both provisions into the permit, and the Director or the Administrator can enforce both provisions. [40 CFR 70.6(a)(1)(ii) and Regulation 26, §26.701(A)(2)]

5. The permittee must maintain the following records of monitoring information as required by this permit. [40 CFR 70.6(a)(3)(ii)(A) and Regulation 26, §26.701(C)(2)]

    a. The date, place as defined in this permit, and time of sampling or measurements;
    b. The date(s) analyses performed;
    c. The company or entity performing the analyses;
    d. The analytical techniques or methods used;
    e. The results of such analyses; and
    f. The operating conditions existing at the time of sampling or measurement.

6. The permittee must retain the records of all required monitoring data and support information for at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [40 CFR 70.6(a)(3)(ii)(B) and Regulation 26, §26.701(C)(2)(b)]

7. The permittee must submit reports of all required monitoring every six (6) months. If permit establishes no other reporting period, the reporting period shall end on the last day of the anniversary month of the initial Title V permit. The report is due within thirty (30) days of the end of the reporting period. Although the reports are due every six months, each report shall contain a full year of data. The report must clearly identify all instances of deviations from permit requirements. A responsible official as defined in Regulation No. 26, §26.2 must certify all required reports. The permittee will send the reports to the address below: [40 C.F.R. 70.6(a)(3)(iii)(A) and Regulation 26, §26.701(C)(3)(a)]

    Arkansas Department of Environmental Quality
    Air Division
    ATTN: Compliance Inspector Supervisor
    Post Office Box 8913
    Little Rock, AR 72219

8. The permittee shall report to the Department all deviations from permit requirements, including those attributable to upset conditions as defined in the permit.

    a. For all upset conditions (as defined in Regulation19, § 19.601), the permittee will make an initial report to the Department by the next business day after the discovery of the occurrence. The initial report my be made by telephone and shall include:

        i. The facility name and location
        ii. The process unit or emission source deviating from the permit limit,
        iii. The permit limit, including the identification of pollutants, from which deviation occurs,
        iv. The date and time the deviation started,
        v. The duration of the deviation,
        vi. The average emissions during the deviation,
        vii. The probable cause of such deviations,
        viii. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future, and
        ix. The name of the person submitting the report.

    The permittee shall make a full report in writing to the Department within five (5) business days of discovery of the occurrence. The report must include, in addition to the information required by the initial report, a schedule of actions taken or planned to eliminate future occurrences and/or to minimize the amount the permit's limits were exceeded and to reduce the length of time the limits were exceeded. The permittee may submit a full report in writing (by facsimile, overnight courier, or other means) by the next business day after discovery of the occurrence, and the report will serve as both the initial report and full report.

    b. For all deviations, the permittee shall report such events in semi-annual reporting and annual certifications required in this permit. This includes all upset conditions reported in 8a above. The semi-annual report must include all the information as required by the initial and full reports required in 8a. [Regulation

19, §19.601 and §19.602, Regulation 26, §26.701(C)(3)(b), and 40 CFR 70.6(a)(3)(iii)(B)]

9. If any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity will not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable. [40 CFR 70.6(a)(5), Regulation 26, §26.701(E), and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

10. The permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in Regulation 26 constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. §7401, et seq. and is grounds for enforcement action; for permit termination, revocation and reissuance, for permit modification; or for denial of a permit renewal application. [40 CFR 70.6(a)(6)(i) and Regulation 26, §26.701(F)(1)]

11. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit. [40 CFR 70.6(a)(6)(ii) and Regulation 26, §26.701(F)(2)]

12. The Department may modify, revoke, reopen and reissue the permit or terminate the permit for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [40 CFR 70.6(a)(6)(iii) and Regulation 26, §26.701(F)(3)]

13. This permit does not convey any property rights of any sort, or any exclusive privilege. [40 CFR 70.6(a)(6)(iv) and Regulation 26, §26.701(F)(4)]

14. The permittee must furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee must also furnish to the Director copies of records required by the permit. For information the permittee claims confidentiality, the Department may require the permittee to furnish such records directly to the Director along with a claim of confidentiality. [40 CFR 70.6(a)(6)(v) and Regulation 26, §26.701(F)(5)]

15. The permittee must pay all permit fees in accordance with the procedures established in Regulation 9. [40 CFR 70.6(a)(7) and Regulation 26, §26.701(G)]

16. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes provided for elsewhere in this permit. [40 CFR 70.6(a)(8) and Regulation 26, §26.701(H)]

17. If the permit allows different operating scenarios, the permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the

permitted facility a record of the operational scenario. [40 CFR 70.6(a)(9)(i) and Regulation 26, §26.701(I)(1)]

18. The Administrator and citizens may enforce under the Act all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, unless the Department specifically designates terms and conditions of the permit as being federally unenforceable under the Act or under any of its applicable requirements. [40 CFR 70.6(b) and Regulation 26, §26.702(A) and (B)]

19. Any document (including reports) required by this permit must contain a certification by a responsible official as defined in Regulation 26, §26.2. [40 CFR 70.6(c)(1) and Regulation 26, §26.703(A)]

20. The permittee must allow an authorized representative of the Department, upon presentation of credentials, to perform the following: [40 CFR 70.6(c)(2) and Regulation 26, §26.703(B)]

    a. Enter upon the permittee's premises where the permitted source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
    b. Have access to and copy, at reasonable times, any records required under the conditions of this permit;
    c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
    d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for assuring compliance with this permit or applicable requirements.

21. The permittee shall submit a compliance certification with the terms and conditions contained in the permit, including emission limitations, standards, or work practices. The permittee must submit the compliance certification annually within 30 days following the last day of the anniversary month of the initial Title V permit. The permittee must also submit the compliance certification to the Administrator as well as to the Department. All compliance certifications required by this permit must include the following: [40 CFR 70.6(c)(5) and Regulation 26, §26.703(E)(3)]

    a. The identification of each term or condition of the permit that is the basis of the certification;
    b. The compliance status;
    c. Whether compliance was continuous or intermittent;
    d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit;
    e. and Such other facts as the Department may require elsewhere in this permit or by §114(a)(3) and §504(b) of the Act.

22. Nothing in this permit will alter or affect the following: [Regulation 26, §26.704(C)]

a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
b. The liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
c. The applicable requirements of the acid rain program, consistent with §408(a) of the Act or,
d. The ability of EPA to obtain information from a source pursuant to §114 of the Act.

23. This permit authorizes only those pollutant emitting activities addressed in this permit. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

APPENDIX A

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

Subpart GG—National Emission Standards for Aerospace Manufacturing and Rework Facilities

Source: 60 FR 45956, Sept. 1, 1996, unless otherwise noted.

§ 63.741 Applicability and designation of affected sources.

(a) This subpart applies to facilities that are engaged, either in part or in whole, in the manufacture or rework of commercial, civil, or military aerospace vehicles or components and that are major sources as defined in §63.2.

(b) The owner or operator of an affected source shall comply with the requirements of this subpart and of subpart A of this part, except as specified in §63.743(a) and Table 1 of this subpart.

(c) *Affected sources.* The affected sources to which the provisions of this subpart apply are specified in paragraphs (c)(1) through (7) of this section. The activities subject to this subpart are limited to the manufacture or rework of aerospace vehicles or components as defined in this subpart. Where a dispute arises relating to the applicability of this subpart to a specific activity, the owner or operator shall demonstrate whether or not the activity is regulated under this subpart.

(1) Each cleaning operation as follows:

(i) All hand-wipe cleaning operations constitute an affected source.

(ii) Each spray gun cleaning operation constitutes an affected source.

(iii) All flush cleaning operations constitute an affected source.

(2) For organic HAP or VOC emissions, each primer application operation, which is the total of all primer applications at the facility.

(3) For organic HAP or VOC emissions, each topcoat application operation, which is the total of all topcoat applications at the facility.

(4) For organic HAP or VOC emissions, each depainting operation, which is the total of all depainting at the facility.

(5) Each chemical milling maskant application operation, which is the total of all chemical milling maskant applications at the facility.

(6) Each waste storage and handling operation, which is the total of all waste handling and storage at the facility.

(7) For inorganic HAP emissions, each spray booth or hangar that contains a primer or topcoat application operation subject to §63.745(g) or a depainting operation subject to §63.746(b)(4).

(d) An owner or operator of an affected source subject to this subpart shall obtain an operating permit from the permitting authority in the State in which the source is located. The owner or operator shall apply for and obtain such permit in accordance with the regulations contained in part 70 of this chapter and in applicable State regulations.

(e) All wastes that are determined to be hazardous wastes under the Resource Conservation and Recovery Act of 1976 (PL 94–580) (RCRA) as implemented by 40 CFR parts 260 and 261, and that are subject to RCRA requirements as implemented in 40 CFR parts 262 through 268, are exempt from the requirements of this subpart.

(f) This subpart does not contain control requirements for use of specialty coatings, adhesives, adhesive bonding primers, or sealants at aerospace facilities. It also does not regulate research and development, quality control, and laboratory testing activities, chemical milling, metal finishing, electrodeposition (except for electrodeposition of paints), composites processing (except for cleaning and coating of composite parts or components that become part of an aerospace vehicle or component as well as composite tooling that comes in contact with such composite parts or components prior to cure), electronic parts and assemblies (except for cleaning and topcoating of completed assemblies), manufacture of aircraft transparencies, and wastewater operations at aerospace facilities. These requirements do not apply to the rework of aircraft or aircraft components if the holder of the Federal Aviation Administration (FAA) design approval, or the holder's licensee, is not actively manufacturing the aircraft or aircraft components. These requirements also do not apply to parts and assemblies not critical to the vehicle's structural integrity or flight performance. The requirements of this subpart also do not apply to primers, topcoats, chemical milling maskants, strippers, and cleaning solvents containing HAP and VOC at concentrations less than 0.1 percent for carcinogens or 1.0 percent for noncarcinogens, as determined from manufacturer's representations. Additional specific exemptions from regulatory coverage are set forth in paragraphs (e), (g), (h), (i) and (j) of this section and §§63.742, 63.744(a)(1), (b), (e), 63.745(a), (f)(3), (g)(4), 63.746(a), (b)(5), 63.747(c)(3), and 63.749(d).

(g) The requirements for primers, topcoats, and chemical milling maskants in §63.745 and §63.747 do not apply to the use of low-volume coatings in these categories for which the annual total of each separate formulation used at a facility does not exceed 189 l (50 gal), and the combined annual total of all such primers, topcoats, and chemical milling maskants used at a facility does not exceed 757 l (200 gal). Primers and topcoats exempted under paragraph (f) of this section and under §63.745(f)(3) and (g)(4) are not included in the 50 and 200 gal limits. Chemical milling maskants exempted under §63.747(c)(3) are also not included in these limits.

(h) Regulated activities associated with space vehicles designed to travel beyond the limit of the earth's atmosphere, including but not limited to satellites, space stations, and the Space Shuttle System (including orbiter, external tanks, and solid rocket boosters), are exempt from the requirements of this subpart, except for depainting operations found in §63.746.

(i) Any waterborne coating for which the manufacturer's supplied data demonstrate that organic HAP and VOC contents are less than or equal to the organic HAP and VOC content limits for its coating type, as specified in §§63.745(c) and 63.747(c), is exempt from the following requirements of this subpart: §§63.745 (d) and (e), 63.747(d) and (e), 63.749 (d) and (h), 63.750 (c) through (h) and (k) through (n), 63.752 (c) and (f), and 63.753 (c) and (e). A facility shall maintain the manufacturer's supplied data and annual purchase records for each exempt waterborne coating readily available for inspection and review and shall retain these data for 5 years.

(j) Regulated activities associated with the rework of antique aerospace vehicles or components are exempt from the requirements of this subpart.

[60 FR 45956, Sept. 1, 1996, as amended at 63 FR 15016, Mar. 27, 1998; 63 FR 46532, Sept. 1, 1998]

§ 63.742 Definitions.

Terms used in this subpart are defined in the Act, in subpart A of this part, or in this section as follows:

Aerospace facility means any facility that produces, reworks, or repairs in any amount any commercial, civil, or military aerospace vehicle or component.

Aerospace vehicle or component means any fabricated part, processed part, assembly of parts, or completed unit, with the exception of electronic components, of any aircraft including but not limited to airplanes, helicopters, missiles, rockets, and space vehicles.

Aircraft fluid systems means those systems that handle hydraulic fluids, fuel, cooling fluids, or oils.

Aircraft transparency means the aircraft windshield, canopy, passenger windows, lenses, and other components which are constructed of transparent materials.

Antique aerospace vehicle or component means an aircraft or component thereof that was built at least 30 years ago. An antique aerospace vehicle would not routinely be in commercial or military service in the capacity for which it was designed.

Carbon adsorber means one vessel in a series of vessels in a carbon adsorption system that contains carbon and is used to remove gaseous pollutants from a gaseous emission source.

Carbon Adsorber control efficiency means the total efficiency of the control system, determined by the product of the capture efficiency and the control device efficiency.

Chemical milling maskant means a coating that is applied directly to aluminum components to protect surface areas when chemical milling the component with a Type I or Type II etchant. Type I chemical milling maskants are used with a Type I etchant and Type II chemical milling maskants are used with a Type II etchant. This definition does not include bonding maskants, critical use and line sealer maskants, and seal coat maskants. Additionally, maskants that must be used with a combination of Type I or II etchants and any of the above types of maskants (i.e., bonding, critical use and line sealer, and seal coat) are also exempt from this subpart. (See also Type I and Type II etchant definitions.)

Chemical milling maskant application operation means application of chemical milling maskant for use with Type I or Type II chemical milling etchants.

Cleaning operation means collectively spray gun, hand-wipe, and flush cleaning operations.

Cleaning solvent means a liquid material used for hand-wipe, spray gun, or flush cleaning. This definition does not include solutions that contain HAP and VOC below the de minimis levels specified in §63.741(f).

Closed-cycle depainting system means a dust-free, automated process that removes permanent coating in small sections at a time and maintains a continuous vacuum around the area(s) being depainted to capture emissions.

Coating means a material that is applied to the surface of an aerospace vehicle or component to form a decorative, protective, or functional solid film, or the solid film itself.

Coating operation means the use of a spray booth, tank, or other enclosure or any area, such as a hangar, for the application of a single type of coating (e.g., primer); the use of the same spray booth for the application of another type of coating (e.g., topcoat) constitutes a separate coating operation for which compliance determinations are performed separately.

Coating unit means a series of one or more coating applicators and any associated drying area and/or oven wherein a coating is applied, dried, and/or cured. A coating unit ends at the point where the coating is dried or cured, or prior to any subsequent application of a different coating. It is not necessary to have an oven or flashoff area in order to be included in this definition.

Confined space means a space that: (1) Is large enough and so configured that an employee can bodily enter and perform assigned work; (2) has limited or restricted means

for entry or exit (for example, fuel tanks, fuel vessels, and other spaces that have limited means of entry); and (3) is not suitable for continuous employee occupancy.

Control device means destruction and/or recovery equipment used to destroy or recover HAP or VOC emissions generated by a regulated operation.

Control system means a combination of pollutant capture system(s) and control device(s) used to reduce discharge to the atmosphere of HAP or VOC emissions generated by a regulated operation.

Depainting means the removal of a permanent coating from the outer surface of an aerospace vehicle or component, whether by chemical or non-chemical means. For non-chemical means, this definition excludes hand and mechanical sanding, and any other non-chemical removal processes that do not involve blast media or other mechanisms that would result in airborne particle movement at high velocity.

Depainting operation means the use of a chemical agent, media blasting, or any other technique to remove permanent coatings from the outer surface of an aerospace vehicle or components. The depainting operation includes washing of the aerospace vehicle or component to remove residual stripper, media, or coating residue.

Electrodeposition of paint means the application of a coating using a water-based electrochemical bath process. The component being coated is immersed in a bath of the coating. An electric potential is applied between the component and an oppositely charged electrode hanging in the bath. The electric potential causes the ionized coating to be electrically attracted, migrated, and deposited on the component being coated.

Electrostatic spray means a method of applying a spray coating in which an electrical charge is applied to the coating and the substrate is grounded. The coating is attracted to the substrate by the electrostatic potential between them.

Exempt solvent means specified organic compounds that have been determined by the EPA to have negligible photochemical reactivity and are listed in 40 CFR 51.100.

Exterior primer means the first layer and any subsequent layers of identically formulated coating applied to the exterior surface of an aerospace vehicle or component where the component is used on the exterior of the aerospace vehicle. Exterior primers are typically used for corrosion prevention, protection from the environment, functional fluid resistance, and adhesion of subsequent exterior topcoats. Coatings that are defined as specialty coatings are not included under this definition.

Flush cleaning means the removal of contaminants such as dirt, grease, oil, and coatings from an aerospace vehicle or component or coating equipment by passing solvent over, into, or through the item being cleaned. The solvent may simply be poured into the item being cleaned and then drained, or be assisted by air or hydraulic pressure, or by

pumping. Hand-wipe cleaning operations where wiping, scrubbing, mopping, or other hand action are used are not included.

General aviation (GA) means that segment of civil aviation that encompasses all facets of aviation except air carriers, commuters, and military. General aviation includes charter and corporate-executive transportation, instruction, rental, aerial application, aerial observation, business, pleasure, and other special uses.

General aviation rework facility means any aerospace facility with the majority of its revenues resulting from the reconstruction, repair, maintenance, repainting, conversion, or alteration of general aviation aerospace vehicles or components.

Hand-wipe cleaning operation means the removal of contaminants such as dirt, grease, oil, and coatings from an aerospace vehicle or component by physically rubbing it with a material such as a rag, paper, or cotton swab that has been moistened with a cleaning solvent.

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

High efficiency particulate air (HEPA) filter means a filter that has a 99.97 percent reduction efficiency for 0.3 micron aerosol.

High volume low pressure (HVLP) spray equipment means spray equipment that is used to apply coating by means of a spray gun that operates at 10.0 psig of atomizing air pressure or less at the air cap.

Inorganic hazardous air pollutant (HAP) means any HAP that is not organic.

Large commercial aircraft means an aircraft of more than 110,000 pounds, maximum certified take-off weight manufactured for non-military use.

Leak means any visible leakage, including misting and clouding.

Limited access space means internal surfaces or passages of an aerospace vehicle or component that cannot be reached without the aid of an airbrush or a spray gun extension for the application of coatings.

Mechanical sanding means aerospace vehicle or component surface conditioning which uses directional and random orbital abrasive tools and aluminum oxide or nylon abrasive pads for the purpose of corrosion rework, substrate repair, prepaint surface preparation, and other maintenance activities.

Natural draft opening means any opening in a room, building, or total enclosure that remains open during operation of the facility and that is not connected to a duct in which a fan is installed. The rate and direction of the natural draft through such an opening is a

consequence of the difference in pressures on either side of the wall containing the opening.

Non-chemical based depainting equipment means any depainting equipment or technique, including, but not limited to, media blasting equipment, that can depaint an aerospace vehicle or component in the absence of a chemical stripper. This definition does not include mechanical sanding or hand sanding.

Nonregenerative carbon adsorber means a carbon adsorber vessel in which the spent carbon bed does not undergo carbon regeneration in the adsorption vessel.

Operating parameter value means a minimum or maximum value established for a control device or process parameter which, if achieved by itself or in combination with one or more other operating parameter values, determines that an owner or operator has complied with an applicable emission limitation.

Organic hazardous air pollutant (HAP) means any HAP that is organic.

Primer means the first layer and any subsequent layers of identically formulated coating applied to the surface of an aerospace vehicle or component. Primers are typically used for corrosion prevention, protection from the environment, functional fluid resistance, and adhesion of subsequent coatings. Coatings that are defined as specialty coatings are not included under this definition.

Radome means the non-metallic protective housing for electromagnetic transmitters and receivers (e.g., radar, electronic countermeasures, etc.).

Recovery device means an individual unit of equipment capable of and normally used for the purpose of recovering chemicals for fuel value, use, or reuse. Examples of equipment that may be recovery devices include absorbers, carbon adsorbers, condensers, oil-water separators, or organic-water separators or organic removal devices such as decanters, strippers, or thin-film evaporation units.

Research and Development means an operation whose primary purpose is for research and development of new processes and products, that is conducted under the close supervision of technically trained personnel, and is not involved in the manufacture of final or intermediate products for commerical purposes, except in a de mimnimis manner.

Self-priming topcoat means a topcoat that is applied directly to an uncoated aerospace vehicle or component for purposes of corrosion prevention, environmental protection, and functional fluid resistance. More than one layer of identical coating formulation may be applied to the vehicle or component.

Semi-aqueous cleaning solvent means a solution in which water is a primary ingredient (" 60 percent of the solvent solution as applied must be water.)

Softener means a liquid that is applied to an aerospace vehicle or component to degrade coatings such as primers and topcoats specifically as a preparatory step to subsequent depainting by non-chemical based depainting equipment. Softeners may contain VOC but shall not contain any HAP as determined from MSDS's or manufacturer supplied information.

Solids means the non-volatile portion of the coating which after drying makes up the dry film.

Space vehicle means a man-made device, either manned or unmanned, designed for operation beyond earth's atmosphere. This definition includes integral equipment such as models, mock-ups, prototypes, molds, jigs, tooling, hardware jackets, and test coupons. Also included is auxiliary equipment associated with test, transport, and storage, which through contamination can compromise the space vehicle performance.

Specialty coating means a coating that, even though it meets the definition of a primer, topcoat, or self-priming topcoat, has additional performance criteria beyond those of primers, topcoats, and self-priming topcoats for specific applications. These performance criteria may include, but are not limited to, temperature or fire resistance, substrate compatibility, antireflection, temporary protection or marking, sealing, adhesively joining substrates, or enhanced corrosion protection. Individual specialty coatings are defined in appendix A to this subpart and in the CTG for Aerospace Manufacturing and Rework Operations (EPA 453/R–97–004).

Spot stripping means the depainting of an area where it is not technically feasible to use a non-chemical depainting technique.

Spray gun means a device that atomizes a coating or other material and projects the particulates or other material onto a substrate.

Stripper means a liquid that is applied to an aerospace vehicle or component to remove permanent coatings such as primers and topcoats.

Surface preparation means the removal of contaminants from the surface of an aerospace vehicle or component, or the activation or reactivation of the surface in preparation for the application of a coating.

Temporary total enclosure means a total enclosure that is constructed for the sole purpose of measuring the emissions from an affected source that are not delivered to an emission control device. A temporary total enclosure must be constructed and ventilated (through stacks suitable for testing) so that it has minimal impact on the performance of the permanent emission capture system. A temporary total enclosure will be assumed to achieve total capture of fugitive emissions if it conforms to the requirements found in §63.750(g)(4) and if all natural draft openings are at least four duct or hood equivalent diameters away from each exhaust duct or hood. Alternatively, the owner or operator

may apply to the Administrator for approval of a temporary enclosure on a case-by-case basis.

Topcoat means a coating that is applied over a primer on an aerospace vehicle or component for appearance, identification, camouflage, or protection. Coatings that are defined as specialty coatings are not included under this definition.

Total enclosure means a permanent structure that is constructed around a gaseous emission source so that all gaseous pollutants emitted from the source are collected and ducted through a control device, such that 100% capture efficiency is achieved. There are no fugitive emissions from a total enclosure. The only openings in a total enclosure are forced makeup air and exhaust ducts and any natural draft openings such as those that allow raw materials to enter and exit the enclosure for processing. All access doors or windows are closed during routine operation of the enclosed source. Brief, occasional openings of such doors or windows to accommodate process equipment adjustments are acceptable, but if such openings are routine or if an access door remains open during the entire operation, the access door must be considered a natural draft opening. The average inward face velocity across the natural draft openings of the enclosure must be calculated including the area of such access doors. The drying oven itself may be part of the total enclosure. An enclosure that meets the requirements found in §63.750(g)(4) is a permanent total enclosure.

Touch-up and repair operation means that portion of the coating operation that is the incidental application of coating used to cover minor imperfections in the coating finish or to achieve complete coverage. This definition includes out-of-sequence or out-of-cycle coating.

Two-stage filter system means a dry particulate filter system using two layers of filter media to remove particulate. The first stage is designed to remove the bulk of the particulate and a higher efficiency second stage is designed to remove smaller particulate.

Type I etchant means a chemical milling etchant that contains varying amounts of dissolved sulfur and does not contain amines.

Type II etchant means a chemical milling etchant that is a strong sodium hydroxide solution containing amines.

Volatile organic compound (VOC) means any compound defined as VOC in 40 CFR 51.100. This includes any organic compound other than those determined by the EPA to be an exempt solvent. For purposes of determining compliance with emission limits, VOC will be measured by the approved test methods. Where such a method also inadvertently measures compounds that are exempt solvent, an owner or operator may exclude these exempt solvents when determining compliance with an emission standard.

Waterborne (water-reducible) coating means any coating that contains more than 5 percent water by weight as applied in its volatile fraction.

Waterwash system means a control system that utilizes flowing water (i.e., a conventional waterwash system) or a pumpless system to remove particulate emissions from the exhaust air stream in spray coating application or dry media blast depainting operations.

Nomenclature for determining carbon adsorber efficiency—The nomenclature defined below is used in §63.750(g):

(1) A_k = the area of each natural draft opening (k) in a total enclosure, in square meters.

(2) C_{aj} = the concentration of HAP or VOC in each gas stream (j) exiting the emission control device, in parts per million by volume.

(3) C_{bi} = the concentration of HAP or VOC in each gas stream (i) entering the emission control device, in parts per million by volume.

(4) C_{di} = the concentration of HAP or VOC in each gas stream (i) entering the emission control device from the affected source, in parts per million by volume.

(5) C_{fk} = the concentration of HAP or VOC in each uncontrolled gas stream (k) emitted directly to the atmosphere from the affected source, in parts per million by volume.

(6) C_{gv} = the concentration of HAP or VOC in each uncontrolled gas stream entering each individual carbon adsorber vessel (v), in parts per million by volume. For the purposes of calculating the efficiency of the individual carbon adsorber vessel, C_{gv} may be measured in the carbon adsorption system's common inlet duct prior to the branching of individual inlet ducts to the individual carbon adsorber vessels.

(7) C_{hv} = the concentration of HAP or VOC in the gas stream exiting each individual carbon adsorber vessel (v), in parts per million by volume.

(8) E = the control device efficiency achieved for the duration of the emission test (expressed as a fraction).

(9) F = the HAP or VOC emission capture efficiency of the HAP or VOC capture system achieved for the duration of the emission test (expressed as a fraction).

(10) FV = the average inward face velocity across all natural draft openings in a total enclosure, in meters per hour.

(11) H_v = the individual carbon adsorber vessel (v) efficiency achieved for the duration of the emission test (expressed as a fraction).

(12) H_{sys} = the efficiency of the carbon adsorption system calculated when each carbon adsorber vessel has an individual exhaust stack (expressed as a fraction).

(13) M_{ci} = the total mass in kilograms of each batch of coating (i) applied, or of each coating applied at an affected coating operation during a 7 to 30-day period, as appropriate, as determined from records at the affected source. This quantity shall be determined at a time and location in the process after all ingredients (including any dilution solvent) have been added to the coating, or if ingredients are added after the mass of the coating has been determined, appropriate adjustments shall be made to account for them.

(14) M_r = the total mass in kilograms of HAP or VOC recovered for a 7 to 30-day period.

(15) Q_{aj} = the volumetric flow rate of each gas stream (j) exiting the emission control device in either dry standard cubic meters per hour when EPA Method 18 in appendix A of part 60 is used to measure HAP or VOC concentration or in standard cubic meters per hour (wet basis) when EPA Method 25A is used to measure HAP or VOC concentration.

(16) Q_{bi} = the volumetric flow rate of each gas stream (i) entering the emission control device, in dry standard cubic meters per hour when EPA Method 18 is used to measure HAP or VOC concentration or in standard cubic meters per hour (wet basis) when EPA Method 25A is used to measure HAP or VOC concentration.

(17) Q_{di} = the volumetric flow rate of each gas stream (i) entering the emission control device from the affected source in either dry standard cubic meters per hour when EPA Method 18 is used to measure HAP or VOC concentration or in standard cubic meters per hour (wet basis) when EPA Method 25A is used to measure HAP or VOC concentration.

(18) Q_{fk} = the volumetric flow rate of each uncontrolled gas stream (k) emitted directly to the atmosphere from the affected source in either dry standard cubic meters per hour, when EPA Method 18 is used to measure HAP or VOC concentration or in standard cubic meters per hour (wet basis) when EPA Method 25A is used to measure HAP or VOC concentration.

(19) Q_{gv} = the volumetric flow rate of each gas stream entering each individual carbon adsorber vessel (v) in either dry standard cubic meters per hour when EPA Method 18 is used to measure HAP or VOC concentration or in standard cubic meters per hour (wet basis) when EPA Method 25A is used to measure HAP or VOC concentration. For purposes of calculating the efficiency of the individual carbon adsorber vessel, the value of Q_{gv} can be assumed to equal the value of Q_{hv} measured for that carbon adsorber vessel.

(20) Q_{hv} = the volumetric flow rate of each gas stream exiting each individual carbon adsorber vessel (v) in either dry standard cubic meters per hour when EPA Method 18 is used to measure HAP or VOC concentration or in standard cubic meters per hour (wet basis) when EPA Method 25A is used to measure HAP or VOC concentration.

(21) Q_{ini} = the volumetric flow rate of each gas stream (i) entering the total enclosure through a forced makeup air duct in standard cubic meters per hour (wet basis).

(22) Q_{outj} = the volumetric flow rate of each gas stream (j) exiting the total enclosure through an exhaust duct or hood in standard cubic meters per hour (wet basis).

(23) R = the overall HAP or VOC emission reduction achieved for the duration of the emission test (expressed as a percentage).

(24) RS_i = the total mass in kilograms of HAP or VOC retained in the coating after drying.

(25) W_{oi} = the weight fraction of VOC in each batch of coating (i) applied, or of each coating applied at an affected coating operation during a 7- to 30-day period, as appropriate, as determined by EPA Method 24 or formulation data. This value shall be determined at a time and location in the process after all ingredients (including any dilution solvent) have been added to the coating, or if ingredients are added after the weight fraction of HAP or VOC in the coating has been determined, appropriate adjustments shall be made to account for them.

[60 FR 45956, Sept. 1, 1995, as amended at 63 FR 15017, Mar. 27, 1998; 63 FR 46533, Sept. 1, 1998; 65 FR 76945, Dec. 8, 2000]

§ 63.743 Standards: General.

(a) Except as provided in paragraphs (a)(4) through (a)(10) of this section and in Table 1 of this subpart, each owner or operator of an affected source subject to this subpart is also subject to the following sections of subpart A of this part:

(1) §63.4, Prohibited activities and circumvention;

(2) §63.5, Construction and reconstruction; and

(3) §63.6, Compliance with standards and maintenance requirements.

(4) For the purposes of this subpart, all affected sources shall submit any request for an extension of compliance not later than 120 days before the affected source's compliance date. The extension request should be requested for the shortest time necessary to attain compliance, but in no case shall exceed 1 year.

(5)(i) For the purposes of this subpart, the Administrator (or the State with an approved permit program) will notify the owner or operator in writing of his/her intention to deny approval of a request for an extension of compliance submitted under either §63.6(i)(4) or §63.6(i)(5) within 60 calendar days after receipt of sufficient information to evaluate the request.

(ii) In addition, for purposes of this subpart, if the Administrator does not notify the owner or operator in writing of his/her intention to deny approval within 60 calendar days

after receipt of sufficient information to evaluate a request for an extension of compliance, then the request shall be considered approved.

(6)(i) For the purposes of this subpart, the Administrator (or the State) will notify the owner or operator in writing of the status of his/her application submitted under §63.6(i)(4)(ii) (that is, whether the application contains sufficient information to make a determination) within 30 calendar days after receipt of the original application and within 30 calendar days after receipt of any supplementary information that is submitted, rather than 15 calendar days as provided for in §63.6(i)(13)(i).

(ii) In addition, for the purposes of this subpart, if the Administrator does not notify the owner or operator in writing of the status of his/her application within 30 calendar days after receipt of the original application and within 30 calendar days after receipt of any supplementary information that is submitted, then the information in the application or the supplementary information is to be considered sufficient upon which to make a determination.

(7) For the purposes of this subpart, each owner or operator who has submitted an extension request application under §63.6(i)(5) is to be provided 30 calendar days to present additional information or arguments to the Administrator after he/she is notified that the application is not complete, rather than 15 calendar days as provided for in §63.6(i)(13)(ii).

(8) For the purposes of this subpart, each owner or operator is to be provided 30 calendar days to present additional information to the Administrator after he/she is notified of the intended denial of a compliance extension request submitted under either §63.6(i)(4) or §63.6(i)(5), rather than 15 calendar days as provided for in §63.6(1)(12)(iii)(B) and §63.6(i)(13)(iii)(B).

(9) For the purposes of this subpart, a final determination to deny any request for an extension submitted under either §63.6(i)(4) or §63.6(i)(5) will be made within 60 calendar days after presentation of additional information or argument (if the application is complete), or within 60 calendar days after the final date specified for the presentation if no presentation is made, rather than 30 calendar days as provided for in §63.6(i)(12)(iv) and §63.6(i)(13)(iv).

(10) For the purposes of compliance with the requirements of §63.5(b)(4) of the General Provisions and this subpart, owners or operators of existing primer or topcoat application operations and depainting operations who construct or reconstruct a spray booth or hangar that does not have the potential to emit 10 tons/yr or more of an individual inorganic HAP or 25 tons/yr or more of all inorganic HAP combined shall only be required to notify the Administrator of such construction or reconstruction on an annual basis. Notification shall be submitted on or before March 1 of each year and shall include the information required in §63.5(b)(4) for each such spray booth or hangar constructed or reconstructed during the prior calendar year, except that such information shall be limited to inorganic HAP's. No advance notification or written approval from the

Administrator pursuant to §63.5(b)(3) shall be required for the construction or reconstruction of such a spray booth or hangar unless the booth or hangar has the potential to emit 10 tons/yr or more of an individual inorganic HAP or 25 tons/yr or more of all inorganic HAP combined.

(b) *Startup, shutdown, and malfunction plan.* Each owner or operator that uses an air pollution control device or equipment to control HAP emissions shall prepare and operate in accordance with a startup, shutdown, and malfunction plan in accordance with §63.6. Dry particulate filter systems operated per the manufacturer's instructions are exempt from a startup, shutdown, and malfunction plan. A startup, shutdown, and malfunction plan shall be prepared for facilities using locally prepared operating procedures. In addition to the information required in §63.6, this plan shall also include the following provisions:

(1) The plan shall specify the operation and maintenance criteria for each air pollution control device or equipment and shall include a standardized checklist to document the operation and maintenance of the equipment;

(2) The plan shall include a systematic procedure for identifying malfunctions and for reporting them immediately to supervisory personnel; and

(3) The plan shall specify procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions do not occur.

(c) An owner or operator who uses an air pollution control device or equipment not listed in this subpart shall submit a description of the device or equipment, test data verifying the performance of the device or equipment in controlling organic HAP and/or VOC emissions, as appropriate, and specific operating parameters that will be monitored to establish compliance with the standards to the Administrator for approval not later than 120 days prior to the compliance date.

(d) Instead of complying with the individual coating limits in §§63.745 and 63.747, a facility may choose to comply with the averaging provisions specified in paragraphs (d)(1) through (d)(6) of this section.

(1) Each owner or operator of a new or existing source shall use any combination of primers, topcoats (including self-priming topcoats), Type I chemical milling maskants, or Type II chemical milling maskants such that the monthly volume-weighted average organic HAP and VOC contents of the combination of primers, topcoats, Type I chemical milling maskants, or Type II chemical milling maskants, as determined in accordance with the applicable procedures set forth in §63.750, complies with the specified content limits in §§63.745(c) and 63.747(c), unless the permitting agency specifies a shorter averaging period as part of an ambient ozone control program.

(2) Averaging is allowed only for uncontrolled primers, topcoats (including self-priming topcoats), Type I chemical milling maskants, or Type II chemical milling maskants.

(3) Averaging is not allowed between primers and topcoats (including self-priming topcoats).

(4) Averaging is not allowed between Type I and Type II chemical milling maskants.

(5) Averaging is not allowed between primers and chemical milling maskants, or between topcoats and chemical milling maskants.

(6) Each averaging scheme shall be approved in advance by the permitting agency and adopted as part of the facility's title V permit.

[60 FR 45956, Sept. 1, 1996, as amended at 63 FR 15017, Mar. 27, 1998]

§ 63.744 Standards: Cleaning operations.

(a) *Housekeeping measures.* Each owner or operator of a new or existing cleaning operation subject to this subpart shall comply with the requirements in these paragraphs unless the cleaning solvent used is identified in Table 1 of this section or contains HAP and VOC below the de minimis levels specified in §63.741(f).

(1) Unless the owner or operator satisfies the requirements in paragraph (a)(4) of this section, place used solvent-laden cloth, paper, or any other absorbent applicators used for cleaning in bags or other closed containers. Ensure that these bags and containers are kept closed at all times except when depositing or removing these materials from the container. Use bags and containers of such design so as to contain the vapors of the cleaning solvent. Cotton-tipped swabs used for very small cleaning operations are exempt from this requirement.

(2) Unless the owner or operator satisfies the requirements in paragraph (a)(4) of this section, store fresh and spent cleaning solvents, except semi-aqueous solvent cleaners, used in aerospace cleaning operations in closed containers.

(4) Demonstrate to the Administrator (or delegated State, local, or Tribal authority) that equivalent or better alternative measures are in place compared to the use of closed containers for the solvent-laden materials described in paragraph (a)(1) of this section, or the storage of solvents described in paragraph (a)(2) of this section.

(3) Conduct the handling and transfer of cleaning solvents to or from enclosed systems, vats, waste containers, and other cleaning operation equipment that hold or store fresh or spent cleaning solvents in such a manner that minimizes spills.

(b) *Hand-wipe cleaning.* Each owner or operator of a new or existing hand-wipe cleaning operation (excluding cleaning of spray gun equipment performed in accordance with paragraph (c) of this section) subject to this subpart shall use cleaning solvents that meet one of the requirements specified in paragraphs (b)(1), (b)(2), and (b)(3) of this section. Cleaning solvent solutions that contain HAP and VOC below the de minimis levels

specified in §63.741(f) are exempt from the requirements in paragraphs (b)(1), (b)(2), and (b)(3) of this section.

(1) Meet one of the composition requirements in Table 1 of this section;

(2) Have a composite vapor pressure of 45 mm Hg (24.1 in. H_2 O) or less at 20 °C (68 °F); or

(3) Demonstrate that the volume of hand-wipe solvents used in cleaning operations has been reduced by at least 60% from a baseline adjusted for production. The baseline shall be established as part of an approved alternative plan administered by the State. Demonstrate that the volume of hand-wipe cleaning solvents used in cleaning operations has been reduced by at least 60 percent from a baseline adjusted for production. The baseline shall be calculated using data from 1996 and 1997, or as otherwise agreed upon by the Administrator or delegated State Authority. The baseline shall be approved by the Administrator or delegated State Authority and shall be included as part of the facility's title V or part 70 permit.

(c) *Spray gun cleaning.* Each owner or operator of a new or existing spray gun cleaning operation subject to this subpart in which spray guns are used for the application of coatings or any other materials that require the spray guns to be cleaned shall use one or more of the techniques, or their equivalent, specified in paragraphs (c)(1) through (c)(4) of this section. Spray gun cleaning operations using cleaning solvent solutions that contain HAP and VOC below the de minimis levels specified in §63.741(f) are exempt from the requirements in paragraphs (c)(1) through (c)(4) of this section.

(1)(i) Enclosed system. Clean the spray gun in an enclosed system that is closed at all times except when inserting or removing the spray gun. Cleaning shall consist of forcing solvent through the gun.

(ii) If leaks are found during the monthly inspection required in §63.751(a), repairs shall be made as soon as practicable, but no later than 15 days after the leak was found. If the leak is not repaired by the 15th day after detection, the cleaning solvent shall be removed, and the enclosed cleaner shall be shut down until the leak is repaired or its use is permanently discontinued.

(2) *Nonatomized cleaning.* Clean the spray gun by placing cleaning solvent in the pressure pot and forcing it through the gun with the atomizing cap in place. No atomizing air is to be used. Direct the cleaning solvent from the spray gun into a vat, drum, or other waste container that is closed when not in use.

(3) Disassembled spray gun cleaning. Disassemble the spray gun and clean the components by hand in a vat, which shall remain closed at all times except when in use. Alternatively, soak the components in a vat, which shall remain closed during the soaking period and when not inserting or removing components.

(4) *Atomizing cleaning.* Clean the spray gun by forcing the cleaning solvent through the gun and direct the resulting atomized spray into a waste container that is fitted with a device designed to capture the atomized cleaning solvent emissions.

(5) Cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems that can be programmed to spray into a closed container, shall be exempt from the requirements of paragraph (c) of this section.

(d) *Flush cleaning.* Each owner or operator of a flush cleaning operation subject to this subpart (excluding those in which Table 1 or semi-aqueous cleaning solvents are used) shall empty the used cleaning solvent each time aerospace parts or assemblies, or components of a coating unit (with the exception of spray guns) are flush cleaned into an enclosed container or collection system that is kept closed when not in use or into a system with equivalent emission control.

(e) *Exempt cleaning operations.* The following cleaning operations are exempt from the requirements of paragraph (b) of this section:

(1) Cleaning during the manufacture, assembly, installation, maintenance, or testing of components of breathing oxygen systems that are exposed to the breathing oxygen;

(2) Cleaning during the manufacture, assembly, installation, maintenance, or testing of parts, subassemblies, or assemblies that are exposed to strong oxidizers or reducers (e.g., nitrogen tetroxide, liquid oxygen, or hydrazine);

(3) Cleaning and surface activation prior to adhesive bonding;

(4) Cleaning of electronic parts and assemblies containing electronic parts;

(5) Cleaning of aircraft and ground support equipment fluid systems that are exposed to the fluid, including air-to-air heat exchangers and hydraulic fluid systems;

(6) Cleaning of fuel cells, fuel tanks, and confined spaces;

(7) Surface cleaning of solar cells, coated optics, and thermal control surfaces;

(8) Cleaning during fabrication, assembly, installation, and maintenance of upholstery, curtains, carpet, and other textile materials used in the interior of the aircraft;

(9) Cleaning of metallic and nonmetallic materials used in honeycomb cores during the manufacture or maintenance of these cores, and cleaning of the completed cores used in the manufacture of aerospace vehicles or components;

(10) Cleaning of aircraft transparencies, polycarbonate, or glass substrates;

(11) Cleaning and cleaning solvent usage associated with research and development, quality control, and laboratory testing;

(12) Cleaning operations, using nonflamable liquids, conducted within five feet of energized electrical systems. Energized electrical systems means any AC or DC electrical circuit on an assembled aircraft once electrical power is connected, including interior passenger and cargo areas, wheel wells and tail sections; and

(13) Cleaning operations identified as essential uses under the Montreal Protocol for which the Administrator has allocated essential use allowances or exemptions in 40 CFR 82.4.

Table 1_Composition Requirements for Approved Cleaning Solvents

Cleaning solvent type	Composition requirements
Aqueous	Cleaning solvents in which water is the primary ingredient (>=80 percent of cleaning solvent solution as applied must be water). Detergents, surfactants, and bioenzyme mixtures and nutrients may be combined with the water along with a variety of additives, such as organic solvents (e.g., high boiling point alcohols), builders, saponifiers, inhibitors, emulsifiers, pH buffers, and antifoaming agents. Aqueous solutions must have a flash point greater than 93 °C (200° F) (as reported by the manufacturer), and the solution must be miscible with water.
Hydrocarbon-based	Cleaners that are composed of photochemically reactive hydrocarbons and/or oxygenated hydrocarbons and have a maximum vapor pressure of 7 mm Hg at 20 °C (3.75 in. H2O and 68 °F). These cleaners also contain no HAP.

[60 FR 45956, Sept. 1, 1996, as amended at 63 FR 15018, Mar. 27 1998; 63 FR 46533, Sept. 1, 1998; 68 FR 37352, June 23, 2003]

§ 63.745 Standards: Primer and topcoat application operations.

(a) Each owner or operator of a new or existing primer or topcoat application operation subject to this subpart shall comply with the requirements specified in paragraph (c) of this section for those coatings that are uncontrolled (no control device is used to reduce organic HAP emissions from the operation), and in paragraph (d) of this section for those coatings that are controlled (organic HAP emissions from the operation are reduced by the use of a control device). Aerospace equipment that is no longer operational, intended for public display, and not easily capable of being moved is exempt from the requirements of this section.

(b) Each owner or operator shall conduct the handling and transfer of primers and topcoats to or from containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills.

(c) *Uncontrolled coatings—organic HAP and VOC content levels.* Each owner or operator shall comply with the organic HAP and VOC content limits specified in paragraphs (c)(1) through (c)(4) of this section for those coatings that are uncontrolled.

(1) Organic HAP emissions from primers shall be limited to an organic HAP content level of no more than: 540 g/L (4.5 lb/gal) of primer (less water), as applied, for general aviation rework facilities; or 650 g/L (5.4 lb/gal) of exterior primer (less water), as applied, to large commercial aircraft components (parts or assemblies) or fully assembled, large commercial aircraft at existing affected sources that produce fully assembled, large commercial aircraft; or 350 g/L (2.9 lb/gal) of primer (less water), as applied.

(2) VOC emissions from primers shall be limited to a VOC content level of no more than: 540 g/L (4.5 lb/gal) of primer (less water and exempt solvents), as applied, for general aviation rework facilities; or 650 g/L (5.4 lb/gal) of exterior primer (less water and exempt solvents), as applied, to large commercial aircraft components (parts or assemblies) or fully assembled, large commercial aircraft at existing affected sources that produce fully assembled, large commercial aircraft; or 350 g/L (2.9 lb/gal) of primer (less water and exempt solvents), as applied.

(3) Organic HAP emissions from topcoats shall be limited to an organic HAP content level of no more than: 420 g/L (3.5 lb/gal) of coating (less water) as applied or 540 g/L (4.5 lb/gal) of coating (less water) as applied for general aviation rework facilities. Organic HAP emissions from self-priming topcoats shall be limited to an organic HAP content level of no more than: 420 g/L (3.5 lb/gal) of self-priming topcoat (less water) as applied or 540 g/L (4.5 lb/gal) of self-priming topcoat (less water) as applied for general aviation rework facilities.

(4) VOC emissions from topcoats shall be limited to a VOC content level of no more than: 420 g/L (3.5 lb/gal) of coating (less water and exempt solvents) as applied or 540 g/L (4.5 lb/gal) of coating (less water and exempt solvents) as applied for general aviation rework facilities. VOC emissions from self-priming topcoats shall be limited to a VOC content level of no more than: 420 g/L (3.5 lb/gal) of self-priming topcoat (less

water and exempt solvents) as applied or 540 g/L (4.5 lb/gal) of self-priming topcoat (less water) as applied for general aviation rework facilities.

(d) *Controlled coatings—control system requirements.* Each control system shall reduce the operation's organic HAP and VOC emissions to the atmosphere by 81% or greater, taking into account capture and destruction or removal efficiencies, as determined using the procedures in §63.750(g) when a carbon adsorber is used and in §63.750(h) when a control device other than a carbon adsorber is used.

(e) *Compliance methods.* Compliance with the organic HAP and VOC content limits specified in paragraphs (c)(1) through (c)(4) of this section shall be accomplished by using the methods specified in paragraphs (e)(1) and (e)(2) of this section either by themselves or in conjunction with one another.

(1) Use primers and topcoats (including self-priming topcoats) with HAP and VOC content levels equal to or less than the limits specified in paragraphs (c)(1) through (c)(4) of this section; or

(2) Use the averaging provisions described in §63.743(d).

(f) *Application equipment.* Except as provided in paragraph (f)(3) of this section, each owner or operator of a new or existing primer or topcoat (including self-priming topcoat) application operation subject to this subpart in which any of the coatings contain organic HAP or VOC shall comply with the requirements specified in paragraphs (f)(1) and (f)(2) of this section.

(1) All primers and topcoats (including self-priming topcoats) shall be applied using one or more of the application techniques specified in paragraphs (f)(1)(i) through (f)(1)(ix) of this section.

(i) Flow/curtain coat application;

(ii) Dip coat application;

(iii) Roll coating;

(iv) Brush coating;

(v) Cotton-tipped swab application;

(vi) Electrodeposition (dip) coating;

(vii) High volume low pressure (HVLP) spraying;

(viii) Electrostatic spray application; or

(ix) Other coating application methods that achieve emission reductions equivalent to HVLP or electrostatic spray application methods, as determined according to the requirements in §63.750(i).

(2) All application devices used to apply primers or topcoats (including self-priming topcoats) shall be operated according to company procedures, local specified operating procedures, and/or the manufacturer's specifications, whichever is most stringent, at alltimes. Equipment modified by the facility shall maintain a transfer efficiency equivalent to HVLP and electrostatic spray application techniques.

(3) The following situations are exempt from the requirements of paragraph (f)(1) of this section:

(i) Any situation that normally requires the use of an airbrush or an extension on the spray gun to properly reach limited access spaces;

(ii) The application of coatings that contain fillers that adversely affect atomization with HVLP spray guns and that the permitting agency has determined cannot be applied by any of the application methods specified in paragraph (f)(1) of this section;

(iii) The application of coatings that normally have a dried film thickness of less than 0.0013 centimeter (0.0005 in.) and that the permitting agency has determined cannot be applied by any of the application methods specified in paragraph (f)(1) of this section;

(iv) The use of airbrush application methods for stenciling, lettering, and other identification markings;

(v) The use of hand-held spray can application methods; and

(vi) Touch-up and repair operations.

(g) *Inorganic HAP emissions.* Except as provided in paragraph (g)(4) of this section, each owner or operator of a new or existing primer or topcoat application operation subject to this subpart in which any of the coatings that are spray applied contain inorganic HAP, shall comply with the applicable requirements in paragraphs (g)(1) through (g)(3) of this section.

(1) Apply these coatings in a booth or hangar in which air flow is directed downward onto or across the part or assembly being coated and exhausted through one or more outlets.

(2) Control the air stream from this operation as follows:

(i) For existing sources, the owner or operator must choose one of the following:

(A) Before exhausting it to the atmosphere, pass the air stream through a dry particulate filter system certified using the methods described in §63.750(o) to meet or exceed the efficiency data points in Tables 1 and 2 of this section; or

Table 1_Two-Stage Arrestor; Liquid Phase Challenge for Existing Sources

Filtration efficiency requirement, %	Aerodynamic particle size range, μm
>90	>5.7
>50	>4.1
>10	>2.2

Table 2_Two-Stage Arrestor; Solid Phase Challenge for Existing Sources

Filtration efficiency requirement, %	Aerodynamic particle size range, μm
>90	>8.1
>50	>5.0
>10	>2.6

(B) Before exhausting it to the atmosphere, pass the air stream through a waterwash system that shall remain in operation during all coating application operations; or

(C) Before exhausting it to the atmosphere, pass the air stream through an air pollution control system that meets or exceeds the efficiency data points in Tables 1 and 2 of this section and is approved by the permitting authority.

(ii) For new sources, either:

(A) Before exhausting it to the atmosphere, pass the air stream through a dry particulate filter system certified using the methods described in §63.750(o) to meet or exceed the efficiency data points in Tables 3 and 4 of this section; or

Table 3_Three-Stage Arrestor; Liquid Phase Challenge for New Sources

Filtration efficiency requirement, %	Aerodynamic particle size range, μm
>95	>2.0
>80	>1.0

>65	>0.42

Table 4_Three-Stage Arrestor; Solid Phase Challenge for New Sources

Filtration efficiency requirement, %	Aerodynamic particle size range, μm
>95	>2.5
>85	>1.1
>75	>0.70

(B) Before exhausting it to the atmosphere, pass the air stream through an air pollution control system that meets or exceeds the efficiency data points in Tables 3 and 4 of this section and is approved by the permitting authority.

(iii) Owners or operators of new sources that have commenced construction or reconstruction after June 6, 1994 but prior to October 29, 1996 may comply with the following requirements in lieu of the requirements in paragraph (g)(2)(ii) of this section:

(A) Pass the air stream through either a two-stage dry particulate filter system or a waterwash system before exhausting it to the atmosphere.

(B) If the primer or topcoat contains chromium or cadmium, control shall consist of a HEPA filter system, three-stage filter system, or other control system equivalent to the three stage filter system as approved by the permitting agency.

(iv) If a dry particulate filter system is used, the following requirements shall be met:

(A) Maintain the system in good working order;

(B) Install a differential pressure gauge across the filter banks;

(C) Continuously monitor the pressure drop across the filter and read and record the pressure drop once per shift; and

(D) Take corrective action when the pressure drop exceeds or falls below the filter manufacturer's recommended limit(s).

(v) If a conventional waterwash system is used, continuously monitor the water flow rate and read and record the water flow rate once per shift. If a pumpless system is used, continuously monitor the booth parameter(s) that indicate performance of the booth per

the manufacturer's recommendations to maintain the booth within the acceptable operating efficiency range and read and record the parameters once per shift.

(3) If the pressure drop across the dry particulate filter system, as recorded pursuant to §63.752(d)(1), is outside the limit(s) specified by the filter manufacturer or in locally prepared operating procedures, shut down the operation immediately and take corrective action. If the water path in the waterwash system fails the visual continuity/flow characteristics check, or the water flow rate recorded pursuant to §63.752(d)(2) exceeds the limit(s) specified by the booth manufacturer or in locally prepared operating procedures, or the booth manufacturer's or locally prepared maintenance procedures for the filter or waterwash system have not been performed as scheduled, shut down the operation immediately and take corrective action. The operation shall not be resumed until the pressure drop or water flow rate is returned within the specified limit(s).

(4) The requirements of paragraphs (g)(1) through (g)(3) of this section do not apply to the following:

(i) Touch-up of scratched surfaces or damaged paint;

(ii) Hole daubing for fasteners;

(iii) Touch-up of trimmed edges;

(iv) Coating prior to joining dissimilar metal components;

(v) Stencil operations performed by brush or air brush;

(vi) Section joining;

(vii) Touch-up of bushings and other similar parts;

(viii) Sealant detackifying;

(ix) Painting parts in an area identified in a title V permit, where the permitting authority has determined that it is not technically feasible to paint the parts in a booth; and

(x) The use of hand-held spray can application methods.

[60 FR 45956, Sept. 1, 1996, as amended at 63 FR 15019, Mar. 27, 1998; 63 FR 46533, Sept. 1, 1998; 65 FR 76945, Dec. 8, 2000]

§ 63.746 Standards: Depainting operations.

(a) *Applicability.* Each owner or operator of a new or existing depainting operation subject to this subpart shall comply with the requirements in paragraphs (a)(1) through (a)(3) of this section, and with the requirements specified in paragraph (b) where there

are no controls for organic HAP, or paragraph (c) where organic HAP are controlled using a control system. This section does not apply to an aerospace manufacturing or rework facility that depaints six or less completed aerospace vehicles in a calendar year.

(1) The provisions of this section apply to the depainting of the outer surface areas of completed aerospace vehicles, including the fuselage, wings, and vertical and horizontal stabilizers of the aircraft, and the outer casing and stabilizers of missiles and rockets. These provisions do not apply to the depainting of parts or units normally removed from the aerospace vehicle for depainting. However, depainting of wings and stabilizers is always subject to the requirements of this section regardless of whether their removal is considered by the owner or operator to be normal practice for depainting.

(2) Aerospace vehicles or components that are intended for public display, no longer operational, and not easily capable of being moved are exempt from the requirements of this section.

(3) The following depainting operations are exempt from the requirements of this section:

(i) Depainting of radomes; and

(ii) Depainting of parts, subassemblies, and assemblies normally removed from the primary aircraft structure before depainting.

(b)(1) *HAP emissions—non-HAP chemical strippers and technologies.* Except as provided in paragraphs (b)(2) and (b)(3) of this section, each owner or operator of a new or existing aerospace depainting operation subject to this subpart shall emit no organic HAP from chemical stripping formulations and agents or chemical paint softeners.

(2) Where non-chemical based equipment is used to comply with paragraph (b)(1) of this section, either in total or in part, each owner or operator shall operate and maintain the equipment according to the manufacturer's specifications or locally prepared operating procedures. During periods of malfunctions of such equipment, each owner or operator may use substitute materials during the repair period provided the substitute materials used are those available that minimize organic HAP emissions. In no event shall substitute materials be used for more than 15 days annually, unless such materials are organic HAP-free.

(3) Each owner or operator of a new or existing depainting operation shall not, on an annual average basis, use more than 26 gallons of organic HAP-containing chemical strippers or alternatively 190 pounds of organic HAP per commercial aircraft depainted; or more than 50 gallons of organic HAP-containing chemical strippers or alternatively 365 pounds of organic HAP per military aircraft depainted for spot stripping and decal removal.

(4) Each owner or operator of a new or existing depainting operation complying with paragraph (b)(2), that generates airborne inorganic HAP emissions from dry media

blasting equipment, shall also comply with the requirements specified in paragraphs (b)(4)(i) through (b)(4)(v) of this section.

(i) Perform the depainting operation in an enclosed area, unless a closed-cycle depainting system is used.

(ii)(A) For existing sources pass any air stream removed from the enclosed area or closed-cycle depainting system through a dry particulate filter system, certified using the method described in §63.750(o) to meet or exceed the efficiency data points in Tables 1 and 2 of §63.745, through a baghouse, or through a waterwash system before exhausting it to the atmosphere.

(B) For new sources pass any air stream removed from the enclosed area or closed-cycle depainting system through a dry particulate filter system certified using the method described in §63.750(o) to meet or exceed the efficiency data points in Tables 3 and 4 of §63.745 or through a baghouse before exhausting it to the atmosphere.

(c) Owners or operators of new sources that have commenced construction or reconstruction after June 6, 1994 but prior to October 29, 1996 may comply with the following requirements in lieu of the requirements in paragraph (b)(4)(ii)(B) of this section:

(*1*) Pass the air stream through either a two-stage dry particulate filter system or a waterwash system before exhausting it to the atmosphere.

(2) If the coating being removed contains chromium or cadmium, control shall consist of a HEPA filter system, three-stage filter system, or other control system equivalent to the three-stage filter system as approved by the permitting agency.

(iii) If a dry particulate filter system is used, the following requirements shall be met:

(A) Maintain the system in good working order;

(B) Install a differential pressure gauge across the filter banks;

(C) Continuously monitor the pressure drop across the filter, and read and record the pressure drop once per shift; and

(D) Take corrective action when the pressure drop exceeds or falls below the filter manufacturer's recommended limits.

(iv) If a waterwash system is used, continuously monitor the water flow rate, and read and record the water flow rate once per shift.

(v) If the pressure drop, as recorded pursuant to §63.752(e)(7), is outside the limit(s) specified by the filter manufacturer or in locally prepared operating procedures,

whichever is more stringent, shut down the operation immediately and take corrective action. If the water path in the waterwash system fails the visual continuity/flow characteristics check, as recorded pursuant to §63.752(e)(7), or the water flow rate, as recorded pursuant to §63.752(d)(2), exceeds the limit(s) specified by the booth manufacturer or in locally prepared operating procedures, or the booth manufacturer's or locally prepared maintenance procedures for the filter or waterwash system have not been performed as scheduled, shut down the operation immediately and take corrective action. The operation shall not be resumed until the pressure drop or water flow rate is returned within the specified limit(s).

(5) Mechanical and hand sanding operations are exempt from the requirements in paragraph (b)(4) of this section.

(c) *Organic HAP emissions—organic HAP-containing chemical strippers.* Each owner or operator of a new or existing organic HAP-containing chemical stripper depainting operation subject to this subpart shall comply with the requirements specified in this paragraph.

(1) All organic HAP emissions from the operation shall be reduced by the use of a control system. Each control system that was installed before the effective date shall reduce the operations' organic HAP emissions to the atmosphere by 81 percent or greater, taking into account capture and destruction or removal efficiencies.

(2) Each control system installed on or after the effective date shall reduce organic HAP emissions to the atmosphere by 95 percent or greater. Reduction shall take into account capture and destruction or removal efficiencies, and may take into account the volume of chemical stripper used relative to baseline levels (e.g., the 95 percent efficiency may be achieved by controlling emissions at 81 percent efficiency with a control system and using 74 percent less stripper than in baseline applications). The baseline shall be calculated using data from 1996 and 1997, which shall be on a usage per aircraft or usage per square foot of surface basis.

(3) The capture and destruction or removal efficiencies are to be determined using the procedures in §63.750(g) when a carbon adsorber is used and those in §63.750(h) when a control device other than a carbon adsorber is used.

[60 FR 45956, Sept. 1, 1996, as amended at 63 FR 15020, Mar. 27, 1998; 63 FR 46533, Sept. 1, 1998]

§ 63.747 Standards: Chemical milling maskant application operations.

(a) Each owner or operator of a new or existing chemical milling maskant operation subject to this subpart shall comply with the requirements specified in paragraph (c) of this section for those chemical milling maskants that are uncontrolled (no control device is used to reduce organic HAP emissions from the operation) and in paragraph (d) of this

section for those chemical milling maskants that are controlled (organic HAP emissions from the operation are reduced by the use of a control device).

(b) Each owner or operator shall conduct the handling and transfer of chemical milling maskants to or from containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills.

(c) *Uncontrolled maskants—organic HAP and VOC content levels.* Each owner or operator shall comply with the organic HAP and VOC content limits specified in paragraphs (c)(1) and (c)(2) of this section for each chemical milling maskant that is uncontrolled.

(1) Organic HAP emissions from chemical milling maskants shall be limited to organic HAP content levels of no more than 622 grams of organic HAP per liter (5.2 lb/gal) of Type I chemical milling maskant (less water) as applied, and no more than 160 grams of organic HAP per liter (1.3 lb/gal) of Type II chemical milling maskant (less water) as applied.

(2) VOC emissions from chemical milling maskants shall be limited to VOC content levels of no more than 622 grams of VOC per liter (5.2 lb/gal) of Type I chemical milling maskant (less water and exempt solvents) as applied, and no more than 160 grams of VOC per liter (1.3 lb/gal) of Type II chemical milling maskant (less water and exempt solvents) as applied.

(3) The requirements of paragraphs (c)(1) and (c)(2) of this section do not apply to the following:

(i) Touch-up of scratched surfaces or damaged maskant; and

(ii) Touch-up of trimmed edges.

(d) *Controlled maskants—control system requirements.* Each control system shall reduce the operation's organic HAP and VOC emissions to the atmosphere by 81% or greater, taking into account capture and destruction or removal efficiencies, as determined using the procedures in §63.750(g) when a carbon adsorber is used and in §63.750(h) when a control device other than a carbon adsorber is used.

(e) *Compliance methods.* Compliance with the organic HAP and VOC content limits specified in paragraphs (c)(1) and (c)(2) of this section may be accomplished by using the methods specified in paragraphs (e)(1) and (e)(2) of this section either by themselves or in conjunction with one another.

(1) Use chemical milling maskants with HAP and VOC content levels equal to or less than the limits specified in paragraphs (c)(1) and (c)(2) of this section.

(2) Use the averaging provisions described in §63.743(d).

[60 FR 45956, Sept. 1, 1996, as amended at 63 FR 15021, Mar. 27, 1998]

§ 63.748 Standards: Handling and storage of waste.

Except as provided in §63.741(e), the owner or operator of each facility subject to this subpart that produces a waste that contains HAP shall conduct the handling and transfer of the waste to or from containers, tanks, vats, vessels, and piping systems in such a manner that minimizes spills.

§ 63.749 Compliance dates and determinations.

(a) *Compliance dates.* (1) Each owner or operator of an existing affected source subject to this subpart shall comply with the requirements of this subpart by September 1, 1998, except as specified in paragraph (a)(2) of this section. Owners or operators of new affected sources subject to this subpart shall comply on the effective date or upon startup, whichever is later. In addition, each owner or operator shall comply with the compliance dates specified in §63.6(b) and (c).

(2) Owners or operators of existing primer or topcoat application operations and depainting operations who construct or reconstruct a spray booth or hangar must comply with the new source requirements for inorganic HAP specified in §§63.745(g)(2)(ii) and 63.746(b)(4) for that new spray booth or hangar upon startup. Such sources must still comply with all other existing source requirements by September 1, 1998.

(b) *General.* Each facility subject to this subpart shall be considered in noncompliance if the owner or operator fails to submit a startup, shutdown, and malfunction plan as required by §63.743(b) or uses a control device other than one specified in this subpart that has not been approved by the Administrator, as required by §63.743(c).

(c) *Cleaning operations.* Each cleaning operation subject to this subpart shall be considered in noncompliance if the owner or operator fails to institute and carry out the housekeeping measures required under §63.744(a). Incidental emissions resulting from the activation of pressure release vents and valves on enclosed cleaning systems are exempt from this paragraph.

(1) *Hand-wipe cleaning.* An affected hand-wipe cleaning operation shall be considered in compliance when all hand-wipe cleaning solvents, excluding those used for hand cleaning of spray gun equipment under §63.744(c)(3), meet either the composition requirements specified in §63.744(b)(1) or the vapor pressure requirement specified in §63.744(b)(2).

(2) *Spray gun cleaning.* An affected spray gun cleaning operation shall be considered in compliance when each of the following conditions is met:

(i) One of the four techniques specified in §63.744 (c)(1) through (c)(4) is used;

(ii) The technique selected is operated according to the procedures specified in §63.744 (c)(1) through (c)(4) as appropriate; and

(iii) If an enclosed system is used, monthly visual inspections are conducted and any leak detected is repaired within 15 days after detection. If the leak is not repaired by the 15th day after detection, the solvent shall be removed and the enclosed cleaner shall be shut down until the cleaner is repaired or its use is permanently discontinued.

(3) *Flush cleaning.* An affected flush cleaning operation shall be considered in compliance if the operating requirements specified in §63.744(d) are implemented and carried out.

(d) *Organic HAP and VOC content levels—primer and topcoat application operations—* (1) *Performance test periods.* For uncontrolled coatings that are not averaged, each 24 hours is considered a performance test. For compliant and non-compliant coatings that are averaged together, each 30-day period is considered a performance test, unless the permitting agency specifies a shorter averaging period as part of an ambient ozone control program. When using a control device other than a carbon adsorber, three 1-hour runs constitute the test period for the initial and any subsequent performance test. When using a carbon adsorber, each rolling material balance period is considered a performance test.

(2) *Initial performance tests.* If a control device is used, each owner or operator shall conduct an initial performance test to demonstrate compliance with the overall reduction efficiency specified in paragraph §63.745, unless a waiver is obtained under either §63.7(e)(2)(iv) or §63.7(h). The initial performance test shall be conducted according to the procedures and test methods specified in §63.7 and §63.750(g) for carbon adsorbers and in §63.750(h) for control devices other than carbon adsorbers. For carbon adsorbers, the initial performance test shall be used to establish the appropriate rolling material balance period for determining compliance. The procedures in paragraphs (d)(2)(i) through (d)(2)(vi) of this section shall be used in determining initial compliance with the provisions of this subpart for carbon adsorbers.

(i)(A) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with a common exhaust stack for all the individual carbon adsorber vessels pursuant to §63.750(g) (2) or (4), the test shall consist of three separate runs, each coinciding with one or more complete sequences through the adsorption cycles of all of the individual carbon adsorber vessels.

(B) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with individual exhaust stacks for each carbon adsorber vessel pursuant to §63.750(g) (3) or (4), each carbon adsorber vessel shall be tested individually. The test for each carbon adsorber vessel shall consist of three separate runs. Each run shall coincide with one or more complete adsorption cycles.

(ii) EPA Method 1 or 1A of appendix A of part 60 is used for sample and velocity traverses.

(iii) EPA Method 2, 2A, 2C, or 2D of appendix A of part 60 is used for velocity and volumetric flow rates.

(iv) EPA Method 3 of appendix A of part 60 is used for gas analysis.

(v) EPA Method 4 of appendix A of part 60 is used for stack gas moisture.

(vi) EPA Methods 2, 2A, 2C, 2D, 3, and 4 shall be performed, as applicable, at least twice during each test period.

(3) The primer application operation is considered in compliance when the conditions specified in paragraphs (d)(3)(i) through (d)(3)(iv) of this section, as applicable, and in paragraph (e) of this section are met. Failure to meet any one of the conditions identified in these paragraphs shall constitute noncompliance.

(i) For all uncontrolled primers, all values of H_i and H_a (as determined using the procedures specified in §63.750 (c) and (d)) are less than or equal to 350 grams of organic HAP per liter (2.9 lb/gal) of primer (less water) as applied, and all values of G_i and G_a (as determined using the procedures specified in §63.750 (e) and (f)) are less than or equal to 350 grams of organic VOC per liter (2.9 lb/gal) of primer (less water and exempt solvents) as applied.

(ii) If a control device is used:

(A) The overall control system efficiency, E_k, as determined using the procedures specified in §63.750(g) for control systems containing carbon adsorbers and in §63.750(h) for control systems with other control devices, is equal to or greater than 81% during the initial performance test and any subsequent performance test;

(B) If an incinerator other than a catalytic incinerator is used, the average combustion temperature for all 3-hour periods is greater than or equal to the average combustion temperature established under §63.751(b)(11); and

(C) If a catalytic incinerator is used, the average combustion temperatures for all 3-hour periods are greater than or equal to the average combustion temperatures established under §63.751(b)(12).

(iii)(A) Uses an application technique specified in §63.745 (f)(1)(i) through (f)(1)(viii), or

(B) Uses an alternative application technique, as allowed under §63.745(f)(1)(ix), such that the emissions of both organic HAP and VOC for the implementation period of the alternative application method are less than or equal to the emissions generated using

HVLP or electrostatic spray application methods as determined using the procedures specified in §63.750(i).

(iv) Operates all application techniques in accordance with the manufacturer's specifications or locally prepared operating procedures, whichever is more stringent.

(4) The topcoat application operation is considered in compliance when the conditions specified in paragraphs (e)(4)(i) through (e)(4)(iv) of this section, as applicable, and in paragraph (f) of this section are met. Failure to meet any of the conditions identified in these paragraphs shall constitute noncompliance.

(i) For all uncontrolled topcoats, all values of H_i and H_a(as determined using the procedures specified in §63.750(c) and (d)) are less than or equal to 420 grams organic HAP per liter (3.5 lb/gal) of topcoat (less water) as applied, and all values of G_i and G_a (as determined using the procedures specified in §63.750(e) and (f)) are less than or equal to 420 grams organic VOC per liter (3.5 lb/gal) of topcoat (less water and exempt solvents) as applied.

(ii) If a control device is used,

(A) The overall control system efficiency, E_k, as determined using the procedures specified in §63.750(g) for control systems containing carbon adsorbers and in §63.750(h) for control systems with other control devices, is equal to or greater than 81% during the initial performance test and any subsequent performance test;

(B) If an incinerator other than a catalytic incinerator is used, the average combustion temperature for all 3-hour periods is greater than or equal to the average combustion temperature established under §63.751(b)(11); and

(C) If a catalytic incinerator is used, the average combustion temperatures for all 3-hour periods are greater than or equal to the average combustion temperatures established under §63.751(b)(12).

(iii)(A) Uses an application technique specified in §63.745 (f)(1)(i) through (f)(1)(viii); or

(B) Uses an alternative application technique, as allowed under §63.745(f)(1)(ix), such that the emissions of both organic HAP and VOC for the implementation period of the alternative application method are less than or equal to the emissions generated using HVLP or electrostatic spray application methods as determined using the procedures specified in §63.750(i).

(iv) Operates all application techniques in accordance with the manufacturer's specifications or locally prepared operating procedures.

(e) *Inorganic HAP emissions—primer and topcoat application operations.* For each primer or topcoat application operation that emits inorganic HAP, the operation is in compliance when:

(1) It is operated according to the requirements specified in §63.745(g)(1) through (g)(3); and

(2) It is shut down immediately whenever the pressure drop or water flow rate is outside the limit(s) established for them and is not restarted until the pressure drop or water flow rate is returned within these limit(s), as required under §63.745(g)(3).

(f) *Organic HAP emissions—Depainting operations*—(1) *Performance test periods.* When using a control device other than a carbon adsorber, three 1-hour runs constitute the test period for the initial and any subsequent performance test. When a carbon adsorber is used, each rolling material balance period is considered a performance test. Each 24-hour period is considered a performance test period for determining compliance with §63.746(b)(1). For uncontrolled organic emissions from depainting operations, each calendar year is considered a performance test period for determining compliance with the HAP limits for organic HAP-containing chemical strippers used for spot stripping and decal removal.

(2) *Initial performance tests.* If a control device is used, each owner or operator shall conduct an initial performance test to demonstrate compliance with the overall reduction efficiency specified in §63.746(c), unless a waiver is obtained under either §63.7(e)(2)(iv) or §63.7(h). The initial performance test shall be conducted according to the procedures and test methods specified in §63.7 and §63.750(g) for carbon adsorbers and in §63.750(h) for control devices other than carbon adsorbers. For carbon adsorbers, the initial performance test shall be used to establish the appropriate rolling material balance period for determining compliance. The procedures in paragraphs (2)(i) through (2)(vi) of this section shall be used in determining initial compliance with the provisions of this subpart for carbon adsorbers.

(i)(A) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with a common exhaust stack for all the individual carbon adsorber vessels pursuant to §63.750(g)(2) or (4), the test shall consist of three separate runs, each coinciding with one or more complete sequences through the adsorption cycles of all of the individual carbon adsorber vessels.

(B) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with individual exhaust stacks for each carbon adsorber vessel pursuant to §63.750(g) (3) or (4), each carbon adsorber vessel shall be tested individually. The test for each carbon adsorber vessel shall consist of three separate runs. Each run shall coincide with one or more complete adsorption cycles.

(ii) EPA Method 1 or 1A of appendix A of part 60 is used for sample and velocity traverses.

(iii) EPA Method 2, 2A, 2C, or 2D of appendix A of part 60 is used for velocity and volumetric flow rates.

(iv) EPA Method 3 of appendix A of part 60 is used for gas analysis.

(v) EPA Method 4 of appendix A of part 60 is used for stack gas moisture.

(vi) EPA Methods 2, 2A, 2C, 2D, 3, and 4 shall be performed, as applicable, at least twice during each test period.

(3) An organic HAP-containing chemical stripper depainting operation is considered in compliance when the conditions specified in paragraph (g)(3)(i) of this section are met.

(i) If a carbon adsorber (or other control device) is used, the overall control efficiency of the control system, as determined using the procedures specified in §63.750(g) (or other control device as determined using the procedures specified in §63.750(h)), is equal to or greater than 81% for control systems installed before the effective date, or equal to or greater than 95% for control systems installed on or after the effective date, during the initial performance test and all subsequent material balances (or performance tests, as appropriate).

(ii) For non-HAP depainting operations complying with §63.746(b)(1);

(A) For any spot stripping and decal removal, the value of C, as determined using the procedures specified in §63.750(j), is less than or equal to 26 gallons of organic HAP-containing chemical stripper or 190 pounds of organic HAP per commercial aircraft depainted calculated on a yearly average; and is less than or equal to 50 gallons of organic HAP-containing chemical stripper or 365 pounds of organic HAP per military aircraft depainted calculated on a yearly average; and

(B) The requirements of §63.746(b)(2) are carried out during malfunctions of non-chemical based equipment.

(g) *Inorganic HAP emissions—depainting operations.* Each depainting operation is in compliance when:

(1) The operating requirements specified in §63.746(b)(4) are followed; and

(2) It is shut down immediately whenever the pressure drop or water flow rate is outside the limit(s) established for them and is not restarted until the pressure drop or water flow rate is returned within these limit(s), as required under §63.746(b)(4)(v).

(h) *Chemical milling maskant application operations*—(1) *Performance test periods.* For uncontrolled chemical milling maskants that are not averaged, each 24-hour period is considered a performance test. For compliant and noncompliant chemical milling maskants that are averaged together, each 30-day period is considered a performance test, unless the permitting agency specifies a shorter period as part of an ambient ozone control program. When using a control device other than a carbon adsorber, three 1-hour runs constitute the test period for the initial and any subsequent performance test. When a carbon adsorber is used, each rolling material balance period is considered a performance test.

(2) *Initial performance tests.* If a control device is used, each owner or operator shall conduct an initial performance test to demonstrate compliance with the overall reduction efficiency specified in §63.747(d), unless a waiver is obtained under either §63.7(e)(2)(iv) or §63.7(h). The initial performance test shall be conducted according to the procedures and test methods specified in §63.7 and §63.750(g) for carbon adsorbers and in §63.750(h) for control devices other than carbon adsorbers. For carbon adsorbers, the initial performance test shall be used to establish the appropriate rolling material balance period for determining compliance. The procedures in paragraphs (h)(2) (i) through (vi) of this section shall be used in determining initial compliance with the provisions of this subpart for carbon adsorbers.

(i)(A) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with a common exhaust stack for all the individual carbon adsorber vessels pursuant to §63.750(g) (2) or (4), the test shall consist of three separate runs, each coinciding with one or more complete sequences through the adsorption cycles of all of the individual carbon adsorber vessels.

(B) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with individual exhaust stacks for each carbon adsorber vessel pursuant to §63.750(g) (3) or (4), each carbon adsorber vessel shall be tested individually. The test for each carbon adsorber vessel shall consist of three separate runs. Each run shall coincide with one or more complete adsorption cycles.

(ii) EPA Method 1 or 1A of appendix A of part 60 is used for sample and velocity traverses.

(iii) EPA Method 2, 2A, 2C, or 2D of appendix A of part 60 is used for velocity and volumetric flow rates.

(iv) EPA Method 3 of appendix A of part 60 is used for gas analysis.

(v) EPA Method 4 of appendix A of part 60 is used for stack gas moisture.

(vi) EPA Methods 2, 2A, 2C, 2D, 3, and 4 shall be performed, as applicable, at least twice during each test period.

(3) The chemical milling maskant application operation is considered in compliance when the conditions specified in paragraphs (i)(3)(i) and (i)(3)(ii) of this section are met.

(i) For all uncontrolled chemical milling maskants, all values of H_i and H_a (as determined using the procedures specified in §63.750 (k) and (l)) are less than or equal to 622 grams of organic HAP per liter (5.2 lb/gal) of Type I chemical milling maskant as applied (less water), and 160 grams of organic HAP per liter (1.3 lb/gal) of Type II chemical milling maskant as applied (less water). All values of G_i and G_a (as determined using the procedures specified in §63.750 (m) and (n)) are less than or equal to 622 grams of VOC per liter (5.2 lb/gal) of Type I chemical milling maskant as applied (less water and exempt solvents), and 160 grams of VOC per liter (1.3 lb/gal) of Type II chemical milling maskant (less water and exempt solvents) as applied.

(ii) If a carbon adsorber (or other control device) is used, the overall control efficiency of the control system, as determined using the procedures specified in §63.750(g) (or systems with other control devices as determined using the procedures specified in §63.750(h)), is equal to or greater than 81% during the initial performance test period and all subsequent material balances (or performance tests, as appropriate).

(i) *Handling and storage of waste.* For those wastes subject to this subpart, failure to comply with the requirements specified in §63.748 shall be considered a violation.

[60 FR 45956, Sept. 1, 1996, as amended at 63 FR 15021, Mar. 27, 1998]

§ 63.750 Test methods and procedures.

(a) *Composition determination.* Compliance with the hand-wipe cleaning solvent approved composition list specified in §63.744(b)(1) for hand-wipe cleaning solvents shall be demonstrated using data supplied by the manufacturer of the cleaning solvent. The data shall identify all components of the cleaning solvent and shall demonstrate that one of the approved composition definitions is met.

(b) *Vapor pressure determination.* The composite vapor pressure of hand-wipe cleaning solvents used in a cleaning operation subject to this subpart shall be determined as follows:

(1) For single-component hand-wipe cleaning solvents, the vapor pressure shall be determined using MSDS or other manufacturer's data, standard engineering reference texts, or other equivalent methods.

(2) The composite vapor pressure of a blended hand-wipe solvent shall be determined by quantifying the amount of each organic compound in the blend using manufacturer's supplied data or a gas chromatographic analysis in accordance with ASTM E 260–91 or

96 (incorporated by reference—see §63.14 of Subpart A of this part) and by calculating the composite vapor pressure of the solvent by summing the partial pressures of each component. The vapor pressure of each component shall be determined using manufacturer's data, standard engineering reference texts, or other equivalent methods. The following equation shall be used to determine the composite vapor pressure:

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

where:

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

W_w=Weight of water, grams.

W_e=Weight of non-HAP, nonVOC compound, grams.

MW_i=Molecular weight of the "i"th VOC compound, g/g-mole.

MW_w=Molecular weight of water, g/g-mole.

MW_e=Molecular weight of exempt compound, g/g-mole.

PP_c=VOC composite partial pressure at 20 °C, mm Hg.

VP_i=Vapor pressure of the "i"th VOC compound at 20 °C, mm Hg.

(c) *Organic HAP content level determination—compliant primers and topcoats.* For those uncontrolled primers and topcoats complying with the primer and topcoat organic HAP content limits specified in §63.745(c) without being averaged, the following procedures shall be used to determine the mass of organic HAP emitted per volume of coating (less water) as applied.

(1) For coatings that contain no exempt solvents, determine the total organic HAP content using manufacturer's supplied data or Method 24 of 40 CFR part 60, appendix A, to determine the VOC content. The VOC content shall be used as a surrogate for total HAP content for coatings that contain no exempt solvent. If there is a discrepancy between the manufacturer's formulation data and the results of the Method 24 analysis, compliance shall be based on the results from the Method 24 analysis.

When Method 24 is used to determine the VOC content of water-reducible coatings, the precision adjustment factors in Reference Method 24 shall be used. If the adjusted analytical VOC content is less than the formulation solvent content, then the analytical VOC content should be set equal to the formulation solvent content.

(2) For each coating formulation as applied, determine the organic HAP weight fraction, water weight fraction (if applicable), and density from manufacturer's data. If these values cannot be determined using the manufacturer's data, the owner or operator shall submit an alternative procedure for determining their values for approval by the Administrator. Recalculation is required only when a change occurs in the coating formulation.

(3) For each coating as applied, calculate the mass of organic HAP emitted per volume of coating (lb/gal) less water as applied using equations 1, 2, and 3:

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

where:

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

D_{ci}=density (lb of coating per gal of coating) of coating i.

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

D_w=density of water, 8.33 lb/gal.

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

where:

M_{Hi}=mass (lb) of organic HAP in one gal of coating i.

D_{ci}=density (lb of coating per gal of coating) of coating i.

W_{Hi}=weight fraction (expressed as a decimal) of organic HAP in coating i.

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

where:

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

M_{Hi}=mass (lb) of organic HAP in one gal of coating i.

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

(d) *Organic HAP content level determination—averaged primers and topcoats.* For those uncontrolled primers and topcoats that are averaged together in order to comply with the primer and topcoat organic HAP content limits specified in §63.745(c), the following procedure shall be used to determine the monthly volume-weighted average mass of organic HAP emitted per volume of coating (less water) as applied, unless the permitting agency specifies a shorter averaging period as part of an ambient ozone control program.

(1)(i) Determine the total organic HAP weight fraction as applied of each coating. If any ingredients, including diluent solvent, are added to a coating prior to its application, the organic HAP weight fraction of the coating shall be determined at a time and location in the process after all ingredients have been added.

(ii) Determine the total organic HAP weight fraction of each coating as applied each month.

(A) If no changes have been made to a coating, either as supplied or as applied, or if a change has been made that has a minimal effect on the organic HAP content of the coating, the value previously determined may continue to be used until a change in formulation has been made by either the manufacturer or the user.

(B) If a change in formulation or a change in the ingredients added to the coating takes place, including the ratio of coating to diluent solvent, prior to its application, either of which results in a more than minimal effect on the organic HAP content of the coating, the total organic HAP weight fraction of the coating shall be redetermined.

(iii) Manufacturer's formulation data may be used to determine the total organic HAP content of each coating and any ingredients added to the coating prior to its application. If the total organic HAP content cannot be determined using the manufacturer's data, the owner or operator shall submit an alternative procedure for determining the total organic HAP weight fraction for approval by the Administrator.

(2)(i) Determine the volume both in total gallons as applied and in total gallons (less water) as applied of each coating. If any ingredients, including diluent solvents, are added prior to its application, the volume of each coating shall be determined at a time and location in the process after all ingredients (including any diluent solvent) have been added.

(ii) Determine the volume of each coating (less water) as applied each month, unless the permitting agency specifies a shorter period as part of an ambient ozone control program.

(iii) The volume applied may be determined from company records.

(3)(i) Determine the density of each coating as applied. If any ingredients, including diluent solvent, are added to a coating prior to its application, the density of the coating shall be determined at a time and location in the process after all ingredients have been added.

(ii) Determine the density of each coating as applied each month, unless the permitting agency specifies a shorter period as part of an ambient ozone control program.

(A) If no changes have been made to a coating, either as supplied or as applied, or if a change has been made that has a minimal effect on the density of the coating, then the value previously determined may continue to be used until a change in formulation has been made by either the manufacturer or the user.

(B) If a change in formulation or a change in the ingredients added to the coating takes place, including the ratio of coating to diluent solvent, prior to its application, either of which results in a more than minimal effect on the density of the coating, then the density of the coating shall be redetermined.

(iii) The density may be determined from company records, including manufacturer's data sheets. If the density of the coating cannot be determined using the company's records, including the manufacturer's data, then the owner or operator shall submit an alternative procedure for determining the density for approval by the Administrator.

(4) Calculate the total volume in gallons as applied (less water) by summing the individual volumes of each coating (less water) as applied, which were determined under paragraph (d)(2) of this section.

(5) Calculate the volume-weighted average mass of organic HAP in coatings emitted per unit volume (lb/gal) of coating (less water) as applied during each 30-day period using equation 4:

$$H_a = \frac{\sum_{i=1}^{n} W_{Hi} D_{ci} V_{ci}}{C_{av}} \qquad Eq.\ 4$$

where:

H_a=volume-weighted average mass of organic HAP emitted per unit volume of coating (lb/gal) (less water) as applied during each 30-day period for those coatings being averaged.

n=number of coatings being averaged.

W_{Hi}=weight fraction (expressed as a decimal) of organic HAP in coating i as applied that is being averaged during each 30-day period.

D_{ci}=density (lb of coating per gal of coating) of coating i as applied that is being averaged during each 30-day period.

V_{ci}=volume (gal) of coating i as applied that is being averaged during the 30-day period.

C_{lw}=total volume (gal) of all coatings (less water) as applied that are being averaged during each 30-day period.

(e) *VOC content level determination—compliant primers and topcoats.* For those uncontrolled primers and topcoats complying with the primer and topcoat VOC content levels specified in §63.745(c) without being averaged, the following procedure shall be used to determine the mass of VOC emitted per volume of coating (less water and exempt solvents) as applied.

(1) Determine the VOC content of each formulation (less water and exempt solvents) as applied using manufacturer's supplied data or Method 24 of 40 CFR part 60, appendix A, to determine the VOC content. The VOC content shall be used as a surrogate for total HAP content for coatings that contain no exempt solvent. If there is a discrepancy between the manufacturer's formulation data and the results of the Method 24 analysis, compliance shall be based on the results from the Method 24 analysis.

When Method 24 is used to determine the VOC content of water-reducible coatings, the precision adjustment factors in Reference Method 24 shall be used. If the adjusted analytical VOC content is less than the formulation solvent content, then the analytical VOC content should be set equal to the formulation solvent content.

(2) For each coating applied, calculate the mass of VOC emitted per volume of coating (lb/gal) (less water and exempt solvents) as applied using equations 5, 6, and 7:

$$V_{wi} = \frac{D_{ci} W_{wi}}{D_w} \qquad Eq.\ 5$$

where:

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

D_{ci}=density (lb of coating per gal of coating) of coating i.

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

D_w=density of water, 8.33 lb/gal.

$$M_{Vi} = D_{ci} W_{Vi} \qquad Eq.\ 6$$

where:

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

D_{ci}=density (lb of coating per gal of coating) of coating i.

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

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

where:

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

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

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

V_{Xi}=volume (gal) of exempt solvents in one gal of coating i.

(3)(i) If the VOC content is found to be different when EPA Method 24 is used during an enforcement inspection from that used by the owner or operator in calculating G_a, compliance shall be based, except as provided in paragraph (e)(3)(ii) of this section, upon the VOC content obtained using EPA Method 24.

(ii) If the VOC content of a coating obtained using Method 24 would indicate noncompliance as determined under either §63.749 (d)(3)(i) or (d)(4)(i), an owner or operator may elect to average the coating with other uncontrolled coatings and (re)calculate G_i (using the procedure specified in paragraph (f) of this section), provided appropriate and sufficient records were maintained for all coatings included in the average (re)calculation. The (re)calculated value of G_i (G_a in paragraph (f)) for the averaged coatings shall then be used to determine compliance.

(f) *VOC content level determination—averaged primers and topcoats.* For those uncontrolled primers and topcoats that are averaged within their respective coating category in order to comply with the primer and topcoat VOC content limits specified in §63.745 (c)(2) and (c)(4), the following procedure shall be used to determine the monthly volume-weighted average mass of VOC emitted per volume of coating (less water and exempt solvents) as applied, unless the permitting agency specifies a shorter averaging period as part of an ambient ozone control program.

(1)(i) Determine the VOC content (lb/gal) as applied of each coating. If any ingredients, including diluent solvent, are added to a coating prior to its application, the VOC content of the coating shall be determined at a time and location in the process after all ingredients have been added.

(ii) Determine the VOC content of each coating as applied each month, unless the permitting agency specifies a shorter period as part of an ambient ozone control program.

(A) If no changes have been made to a coating, either as supplied or as applied, or if a change has been made that has a minimal effect on the VOC content of the coating, the

value previously determined may continue to be used until a change in formulation has been made by either the manufacturer or the user.

(B) If a change in formulation or a change in the ingredients added to the coating takes place, including the ratio of coating to diluent solvent, prior to its application, either of which results in a more than minimal effect on the VOC content of the coating, the VOC content of the coating shall be redetermined.

(iii) Determine the VOC content of each primer and topcoat formulation (less water and exempt solvents) as applied using EPA Method 24 or from manufacturer's data.

(2)(i) Determine the volume both in total gallons as applied and in total gallons (less water and exempt solvents) as applied of each coating. If any ingredients, including diluent solvents, are added prior to its application, the volume of each coating shall be determined at a time and location in the process after all ingredients (including any diluent solvent) have been added.

(ii) Determine the volume of each coating (less water and exempt solvents) as applied each day.

(iii) The volume applied may be determined from company records.

(3) Calculate the total volume in gallons (less water and exempt solvents) as applied by summing the individual volumes of each coating (less water and exempt solvents) as applied, which were determined under paragraph (f)(2) of this section.

(4) Calculate the volume-weighted average mass of VOC emitted per unit volume (lb/gal) of coating (less water and exempt solvents) as applied for each coating category during each 30-day period using equation 8:

$$G_a = \frac{\sum_{i=1}^{n} (VOC)_{ci} V_{ci}}{C_{lwes}} \qquad Eq.\ 8$$

where:

G_a=volume weighted average mass of VOC per unit volume of coating (lb/gal) (less water and exempt solvents) as applied during each 30-day period for those coatings being averaged.

n=number of coatings being averaged.

$(VOC)_{ci}$=VOC content (lb/gal) of coating i (less water and exempt solvents) as applied (as determined using the procedures specified in paragraph (f)(1) of this section) that is being averaged during the 30-day period.

V_{ci}=volume (gal) of coating i (less water and exempt solvents) as applied that is being averaged during the 30-day period.

C_{lwes}=total volume (gal) of all coatings (less water and exempt solvents) as applied during each 30-day period for those coatings being averaged.

(5)(i) If the VOC content is found to be different when EPA Method 24 is used during an enforcement inspection from that used by the owner or operator in calculating G_a, recalculation of G_a is required using the new value. If more than one coating is involved, the recalculation shall be made once using all of the new values.

(ii) If recalculation is required, an owner or operator may elect to include in the recalculation of G_a uncontrolled coatings that were not previously included provided appropriate and sufficient records were maintained for these other coatings to allow daily recalculations.

(iii) The recalculated value of G_a under either paragraph (f)(5)(i) or (f)(5)(ii) of this section shall be used to determine compliance.

(g) *Overall VOC and/or organic HAP control efficiency—carbon adsorber.* Each owner or operator subject to the requirements of §63.745(d), §63.746(c), or §63.747(d) shall demonstrate initial compliance with the requirements of this subpart by following the procedures of paragraph (g)(1), (2), (3), (4), or (5) as applicable and paragraphs (6), (7), and (8) of this section. When an initial compliance demonstration is required by this subpart, the procedures in paragraphs (g)(9) through (g)(14) of this section shall be used in determining initial compliance with the provisions of this subpart.

(1) To demonstrate initial and continuous compliance with §63.745(d), §63.746(c), or §63.747(d) when emissions are controlled by a dedicated solvent recovery device, each owner or operator of the affected operation may perform a liquid-liquid HAP or VOC material balance over rolling 7- to 30-day periods in lieu of demonstrating compliance through the methods in paragraph (g)(2), (g)(3), or (g)(4) of this section. Results of the material balance calculations performed to demonstrate initial compliance shall be submitted to the Administrator with the notification of compliance status required by §63.9(h) and by §63.753 (c)(1)(iv), (d)(3)(i), and (e)(3). When demonstrating compliance by this procedure, §63.7(e)(3) of subpart A does not apply. The amount of liquid HAP or VOC applied and recovered shall be determined as discussed in paragraph (g)(1)(iii) of this section. The overall HAP or VOC emission reduction (R) is calculated using equation 9:

$$R = \frac{M_r}{\sum_{i=1}^{n} [W_{oi} M_{oi} - RS_i]} \times 100 \qquad Eq. 9$$

(i) The value of RS_i is zero unless the owner or operator submits the following information to the Administrator for approval of a measured RS_i value that is greater than zero:

(A) Measurement techniques; and

(B) Documentation that the measured value of RS_i exceeds zero.

(ii) The measurement techniques of paragraph (g)(1)(i)(A) of this section shall be submitted to the Administrator for approval with the notification of performance test required under §63.7(b).

(iii) Each owner or operator demonstrating compliance by the test method described in paragraph (g)(1) of this section shall:

(A) Measure the amount of coating or stripper as applied;

(B) Determine the VOC or HAP content of all coating and stripper applied using the test method specified in §63.750(c) (1) through (3) or (e) (1) and (2) of this section;

(C) Install, calibrate, maintain, and operate, according to the manufacturer's specifications, a device that indicates the amount of HAP or VOC recovered by the solvent recovery device over rolling 7- to 30-day periods; the device shall be certified by the manufacturer to be accurate to within ±2.0 percent, and this certification shall be kept on record;

(D) Measure the amount of HAP or VOC recovered; and

(E) Calculate the overall HAP or VOC emission reduction (R) for rolling 7- to 30-day periods using equation 9.

(F) Compliance is demonstrated if the value of R is equal to or greater than the overall HAP control efficiencies required by §63.745(d), §63.746(c), or §63.747(d).

(2) To demonstrate initial compliance with §63.745(d), §63.746(c), or §63.747(d) when affected HAP emission points are controlled by an emission control device other than a fixed-bed carbon adsorption system with individual exhaust stacks for each carbon adsorber vessel, each owner or operator of an affected source shall perform a gaseous emission test using the following procedures.

(i) Construct the overall HAP emission reduction system so that all volumetric flow rates and total HAP or VOC emissions can be accurately determined by the applicable test methods and procedures specified in §63.750(g) (9) through (14).

(ii) Determine capture efficiency from the HAP emission points by capturing, venting, and measuring all HAP emissions from the HAP emission points. During a performance

test, the owner or operator of affected HAP emission points located in an area with other gaseous emission sources not affected by this subpart shall isolate the affected HAP emission points from all other gaseous emission points by one of the following methods:

(A) Build a temporary total enclosure around the affected HAP emission point(s); or

(B) Shut down all gaseous emission points not affected by this subpart and continue to exhaust fugitive emissions from the affected HAP emission points through any building ventilation system and other room exhausts such as drying ovens. All ventilation air must be vented through stacks suitable for testing.

(iii) Operate the emission control device with all affected HAP emission points connected and operating.

(iv) Determine the efficiency (E) of the control device using equation 10:

(v) Determine the efficiency (F) of the capture system using equation 11:

$$E = \frac{\sum_{i=1}^{N} Q_{bi} C_{bi} - \sum_{j=1}^{P} Q_{aj} C_{aj}}{\sum_{i=1}^{N} Q_{bi} C_{bi}} \qquad Eq. 10$$

$$F = \frac{\sum_{i=1}^{N} Q_{di} C_{di}}{\sum_{i=1}^{N} Q_{di} C_{di} + \sum_{k=1}^{P} Q_{fk} C_{fk}} \qquad Eq. 11$$

(vi) For each HAP emission point subject to §63.745(d), §63.746(c), or §63.747(d), compliance is demonstrated if the product of (E) × (F) is equal to or greater than the overall HAP control efficiencies required under §63.745(d), §63.746(c), or §63.747(d).

(3) To demonstrate compliance with §63.745(d), §63.746(c), or §63.747(d) when affected HAP emission points are controlled by a fixed-bed carbon adsorption system with individual exhaust stacks for each carbon adsorber vessel, each owner or operator of an affected source shall perform a gaseous emission test using the following procedures:

(i) Construct the overall HAP emission reduction system so that each volumetric flow rate and the total HAP emissions can be accurately determined by the applicable test methods and procedures specified in §63.750(g) (9) through (14);

(ii) Assure that all HAP emissions from the affected HAP emission point(s) are segregated from gaseous emission points not affected by this subpart and that the

emissions can be captured for measurement, as described in paragraphs (g)(2)(ii) (A) and (B) of this section;

(iii) Operate the emission control device with all affected HAP emission points connected and operating;

(iv) Determine the efficiency (H_v) of each individual carbon adsorber vessel (v) using equation 12:

$$H_v = \frac{Q_{gv} C_{gv} - Q_{hv} C_{hv}}{Q_{gv} C_{gv}} \qquad Eq. 12$$

(v) Determine the efficiency of the carbon adsorption system (H_{sys}) by computing the average efficiency of the individual carbon adsorber vessels as weighted by the volumetric flow rate (Q_{hv}) of each individual carbon adsorber vessel (v) using equation 13:

$$H_{sys} = \frac{\sum_{v=1}^{e} H_v Q_{hv}}{\sum_{v=1}^{e} Q_{hv}} \qquad Eq. 13$$

(vi) Determine the efficiency (F) of the capture system using equation 11.

(vii) For each HAP emission point subject to §63.745(d), §63.746(c), or §63.747(d), compliance is demonstrated if the product of (H_{sys}) × (F) is equal to or greater than the overall HAP control efficiency required by §63.745(d), §63.746(c), or §63.747(d).

(4) An alternative method of demonstrating compliance with §63.745(d), §63.746(c), or §63.747(d) is the installation of a total enclosure around the affected HAP emission point(s) and the ventilation of all HAP emissions from the total enclosure to a control device with the efficiency specified in paragraph (g)(4)(iii) of this section. If this method is selected, the compliance test methods described in paragraphs (g)(1), (g)(2), and (g)(3) of this section are not required. Instead, each owner or operator of an affected source shall:

(i) Demonstrate that a total enclosure is installed. An enclosure that meets the requirements in paragraphs (g)(4)(i) (A) through (D) of this section shall be considered a total enclosure. The owner or operator of an enclosure that does not meet these requirements may apply to the Administrator for approval of the enclosure as a total enclosure on a case-by-case basis. The enclosure shall be considered a total enclosure if it is demonstrated to the satisfaction of the Administrator that all HAP emissions from the affected HAP emission point(s) are contained and vented to the control device. The requirements for automatic approval are as follows:

(A) The total area of all natural draft openings shall not exceed 5% of the total surface area of the total enclosure's walls, floor, and ceiling;

(B) All sources of emissions within the enclosure shall be a minimum of four equivalent diameters away from each natural draft opening;

(C) The average inward face velocity (FV) across all natural draft openings shall be a minimum of 3,600 meters per hour as determined by the following procedures:

(*1*) All forced makeup air ducts and all exhaust ducts are constructed so that the volumetric flow rate in each can be accurately determined by the test methods and procedures specified in §63.750(g) (10) and (11); volumetric flow rates shall be calculated without the adjustment normally made for moisture content; and

(*2*) Determine FV by equation 14:

$$FV = \frac{\sum_{j=1}^{n} Q_{out\,j} - \sum_{i=1}^{p} Q_{in\,i}}{\sum_{k=1}^{q} A_k} \qquad Eq.\ 14$$

(D) The air passing through all natural draft openings shall flow into the enclosure continuously. If FV is less than or equal to 9,000 meters per hour, the continuous inward flow of air shall be verified by continuous observation using smoke tubes, streamers, tracer gases, or other means approved by the Administrator over the period that the volumetric flow rate tests required to determine FV are carried out. If FV is greater than 9,000 meters per hour, the direction of airflow through the natural draft openings shall be presumed to be inward at all times without verification.

(ii) Determine the control device efficiency using equation 10 or equations 12 and 13, as applicable, and the test methods and procedures specified in §63.750(g) (9) through (14).

(iii) Compliance shall be achieved if the installation of a total enclosure is demonstrated and the value of E determined from equation 10 (or the value of H_{sys} determined from equations 12 and 13, as applicable) is equal to or greater than the overall HAP control efficiencies required under §63.745(d), §63.746(c), or §63.747(d).

(5) When nonregenerative carbon adsorbers are used to comply with §63.745(d), §63.746(c), or §63.747(d), the owner or operator may conduct a design evaluation to demonstrate initial compliance in lieu of following the compliance test procedures of paragraphs (g)(1), (2), (3), and (4) of this section. The design evaluation shall consider the vent stream composition, component concentrations, flow rate, relative humidity, and temperature, and shall establish the design exhaust vent stream organic compound concentration level, capacity of the carbon bed, type and working capacity of activated

carbon used for the carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and the emission point operating schedule.

(6)(i) To demonstrate initial compliance with §63.745(d), §63.746(c), or §63.747(d) when hard piping or ductwork is used to direct VOC and HAP emissions from a VOC and HAP source to the control device, each owner or operator shall demonstrate upon inspection that the criteria of paragraph (g)(6)(i)(A) and paragraph (g)(6)(i) (B) or (C) of this section VR/FD are met.

(A) The equipment shall be vented to a control device.

(B) The control device efficiency (E or H_{sys}, as applicable) determined using equation 10 or equations 12 and 13, respectively, and the test methods and procedures specified in §63.750(g) (9) through (14), shall be equal to or greater than the overall HAP control efficiency required by §63.745(d), §63.746(c), or §63.747(d).

(C) When a nonregenerative carbon adsorber is used, the ductwork from the affected emission point(s) shall be vented to the control device and the carbon adsorber shall be demonstrated, through the procedures of §63.750(g) (1), (2), (3), (4), or (5), to meet the requirements of §63.745(d), §63.746(c), or §63.747(d).

(7) Startups and shutdowns are normal operation for this source category. Emissions from these activities are to be included when determining if the standards specified in §63.745(d), §63.746(c), or §63.747(d) are being attained.

(8) An owner or operator who uses compliance techniques other than those specified in this subpart shall submit a description of those compliance procedures, subject to the Administrator's approval, in accordance with §63.7(f) of subpart A.

(9) Either EPA Method 18 or EPA Method 25A of appendix A of part 60, as appropriate to the conditions at the site, shall be used to determine VOC and HAP concentration of air exhaust streams as required by §63.750(g) (1) through (6). The owner or operator shall submit notice of the intended test method to the Administrator for approval along with the notification of the performance test required under §63.7(b). Method selection shall be based on consideration of the diversity of organic species present and their total concentration and on consideration of the potential presence of interfering gases. Except as indicated in paragraphs (g)(9) (i) and (ii) of this section, the test shall consist of three separate runs, each lasting a minimum of 30 minutes.

(i) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with a common exhaust stack for all the individual carbon adsorber vessels pursuant to paragraph (g) (2) or (4) of this section, the test shall consist of three separate runs, each coinciding with one or more complete sequences through the adsorption cycles of all of the individual carbon adsorber vessels.

(ii) When either EPA Method 18 or EPA Method 25A is to be used in the determination of the efficiency of a fixed-bed carbon adsorption system with individual exhaust stacks for each carbon adsorber vessel pursuant to §63.750(g) (3) or (4), each carbon adsorber vessel shall be tested individually. The test for each carbon adsorber vessel shall consist of three separate runs. Each run shall coincide with one or more complete adsorption cycles.

(10) EPA Method 1 or 1A of appendix A of part 60 is used for sample and velocity traverses.

(11) EPA Method 2, 2A, 2C, or 2D of appendix A of part 60 is used for velocity and volumetric flow rates.

(12) EPA Method 3 of appendix A of part 60 is used for gas analysis.

(13) EPA Method 4 of appendix A of part 60 is used for stack gas moisture.

(14) EPA Methods 2, 2A, 2C, 2D, 3, and 4 shall be performed, as applicable, at least twice during each test period.

(h) *Overall VOC and/or organic HAP control efficiency—control devices other than carbon adsorbers.* Calculate the overall control efficiency of a control system with a control device other than a carbon adsorber using the following procedure.

(1) Calculate the overall control efficiency using equation 15:

$$E_k = R_k F_k \qquad Eq.15$$

where:

E_k=overall VOC and/or organic HAP control efficiency (expressed as a decimal) of control system k.

R_k=destruction or removal efficiency (expressed as a decimal) of total organic compounds or total organic HAP for control device k as determined under paragraph (h)(2) of this section.

F_k=capture efficiency (expressed as a decimal) of capture system k as determined under paragraph (h)(3) of this section.

(2) The organic HAP destruction or removal efficiency R_k of a control device other than a carbon adsorber shall be determined using the procedures described below. The destruction efficiency may be measured as either total organic HAP or as TOC minus methane and ethane according to these procedures.

(i) Use Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate, to select the sampling sites.

(ii) Determine the gas volumetric flow rate using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate.

(iii) Use Method 18 of 40 CFR part 60, appendix A, to measure either TOC minus methane and ethane or total organic HAP. Alternatively, any other method or data that have been validated according to the applicable procedures in Method 301 of this part may be used.

(iv) Use the following procedure to calculate the destruction or removal efficiency:

(A) The destruction or removal efficiency test shall consist of three runs. The minimum sampling time for each run shall be 1 hour in which either an integrated sample or a minimum of four grab samples shall be taken. If grab sampling is used, the samples shall be taken at approximately equal intervals in time such as 15-minute intervals during the run.

(B) Calculate the mass rate of either TOC (minus methane and ethane) or total organic HAP (E_i, E_o using equations 16 and 17:

$$E_i = K_2 \left(\sum_{j=1}^{n} C_{ij} M_{ij} \right) Q_i \qquad Eq. 16$$

$$E_o = K_2 \left(\sum_{j=1}^{n} C_{oj} M_{oj} \right) Q_o \qquad Eq. 17$$

where:

E_i, E_o=mass rate of TOC (minus methane and ethane) or total organic HAP at the inlet and outlet of the control device, respectively, dry basis, kg/hr.

K_2=constant, 2.494×10^{-6} (parts per million)$^{-1}$ (gram-mole per standard cubic meter) (kilogram/gram) (minute/hour), where standard temperature for (gram-mole per standard cubic meter) is 20 °C.

n=number of sample components in the gas stream.

C_{ij}, C_{oj}=concentration of sample component j of the gas stream at the inlet and outlet of the control device, respectively, dry basis, parts per million by volume.

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

Q_i, Q_o=flow rate of gas stream at the inlet and outlet of the control device, respectively, dry standard cubic meter per minute.

(*1*) Where the mass rate of TOC is being calculated, all organic compounds (minus methane and ethane) measured by EPA Method 18 shall be summed using equation 16 in paragraph (h)(2)(iv)(B) of this section.

(2) Where the mass rate of total organic HAP is being calculated, only the organic HAP species shall be summed using equation 17 in paragraph (h)(2)(iv)(B) of this section. The list of organic HAP is provided in §63.104 of subpart F of this part.

(C) Calculate the destruction or removal efficiency for TOC (minus methane and ethane) or total organic HAP using equation 18:

$$R = \frac{E_i - E_o}{E_i} \times 100 \qquad Eq.\ 18$$

where:

R=destruction or removal efficiency of control device, percent.

E_i=mass rate of TOC (minus methane and ethane) or total organic HAP at the inlet to the control device as calculated under paragraph (h)(2)(iv)(B) of this section, kg TOC per hour or kg organic HAP per hour.

E_o=mass rate of TOC (minus methane and ethane) or total organic HAP at the outlet of the control device, as calculated under paragraph (h)(2)(iv)(B) of this section, kg TOC per hour or kg organic HAP per hour.

(3) Determine the capture efficiency F_k of each capture system to which organic HAP and VOC emissions from coating operations are vented. The capture efficiency value shall be determined using Procedure T—Criteria for and Verification of a Permanent or Temporary Total Enclosure as found in appendix B to §52.741 of part 52 of this chapter for total enclosures, and the capture efficiency protocol specified in §52.741(a)(4)(iii) of part 52 of this chapter for all other enclosures.

(i)(1) *Alternative application method—primers and topcoats.* Each owner or operator seeking to use an alternative application method (as allowed in §63.745(f)(1)(ix)) in complying with the standards for primers and topcoats shall use the procedures specified in paragraphs (i)(2)(i) and (i)(2)(ii) or (i)(2)(iii) of this section to determine the organic HAP and VOC emission levels of the alternative application technique as compared to either HVLP or electrostatic spray application methods.

(2)(i) For the process or processes for which the alternative application method is to be used, the total organic HAP and VOC emissions shall be determined for an initial 30-day period, the period of time required to apply coating to five completely assembled aircraft,

or a time period approved by the permitting agency. During this initial period, only HVLP or electrostatic spray application methods shall be used. The emissions shall be determined based on the volumes, organic HAP contents (less water), and VOC contents (less water and exempt solvents) of the coatings as applied.

(ii) Upon implementation of the alternative application method, use the alternative application method in production on actual production parts or assemblies for a period of time sufficient to coat an equivalent amount of parts and assemblies with coatings identical to those used in the initial 30-day period. The actual organic HAP and VOC emissions shall be calculated for this post-implementation period.

(iii) Test the proposed application method against either HVLP or electrostatic spray application methods in a laboratory or pilot production area, using parts and coatings representative of the process(es) where the alternative method is to be used. The laboratory test will use the same part configuration(s) and the same number of parts for both the proposed method and the HVLP or electrostatic spray application methods.

(iv) Whenever the approach in either paragraph (i)(2)(ii) or (i)(2)(iii) of this section is used, the owner or operator shall calculate both the organic HAP and VOC emission reduction using equation:

$$P = \frac{E_b - E_a}{E_b} \times 100 \qquad Eq.\ 19$$

where:

P=organic HAP or VOC emission reduction, percent.

E_b=organic HAP or VOC emissions, in pounds, before the alternative application technique was implemented, as determined under paragraph (i)(2)(i) of this section.

E_a=organic HAP of VOC emissions, in pounds, after the alternative application technique was implemented, as determined under paragraph (i)(2)(ii) of this section.

(3) Each owner or operator seeking to demonstrate that an alternative application method achieves emission reductions equivalent to HVLP or electrostatic spray application methods shall comply with the following:

(i) Each coating shall be applied such that the dried film thickness is within the range specified by the applicable specification(s) for the aerospace vehicle or component being coated.

(ii) If no such dried film thickness specification(s) exists, the owner or operator shall ensure that the dried film thickness applied during the initial 30-day period is equivalent to the dried film thickness applied during the alternative application method test period for similar aerospace vehicles or components.

(iii) Failure to comply with these dried film thickness requirements shall invalidate the test results obtained under paragraph (i)(2)(i) of this section.

(j) *Spot stripping and decal removal.* Each owner or operator seeking to comply with §63.746(b)(3) shall determine the volume of organic HAP-containing chemical strippers or alternatively the weight of organic HAP used per aircraft using the procedure specified in paragraphs (j)(1) through (j)(3) of this section.

(1) For each chemical stripper used for spot stripping and decal removal, determine for each annual period the total volume as applied or the total weight of organic HAP using the procedure specified in paragraph (d)(2) of this section.

(2) Determine the total number of aircraft for which depainting operations began during the annual period as determined from company records.

(3) Calculate the annual average volume of organic HAP-containing chemical stripper or weight of organic HAP used for spot stripping and decal removal per aircraft using equation 20 (volume) or equation 21 (weight):

$$C = \frac{\sum_{i=1}^{n} V_{si}}{A} \qquad Eq.\ 20$$

where:

C=annual average volume (gal per aircraft) of organic HAP-containing chemical stripper used for spot stripping and decal removal.

n=number of organic HAP-containing chemical strippers used in the annual period.

V_{si}=volume (gal) of organic HAP-containing chemical stripper (i) used during the annual period.

A=number of aircraft for which depainting operations began during the annual period.

$$C = \frac{\sum_{i=1}^{n}\left(V_{si} D_{hi}\left(\sum_{i=1}^{m} W_{hi}\right)\right)}{A} \qquad Eq.\ 21$$

where:

C = annual average weight (lb per aircraft) of organic HAP (chemical stripper) used for spot stripping and decal removal.

m = number of organic HAP contained in each chemical stripper, as applied.

n = number of organic HAP-containing chemical strippers used in the annual period.

W_{hi} = weight fraction (expressed as a decimal) of each organic HAP (i) contained in the chemical stripper, as applied, for each aircraft depainted.

D_{hi} = density (lb/gal) of each organic HAP-containing chemical stripper (i), used in the annual period.

V_{si} = volume (gal) of organic HAP-containing chemical stripper (i) used during the annual period.

A = number of aircraft for which depainting operations began during the annual period.

(k) *Organic HAP content level determination—compliant chemical milling maskants.* For those uncontrolled chemical milling maskants complying with the chemical milling maskant organic HAP content limit specified in §63.747(c)(1) without being averaged, the following procedures shall be used to determine the mass of organic HAP emitted per unit volume of coating (chemical milling maskant) i as applied (less water), H_i (lb/gal).

(1) For coatings that contain no exempt solvents, determine the total organic HAP content using manufacturer's supplied data or Method 24 of 40 CFR part 60, appendix A to determine the VOC content. The VOC content shall be used as a surrogate for total HAP content for coatings that contain no exempt solvent. If there is a discrepancy between the manufacturer's formulation data and the results of the Method 24 analysis, compliance shall be based on the results from the Method 24 analysis.

When Method 24 is used to determine the VOC content of water-reducible coatings, the precision adjustment factors in Reference Method 24 shall be used. If the adjusted analytical VOC content is less than the formulation solvent content, then the analytical VOC content should be set equal to the formulation solvent content.

(2) [Reserved]

(l) *Organic HAP content level determination—averaged chemical milling maskants.* For those uncontrolled chemical milling maskants that are averaged together in order to comply with the chemical milling maskant organic HAP content level specified in §63.747(c)(1), the procedure specified in paragraphs (l)(1) through (l)(4) of this section shall be used to determine the monthly volume-weighted average mass of organic HAP emitted per volume of chemical milling maskant (less water) as applied, unless the permitting agency specifies a shorter averaging period as part of an ambient ozone control program.

(1) Determine the total organic HAP weight fraction as applied of each chemical milling maskant used during each 30-day period using the procedure specified in paragraph (d)(1) of this section.

(2) Determine for each 30-day period:

(i) The individual volume of each chemical milling maskant applied in terms of total gallons (less water) (using the procedure specified in paragraph (d)(2) of this section), and

(ii) The total volume in gallons of all chemical milling maskants (less water) as applied by summing the individual volumes of each chemical milling maskant as applied (less water).

(3) Determine the density of each chemical milling maskant as applied used during each 30-day period using the procedure specified in paragraph (d)(3) of this section.

(4) Calculate the volume-weighted average mass of organic HAP emitted per unit volume (lb/gal) of chemical milling maskant (less water) as applied for all chemical milling maskants during each 30-day period using equation 22:

$$H_a = \frac{\sum_{i=1}^{n} W_{Hi} D_{mi} V_{mi}}{M_{lw}} \qquad \text{Eq. 22}$$

where:

H_a=volume-weighted mass of organic HAP emitted per unit volume of chemical milling maskants (lb/gal) (less water) as applied during each 30-day period for those chemical milling maskants being averaged.

n=number of chemical milling maskants being averaged.

W_{Hi}=weight fraction (expressed as a decimal) of organic HAP in chemical milling maskant i (less water) as applied during each 30-day period that is averaged.

D_{mi}=density (lb chemical milling maskant per gal coating) of chemical milling maskant i as applied during each 30-day period that is averaged.

V_{mi}=volume (gal) of chemical milling maskant i (less water) as applied during the 30-day period that is averaged.

M_{lw}=total volume (gal) of all chemical milling maskants (less water) as applied during each 30-day period that is averaged.

(m) *VOC content level determination—compliant chemical milling maskants.* For those uncontrolled chemical milling maskants complying with the chemical milling maskant VOC content limit specified in §63.747(c)(2) without being averaged, the procedure specified in paragraphs (m)(1) and (m)(2) of this section shall be used to determine the

mass of VOC emitted per volume of chemical milling maskant (less water and exempt solvents) as applied.

(1) Determine the mass of VOC emitted per unit volume of chemical milling maskant (lb/gal) (less water and exempt solvents) as applied, G_i, for each chemical milling maskant using the procedures specified in paragraphs (e)(1) and (e)(2) of this section.

(2)(i) If the VOC content is found to be different when EPA Method 24 is used during an enforcement inspection from that used by the owner or operator in calculating G_i, compliance shall be based, except as provided in paragraph (m)(2)(ii) of this section, upon the VOC content obtained using EPA Method 24.

(ii) If the VOC content of a chemical milling maskant obtained using EPA Method 24 would indicate noncompliance as determined under §63.749(h)(3)(i), an owner or operator may elect to average the chemical milling maskant with other uncontrolled chemical milling maskants and (re)calculate G_a (using the procedure specified in paragraph (n) of this section), provided appropriate and sufficient records were maintained for all chemical milling maskants included in the average recalculation. The (re)calculated value of G_a for the averaged chemical milling maskants shall then be used to determine compliance.

(n) *VOC content level determination—averaged chemical milling maskants.* For those uncontrolled chemical milling maskants that are averaged together in order to comply with the chemical milling maskant VOC content limit specified in §63.747(c)(2), the procedure specified in paragraphs (n)(1) through (n)(4) of this section shall be used to determine the monthly volume-weighted average mass of VOC emitted per volume of chemical milling maskant (less water and exempt solvents) as applied, unless the permitting agency specifies a shorter averaging period as part of an ambient ozone control program.

(1) Determine the VOC content of each chemical milling maskant (less water and exempt solvents) as applied used during each 30-day period using the procedure specified in paragraph (f)(1) of this section.

(2)(i) Determine the individual volume of each chemical milling maskant applied in terms of total gallons (less water and exempt solvents) using the procedure specified in paragraph (f)(2) of this section, and

(ii) Calculate the total volume in gallons of all chemical milling maskants (less water and exempt solvents) as applied by summing the individual volumes of each chemical milling maskant (less water and exempt solvents) as applied.

(3) Calculate the volume-weighted average mass of VOC emitted per unit volume (lb/gal) of chemical milling maskant (less water and exempt solvents) as applied during each 30-day period using equation 23:

$$G_a = \frac{\sum_{i=1}^{n} (VOC)_{mi} V_{mi}}{M_{lwes}} \qquad \text{Eq. 23}$$

where:

G_a=volume-weighted average mass of VOC per unit volume of chemical milling maskant (lb/gal) (less water and exempt solvents) as applied during each 30-day period for those chemical milling maskants that are averaged.

n=number of chemical milling maskants being averaged.

$(VOC)_{mi}$=VOC content (lb/gal) of chemical milling maskant i (less water and exempt solvents) as applied during the 30-day period that is averaged.

V_{mi}=volume (gal) of chemical milling maskant i (less water and exempt solvents) as applied during the 30-day period that is averaged.

M_{lwes}=total volume (gal) of all chemical milling maskants (less water and exempt solvents) as applied during each 30-day period that is averaged.

(4)(i) If the VOC content is found to be different when EPA Method 24 is used during an enforcement inspection from that used by the owner or operator in calculating G_a, recalculation of G_a is required using the new value. If more than one chemical milling maskant is involved, the recalculation shall be made once using all of the new values.

(ii) If recalculation is required, an owner or operator may elect to include in the recalculation of G_a uncontrolled chemical milling maskants that were not previously included provided appropriate and sufficient records were maintained for these other chemical milling maskants to allow daily recalculations.

(iii) The recalculated value of G_a under either paragraph (n)(4)(i) or (n)(4)(ii) of this section shall be used to determine compliance.

(o) *Inorganic HAP emissions—dry particulate filter certification requirements.* Dry particulate filters used to comply with §63.745(g)(2) or §63.746(b)(4) must be certified by the filter manufacturer or distributor, paint/depainting booth supplier, and/or the facility owner or operator using method 319 in appendix A of subpart A of this part, to meet or exceed the efficiency data points found in Tables 1 and 2, or 3 and 4 of §63.745 for existing or new sources respectively.

[60 FR 45956, Sept. 1, 1996, as amended at 63 FR 15021, Mar. 27, 1998; 63 FR 46534, Sept. 1, 1998; 65 FR 62215, Oct. 17, 2000]

§ 63.751 Monitoring requirements.

(a) *Enclosed spray gun cleaners.* Each owner or operator using an enclosed spray gun cleaner under §63.744(c)(1) shall visually inspect the seals and all other potential sources of leaks associated with each enclosed gun spray cleaner system at least once per month. Each inspection shall occur while the system is in operation.

(b) *Incinerators and carbon adsorbers—initial compliance demonstrations.* Each owner or operator subject to the requirements in this subpart must demonstrate initial compliance with the requirements of §§63.745(d), 63.746(c), and 63.747(d) of this subpart. Each owner or operator using a carbon adsorber to comply with the requirements in this subpart shall comply with the requirements specified in paragraphs (b)(1) through (7) of this section. Each owner or operator using an incinerator to comply with the requirements in this subpart shall comply with the requirements specified in paragraphs (b)(8) through (12) of this section.

(1) Except as allowed by paragraph (b)(2) or (b)(5) of this section, for each control device used to control organic HAP or VOC emissions, the owner or operator shall fulfill the requirements of paragraph (b)(1) (i) or (ii) of this section.

(i) The owner or operator shall establish as a site-specific operating parameter the outlet total HAP or VOC concentration that demonstrates compliance with §63.745(d), §63.746(c), or §63.747(d) as appropriate; or

(ii) The owner or operator shall establish as the site-specific operating parameter the control device efficiency that demonstrates compliance with §63.745(d), §63.746(c), or §63.747(d).

(iii) When a nonregenerative carbon adsorber is used to comply with §63.745(d), §63.746(c), or §63.747(d), the site-specific operating parameter value may be established as part of the design evaluation used to demonstrate initial compliance. Otherwise, the site-specific operating parameter value shall be established during the initial performance test conducted according to the procedures of §63.750(g).

(2) For each nonregenerative carbon adsorber, in lieu of meeting the requirements of §63.751(b)(1), the owner or operator may establish as the site-specific operating parameter the carbon replacement time interval, as determined by the maximum design flow rate and organic concentration in the gas stream vented to the carbon adsorption system. The carbon replacement time interval shall be established either as part of the design evaluation to demonstrate initial compliance or during the initial performance test conducted according to the procedures in §63.750(g) (1), (2), (3), or (4).

(3) Each owner or operator venting solvent HAP emissions from a source through a room, enclosure, or hood, to a control device to comply with §63.745(d), §63.746(c), or §63.747(d) shall:

(i) Submit to the Administrator with the compliance status report required by §63.9(h) of the General Provisions a plan that:

(A) Identifies the operating parameter to be monitored to ensure that the capture efficiency measured during the initial compliance test is maintained;

(B) Discusses why this parameter is appropriate for demonstrating ongoing compliance; and

(C) Identifies the specific monitoring procedures;

(ii) Set the operating parameter value, or range of values, that demonstrate compliance with §63.745(d), §63.746(c), or §63.747(d), as appropriate; and

(iii) Conduct monitoring in accordance with the plan submitted to the Administrator unless comments received from the Administrator require an alternate monitoring scheme.

(4) Owners or operators subject to §63.751(b) (1), (2), or (3) shall calculate the site-specific operating parameter value, or range of values, as the arithmetic average of the maximum and/or minimum operating parameter values, as appropriate, that demonstrate compliance with §63.745(d), §63.746(c), or §63.747(d) during the multiple test runs required by §63.750 (g)(2) and (g)(1).

(5) For each solvent recovery device used to comply with §63.745(d), §63.746(c), or §63.747(d), in lieu of meeting the requirements of paragraph (b)(1) of this section, the results of the material balance calculation conducted in accordance with §63.750(g)(1) may serve as the site-specific operating parameter that demonstrates compliance with §63.745(d), §63.746(c), or §63.747(d).

(6) *Continuous compliance monitoring.* Following the date on which the initial compliance demonstration is completed, continuous compliance with §63.745(d), §63.746(c), or §63.747(d) of this subpart shall be demonstrated as outlined in this paragraph.

(i) Each owner or operator of an affected source subject to §63.745(d), §63.746(c), or §63.747(d) of this subpart shall monitor the applicable parameters specified in paragraph (b)(6)(ii), (b)(6)(iii), or (b)(6)(iv) of this section depending on the type of control technique used.

(ii) Compliance monitoring shall be subject to the following provisions:

(A) Except as allowed by paragraph (b)(6)(iii)(A)(2) of this section, all continuous emission monitors shall comply with performance specification (PS) 8 or 9 in 40 CFR part 60, appendix B, as appropriate depending on whether VOC or HAP concentration is being measured. The requirements in appendix F of 40 CFR part 60 shall also be followed. In conducting the quarterly audits required by appendix F, owners or operators shall challenge the monitors with compounds representative of the gaseous emission stream being controlled.

(B) If the effluent from multiple emission points are combined prior to being channeled to a common control device, the owner or operator is required only to monitor the common control device, not each emission point.

(iii) Owners or operators complying with §63.745(d), §63.746(c), or §63.747(d) through the use of a control device and establishing a site-specific operating parameter in accordance with paragraph (b)(1) of this section shall fulfill the requirements of paragraph (b)(6)(iii)(A) of this section and paragraph (b)(6)(iii)(B) or (C) of this section, as appropriate.

(A) The owner or operator shall install, calibrate, operate, and maintain a continuous emission monitor.

(*1*) The continuous emission monitor shall be used to measure continuously the total HAP or VOC concentration at both the inlet and the outlet whenever HAP from coating and paint stripping operations are vented to the control device, or when continuous compliance is demonstrated through a percent efficiency calculation; or

(*2*) For owners or operators using a nonregenerative carbon adsorber, in lieu of using continuous emission monitors as specified in paragraph (b)(6)(iii)(A)(*1*) of this section, the owner or operator may use a portable monitoring device to monitor total HAP or VOC concentration at the inlet and outlet or the outlet of the carbon adsorber as appropriate.

(*a*) The monitoring device shall be calibrated, operated, and maintained in accordance with the manufacturer's specifications.

(*b*) The monitoring device shall meet the requirements of part 60, appendix A, Method 21, sections 2, 3, 4.1, 4.2, and 4.4. The calibration gas shall either be representative of the compounds to be measured or shall be methane, and shall be at a concentration associated with 125% of the expected organic compound concentration level for the carbon adsorber outlet vent.

(*c*) The probe inlet of the monitoring device shall be placed at approximately the center of the carbon adsorber outlet vent. The probe shall be held there for at least 5 minutes during which flow into the carbon adsorber is expected to occur. The maximum reading during that period shall be used as the measurement.

(B) If complying with §63.745(d), §63.746(c), or §63.747(d) through the use of a carbon adsorption system with a common exhaust stack for all of the carbon vessels, the owner or operator shall not operate the control device at an average control efficiency less than that required by §63.745(d), §63.746(c), or §63.747(d) for three consecutive adsorption cycles.

(C) If complying with §63.745(d), §63.746(c), or §63.747(d) through the use of a carbon adsorption system with individual exhaust stacks for each of the multiple carbon adsorber

vessels, the owner or operator shall not operate any carbon adsorber vessel at an average control efficiency less than that required by §63.745(d), §63.746(c), or §63.747(d) as calculated daily using a 7 to 30-day rolling average.

(D) If complying with §63.745(d), §63.746(c), or §63.747(d) through the use of a nonregenerative carbon adsorber, in lieu of the requirements of paragraph (b)(6)(iii) (B) or (C) of this section, the owner or operator may monitor the VOC or HAP concentration of the adsorber exhaust daily, at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater, or at a frequency as determined by the owner or operator and approved by the Administrator.

(iv) Owners or operators complying with §63.745(d), §63.746(c), or §63.747(d) through the use of a nonregenerative carbon adsorber and establishing a site-specific operating parameter for the carbon replacement time interval in accordance with paragraph (b)(2) shall replace the carbon in the carbon adsorber system with fresh carbon at the predetermined time interval as determined in the design evaluation.

(v) Owners or operators complying with §63.745(d), §63.746(c), or §63.747(d) by capturing emissions through a room, enclosure, or hood shall install, calibrate, operate, and maintain the instrumentation necessary to measure continuously the site-specific operating parameter established in accordance with paragraph (b)(3) of this section whenever VOC and HAP from coating and stripper operations are vented through the capture device. The capture device shall not be operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with paragraph (b)(3) of this section for any 3-hour period.

(7) Owners or operators complying with paragraph (b)(4) or (b)(5) of this section shall calculate the site-specific operating parameter value as the arithmetic average of the minimum operating parameter values that demonstrate compliance with §63.745(d)and §63.747(d) during the three test runs required by §63.750(h)(2)(iv).

(8) All temperature monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications. Every 3 months, facilities shall replace the temperature sensors or have the temperature sensors recalibrated. As an alternative, a facility may use a continuous emission monitoring system (CEMS) to verify that there has been no change in the destruction efficiency and effluent composition of the incinerator.

(9) Where an incinerator other than a catalytic incinerator is used, a thermocouple equipped with a continuous recorder shall be installed and continuously operated in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

(10) Where a catalytic incinerator is used, thermocouples, each equipped with a continuous recorder, shall be installed and continuously operated in the gas stream immediately before and after the catalyst bed.

(11) For each incinerator other than a catalytic incinerator, each owner or operator shall establish during each performance test during which compliance is demonstrated, including the initial performance test, the minimum combustion temperature as a site-specific operating parameter. This minimum combustion temperature shall be the operating parameter value that demonstrates compliance with §63.745(d) and §63.747(d).

(12) For each catalytic incinerator, each owner or operator shall establish during each performance test during which compliance is demonstrated, including the initial performance test, the minimum gas temperature upstream of the catalyst bed and the minimum gas temperature difference across the catalyst bed as site-specific operating parameters. These minimum temperatures shall be the operating parameter values that demonstrate compliance with §63.745(d) and §63.747(d).

(c) *Dry particulate filter, HEPA filter, and waterwash systems—primer and topcoat application operations.* (1) Each owner or operator using a dry particulate filter system to meet the requirements of §63.745(g)(2) shall, while primer or topcoat application operations are occurring, continuously monitor the pressure drop across the system and read and record the pressure drop once per shift following the recordkeeping requirements of §63.752(d).

(2) Each owner or operator using a conventional waterwash system to meet the requirements of §63.745(g)(2) shall, while primer or topcoat application operations are occurring, continuously monitor the water flow rate through the system and read and record the water flow rate once per shift following the recordkeeping requirements of §63.752(d). Each owner or operator using a pumpless waterwash system to meet the requirements of §63.745(g)(2) shall, while primer and topcoat application operations are occurring, measure and record the parameter(s) recommended by the booth manufacturer that indicate booth performance once per shift, following the recordkeeping requirements of §63.752(d).

(d) *Particulate filters and waterwash booths—depainting operations.* Each owner or operator using a dry particulate filter or a conventional waterwash system in accordance with the requirements of §63.746(b)(4) shall, while depainting operations are occurring, continuously monitor the pressure drop across the particulate filters or the water flow rate through the conventional waterwash system and read and record the pressure drop or the water flow rate once per shift following the recordkeeping requirements of §63.752(e). Each owner or operator using a pumpless waterwash system to meet the requirements of §63.746(b)(4) shall, while depainting operations are occurring, measure and record the parameter(s) recommended by the booth manufacturer that indicate booth performance once per shift, following the recordkeeping requirements of §63.752(e).

(e) *Use of an alternative monitoring method.* (1) *General.* Until permission to use an alternative monitoring method has been granted by the Administrator under this paragraph, the owner or operator of an affected source shall remain subject to the requirements of this section.

(2) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring methods or procedures of this section including, but not limited to, the following:

(i) Alternative monitoring requirements when the affected source is infrequently operated; or

(ii) Alternative locations for installing continuous monitoring systems when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements; or

(iii) Alternatives to the American Society for Testing and Materials (ASTM) test methods or sampling procedures specified in this section.

(3) If the Administrator finds reasonable grounds to dispute the results obtained by an alternative monitoring method, requirement, or procedure, the Administrator may require the use of a method, requirement, or procedure specified in this section. If the results of the specified and the alternative method, requirement, or procedure do not agree, the results obtained by the specified method, requirement, or procedure shall prevail.

(4)(i) *Request to use alternative monitoring method.* An owner or operator who wishes to use an alternative monitoring method shall submit an application to the Administrator as described in paragraph (e)(4)(ii) of this section. The application may be submitted at any time provided that the monitoring method is not used to demonstrate compliance with a relevant standard or other requirement. If the alternative monitoring method is to be used to demonstrate compliance with a relevant standard, the application shall be submitted not later than with the site-specific test plan required in §63.7(c) (if requested) or with the site-specific performance evaluation plan (if requested), or at least 60 days before the performance evaluation is scheduled to begin.

(ii) The application shall contain a description of the proposed alternative monitoring system and information justifying the owner's or operator's request for an alternative monitoring method, such as the technical or economic infeasibility, or the impracticality, of the affected source using the required method.

(iii) The owner or operator may submit the information required in this paragraph well in advance of the submittal dates specified in paragraph (e)(4)(i) of this section to ensure a timely review by the Administrator in order to meet the compliance demonstration date specified in this subpart.

(5) *Approval of request to use alternative monitoring method.* (i) The Administrator will notify the owner or operator of his/her intention to deny approval of the request to use an alternative monitoring method within 60 calendar days after receipt of the original request and within 60 calendar days after receipt of any supplementary information that is submitted. If notification of intent to deny approval is not received within 60 calendar days, the alternative monitoring method is to be considered approved. Before

disapproving any request to use an alternative monitoring method, the Administrator will notify the applicant of the Administrator's intent to disapprove the request together with:

(A) Notice of the information and findings on which the intended disapproval is based; and

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

(ii) If the Administrator approves the use of an alternative monitoring method for an affected source under paragraph (e)(5)(i) of this section, the owner or operator of such source shall continue to use the alternative monitoring method until approval is received from the Administrator to use another monitoring method as allowed by paragraph (e) of this section.

(f) *Reduction of monitoring data.* (1) The data may be recorded in reduced or nonreduced form (e.g., parts per million (ppm) pollutant and % O_2 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).

[60 FR 45956, Sept. 1, 1996, as amended at 63 FR 15023, Mar. 27, 1998; 63 FR 46534, Sept. 1, 1998; 65 FR 76945, Dec. 8, 2000]

§ 63.752 Recordkeeping requirements.

(a) *General.* Each owner or operator of a source subject to this subpart shall fulfill all recordkeeping requirements specified in §63.10 (a), (b), (d), and (f).

(b) *Cleaning operation.* Each owner or operator of a new or existing cleaning operation subject to this subpart shall record the information specified in paragraphs (b)(1) through (b)(5) of this section, as appropriate.

(1) The name, vapor pressure, and documentation showing the organic HAP constituents of each cleaning solvent used for affected cleaning operations at the facility.

(2) For each cleaning solvent used in hand-wipe cleaning operations that complies with the composition requirements specified in §63.744(b)(1) or for semi-aqueous cleaning solvents used for flush cleaning operations:

(i) The name of each cleaning solvent used;

(ii) All data and calculations that demonstrate that the cleaning solvent complies with one of the composition requirements; and

(iii) Annual records of the volume of each solvent used, as determined from facility purchase records or usage records.

(3) For each cleaning solvent used in hand-wipe cleaning operations that does not comply with the composition requirements in §63.744(b)(1), but does comply with the vapor pressure requirement in §63.744(b)(2):

(i) The name of each cleaning solvent used;

(ii) The composite vapor pressure of each cleaning solvent used;

(iii) All vapor pressure test results, if appropriate, data, and calculations used to determine the composite vapor pressure of each cleaning solvent; and

(iv) The amount (in gallons) of each cleaning solvent used each month at each operation.

(4) For each cleaning solvent used for the exempt hand-wipe cleaning operations specified in §63.744(e) that does not conform to the vapor pressure or composition requirements of §63.744(b):

(i) The identity and amount (in gallons) of each cleaning solvent used each month at each operation; and

(ii) A list of the processes set forth in §63.744(e) to which the cleaning operation applies.

(5) A record of all leaks from enclosed spray gun cleaners identified pursuant to §63.751(a) that includes for each leak found:

(i) Source identification;

(ii) Date leak was discovered; and

(iii) Date leak was repaired.

(c) *Primer and topcoat application operations—organic HAP and VOC.* Each owner or operator required to comply with the organic HAP and VOC content limits specified in §63.745(c) shall record the information specified in paragraphs (c)(1) through (c)(6) of this section, as appropriate.

(1) The name and VOC content as received and as applied of each primer and topcoat used at the facility.

(2) For uncontrolled primers and topcoats that meet the organic HAP and VOC content limits in §63.745(c)(1) through (c)(4) without averaging:

(i) The mass of organic HAP emitted per unit volume of coating as applied (less water) (H_i) and the mass of VOC emitted per unit volume of coating as applied (less water and exempt solvents) (G_i) for each coating formulation within each coating category used each month (as calculated using the procedures specified in §63.750(c) and (e));

(ii) All data, calculations, and test results (including EPA Method 24 results) used in determining the values of H_i and G_i; and

(iii) The volume (gal) of each coating formulation within each coating category used each month.

(3) For "low HAP content" uncontrolled primers with organic HAP content less than or equal to 250 g/l (2.1 lb/gal) less water as applied and VOC content less than or equal to 250 g/l (2.1 lb/gal) less water and exempt solvents as applied:

(i) Annual purchase records of the total volume of each primer purchased; and

(ii) All data, calculations, and test results (including EPA Method 24 results) used in determining the organic HAP and VOC content as applied. These records shall consist of the manufacturer's certification when the primer is applied as received, or the data and calculations used to determine H_i if not applied as received.

(4) For primers and topcoats complying with the organic HAP or VOC content level by averaging:

(i) The monthly volume-weighted average masses of organic HAP emitted per unit volume of coating as applied (less water) (H_a) and of VOC emitted per unit volume of coating as applied (less water and exempt solvents) (G_a) for all coatings (as determined by the procedures specified in §63.750(d) and (f)); and

(ii) All data, calculations, and test results (including EPA Method 24 results) used to determine the values of H_a and G_a.

(5) For primers and topcoats that are controlled by a control device other than a carbon adsorber:

(i) The overall control efficiency of the control system (as determined using the procedures specified in §63.750(h)) and all test results, data, and calculations used in determining the overall control efficiency;

(ii) If an incinerator other than a catalytic incinerator is used, continuous records of the firebox temperature recorded under §63.751(b)(9) and all calculated 3-hour averages of the firebox temperature; and

(iii) If a catalytic incinerator is used, continuous records of the temperature recorded under §63.751(b)(10) and all calculated 3-hour averages of the recorded temperatures.

(6) For primer and topcoats that are controlled by a carbon adsorber:

(i) The overall control efficiency of the control system (as determined using the procedures specified in §63.750(g)) and all test results, data, and calculations used in determining the overall control efficiency. The length of the rolling material balance period and all data and calculations used for determining this rolling period. The record of the certification of the accuracy of the device that measures the amount of HAP or VOC recovered; or

(ii) For nonregenerative carbon adsorbers, the overall control efficiency of the control system (as determined using the procedures specified in §63.750(g)) and all test results, data, and calculations used in determining the overall control efficiency. The record of the carbon replacement time established as the site-specific operating parameter to demonstrate compliance.

(d) *Primer and topcoat application operations—inorganic HAP emissions.* (1) Each owner or operator complying with §63.745(g) for the control of inorganic HAP emissions from primer and topcoat application operations through the use of a dry particulate filter system or a HEPA filter system shall record the pressure drop across the operating system once each shift during which coating operations occur.

(2) Each owner or operator complying with §63.745(g) through the use of a conventional waterwash system shall record the water flow rate through the operating system once each shift during which coating operations occur. Each owner or operator complying with §63.745(g) through the use of a pumpless waterwash system shall record the parameter(s) recommended by the booth manufacturer that indicate the performance of the booth once each shift during which coating operations occur.

(3) This log shall include the acceptable limit(s) of pressure drop, water flow rate, or for the pumpless waterwash booth, the booth manufacturer recommended parameter(s) that indicate the booth performance, as applicable, as specified by the filter or booth manufacturer or in locally prepared operating procedures.

(e) *Depainting operations.* Each owner or operator subject to the depainting standards specified in §63.746 shall record the information specified in paragraphs (e)(1) through (e)(7) of this section, as appropriate.

(1) *General.* For all chemical strippers used in the depainting operation:

(i) The name of each chemical stripper; and

(ii) Monthly volumes of each organic HAP containing chemical stripper used or monthly weight of organic HAP-material used for spot stripping and decal removal.

(2) For HAP-containing chemical strippers that are controlled by a carbon adsorber:

(i) The overall control efficiency of the control system (as determined using the procedures specified in §63.750(g)) and all test results, data, and calculations used in determining the overall control efficiency. The length of the rolling material balance period and all data and calculations used for determining this rolling period. The record of the certification of the accuracy of the device that measures the amount of HAP or VOC recovered; or

(ii) For nonregenerative carbon adsorbers, the overall control efficiency of the control system (as determined using the procedures specified in §63.750(g)) and all test results, data, and calculations used in determining the overall control efficiency. The record of the carbon replacement time established as the site-specific operating parameter to demonstrate compliance.

(3) For HAP-containing chemical strippers that are controlled by a control device other than a carbon adsorber:

(i) The overall control efficiency of the control system (as determined using the procedures specified in §63.750(h)) and all test results, data, and calculations used in determining the overall control efficiency;

(ii) [Reserved]

(4) For each type of aircraft depainted at the facility, a listing of the parts, subassemblies, and assemblies normally removed from the aircraft before depainting. Prototype, test model or aircraft that exist in low numbers (i.e., less than 25 aircraft of any one type) are exempt from this requirement.

(5) *Non-chemical based equipment.* If dry media blasting equipment is used to comply with the organic HAP emission limit specified in §63.746(b)(1):

(i) The names and types of non-chemical based equipment; and

(ii) For periods of malfunction,

(A) The non-chemical method or technique that malfunctioned;

(B) The date that the malfunction occurred;

(C) A description of the malfunction;

(D) The methods used to depaint aerospace vehicles during the malfunction period;

(E) The dates that these methods were begun and discontinued; and

(F) The date that the malfunction was corrected.

(6) *Spot stripping and decal removal.* For spot stripping and decal removal, the volume of organic HAP-containing chemical stripper or weight of organic HAP used, the annual average volume of organic HAP-containing chemical stripper or weight of organic HAP used per aircraft, the annual number of aircraft stripped, and all data and calculations used.

(7) *Inorganic HAP emissions.* Each owner or operator shall record the actual pressure drop across the particulate filters or the visual continuity of the water curtain and water flow rate for conventional waterwash systems once each shift in which the depainting process is in operation. For pumpless waterwash systems, the owner or operator shall record the parameter(s) recommended by the booth manufacturer that indicate the performance of the booth once per shift in which the depainting process is in operation. This log shall include the acceptable limit(s) of the pressure drop as specified by the filter manufacturer, the visual continuity of the water curtain and the water flow rate for conventional waterwash systems, or the recommended parameter(s) that indicate the booth performance for pumpless systems as specified by the booth manufacturer or in locally prepared operating procedures.

(f) *Chemical milling maskant application operations.* Each owner or operator seeking to comply with the organic HAP and VOC content limits for the chemical milling maskant application operation, as specified in §63.747(c), or the control system requirements specified in §63.747(d), shall record the information specified in paragraphs (f)(1) through (f)(4) of this section, as appropriate.

(1) For uncontrolled chemical milling maskants that meet the organic HAP or VOC content limit without averaging:

(i) The mass of organic HAP emitted per unit volume of chemical milling maskant as applied (less water) (H_i) and the mass of VOC emitted per unit volume of chemical milling maskant as applied (less water and exempt solvents) (G_i) for each chemical milling maskant formulation used each month (as determined by the procedures specified in §63.750 (k) and (m));

(ii) All data, calculations, and test results (including EPA Method 24 results) used in determining the values of H_i and G_i; and

(iii) The volume (gal) of each chemical milling maskant formulation used each month.

(2) For chemical milling maskants complying with the organic HAP or VOC content level by averaging:

(i) The monthly volume-weighted average masses of organic HAP emitted per unit volume of chemical milling maskant as applied (less water) (H_a) and of VOC emitted per unit volume of chemical milling maskant as applied (less water and exempt solvents) (G_a)

for all chemical milling maskants (as determined by the procedures specified in §63.750 (l) and (n)); and

(ii) All data, calculations, and test results (including EPA Method 24 results) used to determine the values of H_a and G_a.

(3) For chemical milling maskants that are controlled by a carbon adsorber:

(i) The overall control efficiency of the control system (as determined using the procedures specified in §63.750(g)) and all test results, data, and calculations used in determining the overall control efficiency. The length of the rolling material balance period and all data and calculations used for determining this rolling period. The record of the certification of the accuracy of the device that measures the amount of HAP or VOC recovered; or

(ii) For nonregenerative carbon adsorbers, the overall control efficiency of the control system (as determined using the procedures specified in §63.750(g)) and all test results, data, and calculations used in determining the overall control efficiency. The record of the carbon replacement time established as the site-specific operating parameter to demonstrate compliance.

(4) For chemical milling maskants that are controlled by a control device other than a carbon adsorber:

(i) The overall control efficiency of the control system (as determined using the procedures specified in §63.750(h)) and all test results, data, and calculations used in determining the overall control efficiency;

(ii) If an incinerator other than a catalytic incinerator is used, continuous records of the firebox temperature recorded under §63.751(b)(9) and all calculated 3-hour averages of the firebox temperature; and

(iii) If a catalytic incinerator is used, continuous records of the temperature recorded under §63.751(b)(10) and all calculated 3-hour averages of the recorded temperatures.

[60 FR 45956, Sept. 1, 1996, as amended at 63 FR 15023, Mar. 27, 1998; 63 FR 46534, Sept. 1, 1998]

§ 63.753 Reporting requirements.

(a)(1) Except as provided in paragraphs (a)(2) and (a)(3) of this section, each owner or operator subject to this subpart shall fulfill the requirements contained in §63.9(a) through (e) and (h) through (j), Notification requirements, and §63.10(a), (b), (d), and (f), Recordkeeping and reporting requirements, of the General Provisions, 40 CFR part 63, subpart A, and that the initial notification for existing sources required in §63.9(b)(2)

shall be submitted not later than September 1, 1997. In addition to the requirements of §63.9(h), the notification of compliance status shall include:

(i) Information detailing whether the source has operated within the specified ranges of its designated operating parameters.

(ii) For each coating line, where averaging will be used along with the types of quantities of coatings the facility expects to use in the first year of operation. Averaging scheme shall be approved by the Administrator or delegated State authority and shall be included as part of the facility's title V or part 70 permit.

(2) The initial notification for existing sources, required in §63.9(b)(2) shall be submitted no later than September 1, 1997. For the purposes of this subpart, a title V or part 70 permit application may be used in lieu of the initial notification required under §63.9(b)(2), provided the same information is contained in the permit application as required by §63.9(b)(2), and the State to which the permit application has been submitted has an approved operating permit program under part 70 of this chapter and has received delegation of authority from the EPA. Permit applications shall be submitted by the same due dates as those specified for the initial notifications.

(3) For the purposes of this subpart, the Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment to a particular time period or postmark deadline submitted under §63.9(i) within 30 calendar days of receiving sufficient information to evaluate the request, rather than 15 calendar days as provided for in §63.9(i)(3).

(b) *Cleaning operation.* Each owner or operator of a cleaning operation subject to this subpart shall submit the following information:

(1) Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:

(i) Any instance where a noncompliant cleaning solvent is used for a non-exempt hand-wipe cleaning operation;

(ii) A list of any new cleaning solvents used for hand-wipe cleaning in the previous 6 months and, as appropriate, their composite vapor pressure or notification that they comply with the composition requirements specified in §63.744(b)(1);

(iii) Any instance where a noncompliant spray gun cleaning method is used;

(iv) Any instance where a leaking enclosed spray gun cleaner remains unrepaired and in use for more than 15 days; and

(v) If the operations have been in compliance for the semiannual period, a statement that the cleaning operations have been in compliance with the applicable standards. Sources

shall also submit a statement of compliance signed by a responsible company official certifying that the facility is in compliance with all applicable requirements.

(c) *Primer and topcoat application operations.* Each owner or operator of a primer or topcoat application operation subject to this subpart shall submit the following information:

(1) Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:

(i) For primers and topcoats where compliance is not being achieved through the use of averaging or a control device, each value of H_i and G_i, as recorded under §63.752(c)(2)(i), that exceeds the applicable organic HAP or VOC content limit specified in §63.745(c);

(ii) For primers and topcoats where compliance is being achieved through the use of averaging, each value of H_a and G_a, as recorded under §63.752(c)(4)(i), that exceeds the applicable organic HAP or VOC content limit specified in §63.745(c);

(iii) If incinerators are used to comply with the standards, all periods when the 3-hour average combustion temperature(s) is (are) less than the average combustion temperature(s) established under §63.751(b) (11) or (12) during the most recent performance test during which compliance was demonstrated;

(iv) If a carbon adsorber is used;

(A) each rolling period when the overall control efficiency of the control system is calculated to be less than 81%, the initial material balance calculation, and any exceedances as demonstrated through the calculation; or,

(B) for nonregenerative carbon adsorbers, submit the design evaluation, the continuous monitoring system performance report, and any excess emissions as demonstrated through deviations of monitored values.

(v) For control devices other than an incinerator or carbon adsorber, each exceedance of the operating parameter(s) established for the control device under the initial performance test during which compliance was demonstrated;

(vi) All times when a primer or topcoat application operation was not immediately shut down when the pressure drop across a dry particulate filter or HEPA filter system, the water flow rate through a conventional waterwash system, or the recommended parameter(s) that indicate the booth performance for pumpless systems, as appropriate, was outside the limit(s) specified by the filter or booth manufacturer or in locally prepared operating procedures;

(vii) If the operations have been in compliance for the semiannual period, a statement that the operations have been in compliance with the applicable standards; and,

(2) Annual reports beginning 12 months after the date of the notification of compliance status listing the number of times the pressure drop or water flow rate for each dry filter or waterwash system, as applicable, was outside the limit(s) specified by the filter or booth manufacturer or in locally prepared operating procedures.

(d) *Depainting operation.* Each owner or operator of a depainting operation subject to this subpart shall submit the following information:

(1) Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:

(i) Any 24-hour period where organic HAP were emitted from the depainting of aerospace vehicles, other than from the exempt operations listed in §63.746 (a), (b)(3), and (b)(5).

(ii) Any new chemical strippers used at the facility during the reporting period;

(iii) The organic HAP content of these new chemical strippers;

(iv) For each chemical stripper that undergoes reformulation, its organic HAP content;

(v) Any new non-chemical depainting technique in use at the facility since the notification of compliance status or any subsequent semiannual report was filed;

(vi) For periods of malfunctions:

(A) The non-chemical method or technique that malfunctioned;

(B) The date that the malfunction occurred;

(C) A description of the malfunction;

(D) The methods used to depaint aerospace vehicles during the malfunction period;

(E) The dates that these methods were begun and discontinued; and

(F) The date that the malfunction was corrected;

(vii) All periods where a nonchemical depainting operation subject to §63.746(b)(2) and (b)(4) for the control of inorganic HAP emissions was not immediately shut down when the pressure drop, water flow rate, or recommended booth parameter(s) was outside the limit(s) specified by the filter or booth manufacturer or in locally prepared operational procedures;

(viii) A list of new and discontinued aircraft models depainted at the facility over the last 6 months and a list of the parts normally removed for depainting for each new aircraft model being depainted; and

(ix) If the depainting operation has been in compliance for the semiannual period, a statement signed by a responsible company official that the operation was in compliance with the applicable standards.

(2) Annual reports occurring every 12 months from the date of the notification of compliance status that identify:

(i) The average volume per aircraft of organic HAP-containing chemical strippers or weight of organic HAP used for spot stripping and decal removal operations if it exceeds the limits specified in §63.746(b)(3); and

(ii) The number of times the pressure drop limit(s) for each filter system or the number of times the water flow rate limit(s) for each waterwash system were outside the limit(s) specified by the filter or booth manufacturer or in locally prepared operating procedures.

(3) Where a control device is used to control organic HAP emissions, semiannual reports that identify:

(i) If a carbon adsorber is used,

(A) each rolling period when the overall control efficiency of the control system is calculated to be less than 81% for existing systems or less than 95% for new systems, the initial material balance calculation, and any exceedances as demonstrated through the calculation; or,

(B) for nonregenerative carbon adsorbers, submit the design evaluation, the continuous monitoring system performance report, and any excess emissions as demonstrated through deviations of monitored values.

(ii) For control devices other than a carbon adsorber, each exceedance of the operating parameter(s) established for the control device under the initial performance test during which compliance was demonstrated;

(iii) Descriptions of any control devices currently in use that were not listed in the notification of compliance status or any subsequent report.

(e) *Chemical milling maskant application operation.* Each owner or operator of a chemical milling maskant application operation subject to this subpart shall submit semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:

(1) For chemical milling maskants where compliance is not being achieved through the use of averaging or a control device, each value of H_i and G_i, as recorded under §63.752(f)(1)(i), that exceeds the applicable organic HAP or VOC content limit specified in §63.747(c);

(2) For chemical milling maskants where compliance is being achieved through the use of averaging, each value of H_a and G_a, as recorded under §63.752(f)(2)(i), that exceeds the applicable organic HAP or VOC content limit specified in §63.747(c);

(3) Where a control device is used,

(i) If incinerators are used to comply with the standards, all periods when the 3-hour average combustion temperature(s) is (are) less than the average combustion temperature(s) established under §63.751(b) (11) or (12) during the most recent performance test during which compliance was demonstrated;

(ii) If a carbon adsorber is used,

(A) Each rolling period when the overall control efficiency of the control system is calculated to be less than 81%, the initial material balance calculation, and any exceedances as demonstrated through the calculation; or,

(B) For nonregenerative carbon adsorbers, submit the design evaluation, the continuous monitoring system performance report, and any excess emissions as demonstrated through deviations of monitored values.

(iii) For control devices other than an incinerator or carbon adsorber, each exceedance of the operating parameter(s) established for the control device under the initial performance test during which compliance was demonstrated;

(4) All chemical milling maskants currently in use that were not listed in the notification of compliance status or any other subsequent semiannual report;

(5) Descriptions of any control devices currently in use that were not listed in the notification of compliance status or any subsequent report; and

(6) If the operations have been in compliance for the semiannual period, a statement that the chemical milling maskant application operation has been in compliance with the applicable standards.

[60 FR 45956, Sept. 1, 1996; 61 FR 4903, Feb. 9, 1996, as amended at 61 FR 66227, Dec. 17, 1996; 63 FR 15023, Mar. 27, 1998; 63 FR 46535, Sept. 1, 1998]

§§ 63.754-63.758 [Reserved]

§ 63.759 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or Tribal agency.

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

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the requirements in §§63.741, 63.743, 63.744(a)(3), (b) through (e), 63.745 through 63.748, and 63.649(a).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart.

(3) Approval of major alternatives to monitoring under §63.8(f), as defined in §63.90, and as required in this subpart.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.

[68 FR 37352, June 23, 2003]

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

Reference	Applies to affected sources in subpart GG	Comment
63.1(a)(1)	Yes	
63.1(a)(2)	Yes	
63.1(a)(3)	Yes	
63.1(a)(4)	Yes	
63.1(a)(5)	No	Reserved.
63.1(a)(6)	Yes	
63.1(a)(7)	Yes	
63.1(a)(8)	Yes	
63.1(a)(9)	No	Reserved.

63.1(a)(10)	Yes		
63.1(a)(11)	Yes		
63.1(a)(12)	Yes		
63.1(a)(13)	Yes		
63.1(a)(14)	Yes		
63.1(b)(1)	Yes		
63.1(b)(2)	Yes		
63.1(b)(3)	Yes		
63.1(c)(1)	Yes		
63.1(c)(2)	Yes	Subpart GG does not apply to area sources.	
63.1(c)(3)	No	Reserved.	
63.1(c)(4)	Yes		
63.1(c)(5)	Yes		
63.1(d)	No	Reserved.	
63.1(e)	Yes		
63.2	Yes		
63.3	Yes		
63.4(a)(1)	Yes		
63.4(a)(2)	Yes		
63.4(a)(3)	Yes		
63.4(a)(4)	No	Reserved.	
63.4(a)(5)	Yes		
63.4(b)	Yes		
63.4(c)	Yes		
63.5(a)	Yes		
63.5(b)(1)	Yes		
63.5(b)(2)	No	Reserved.	
63.5(b)(3)	Yes		
63.5(b)(4)	Yes		
63.5(b)(5)	Yes		
63.5(b)(6)	Yes		
63.5(c)	No	Reserved.	
63.5(d)(1)(i)	Yes		
63.5(d)(1)(ii)(A)-(H)	Yes		
63.5(d)(1)(ii)(I)	No	Reserved.	
63.5(d)(1)(ii)(J)	Yes		
63.5(d)(1)(iii)	Yes		
63.5(d)(2)-(4)	Yes		
63.5(e)	Yes		
63.5(f)	Yes		
63.6(a)	Yes		
63.6(b)(1)-(5)	Yes	§ 63.749(a) specifies compliance dates for new sources.	
63.6(b)(6)	No	Reserved.	

63.6(b)(7)	Yes	
63.6(c)(1)	Yes	
63.6(c)(2)	No	The standards in subpart GG are promulgated under section 112(d) of the Act.
63.6(c)(3)-(4)	No	Reserved.
63.6(c)(5)	Yes	
63.6(d)	No	Reserved.
63.6(e)	Yes	63.743(b) includes additional provisions for the operation and maintenance plan.
63.6(f)	Yes	
63.6(g)	Yes	
63.6(h)	No	The standards in subpart GG do not include opacity standards.
63.6(i)(1)-(3)	Yes	
63.6(i)(4)(i)(A)	Yes	
63.6(i)(4)(i)(B)	No	§ 63.743(a)(4) specifies that requests for extension of compliance must be submitted no later than 120 days before an affected source's compliance date.
63.6(i)(4)(ii)	No	The standards in subpart GG are promulgated under section 112(d) of the Act.
63.6(i)(5)-(12)	Yes	
63.6(i)(13)	Yes	
63.6(i)(14)	Yes	
63.6(i)(15)	No	Reserved.
63.6(i)(16)	Yes	
63.6(j)	Yes	
63.7(a)(1)	Yes	
63.7(a)(2)(i)-(vi)	Yes	
63.7(a)(2)(vii)-(viii)	No	Reserved.
63.7(a)(2)(ix)	Yes	
63.7(a)(3)	Yes	
63.7(b)	Yes	
63.7(c)	Yes	
63.7(d)	Yes	
63.7(e)	Yes	
63.7(f)	Yes	
63.7(g)(1)	Yes	
63.7(g)(2)	No	Reserved.
63.7(g)(3)	Yes	

63.7(h)	Yes		
63.8(a)(1)-(2)	Yes		
63.8(a)(3)	No	Reserved.	
63.8(a)(4)	Yes		
63.8(b)	Yes		
63.8(c)	Yes		
63.8(d)	No		
63.8(e)(1)-(4)	Yes		
63.8(e)(5)(i)	Yes		
63.8(e)(5)(ii)	No	The standards in subpart GG do not include opacity standards.	
63.8(f)(1)	Yes		
63.8(f)(2)(i)-(vii)	Yes		
63.8(f)(2)(viii)	No	The standards in subpart GG do not include opacity standards.	
63.8(f)(2)(ix)	Yes		
63.8(f)(3)-(6)	Yes		
63.8(g)	Yes		
63.9(a)	Yes		
63.9(b)(1)	Yes		
63.9(b)(2)	Yes	§ 63.753(a)(1) requires submittal of the initial notification at least 1 year prior to the compliance date; § 63.753(a)(2) allows a title V or part 70 permit application to be substituted for the initial notification in certain circumstances.	
63.9(b)(3)	Yes		
63.9(b)(4)	Yes		
63.9(b)(5)	Yes		
63.9(c)	Yes		
63.9(d)	Yes		
63.9(e)	Yes		
63.9(f)	No	The standards in subpart GG do not include opacity standards.	
63.9(g)(1)	No		
63.9(g)(2)	No	The standards in subpart GG do not include opacity standards.	
63.9(g)(3)	No		

63.9(h)(1)-(3)	Yes	§ 63.753(a)(1) also specifies additional information to be included in the notification of compliance status.
63.9(h)(4)	No	Reserved.
63.9(h)(5)-(6)	Yes	
63.9(i)	Yes	
63.9(j)	Yes	
63.10(a)	Yes	
63.10(b)	Yes	
63.10(c)(1)	No	
63.10(c)(2)-(4)	No	Reserved.
63.10(c)(5)-(8)	No	
63.10(c)(9)	No	Reserved.
63.10(c)(10)-(13)	No	
63.10(c)(14)	No	§ 63.8(d) does not apply to this subpart.
63.10(c)(15)	No	
63.10(d)(1)-(2)	Yes	
63.10(d)(3)	No	The standards in subpart GG do not include opacity standards.
63.10(d)(4)	Yes	
63.10(d)(5)	Yes	
63.(10)(e)(1)	No	
63.10(e)(2)(i)	No	
63.10(e)(2)(ii)	No	The standards in subpart GG do not include opacity standards.
63.10(e)(3)	No	
63.10(e)(4)	No	The standards in subpart GG do not include opacity standards.
63.10(f)	Yes	
63.11	Yes	
63.12	Yes	
63.13	Yes	
63.14	Yes	
63.15	Yes	

[63 FR 15024, Mar. 27, 1998]

Appendix A to Subpart GG of Part 63—Specialty Coating Definitions

Ablative coating—A coating that chars when exposed to open flame or extreme temperatures, as would occur during the failure of an engine casing or during aerodynamic heating. The ablative char surface serves as an insulative barrier, protecting adjacent components from the heat or open flame.

Adhesion promoter—A very thin coating applied to a substrate to promote wetting and form a chemical bond with the subsequently applied material.

Adhesive bonding primer—A primer applied in a thin film to aerospace components for the purpose of corrosion inhibition and increased adhesive bond strength by attachment. There are two categories of adhesive bonding primers: primers with a design cure at 250 °F or below and primers with a design cure above 250 °F.

Aerosol coating—A hand-held, pressurized, nonrefillable container that expels an adhesive or a coating in a finely divided spray when a valve on the container is depressed.

Antichafe coating—A coating applied to areas of moving aerospace components that may rub during normal operations or installation.

Bearing coating—A coating applied to an antifriction bearing, a bearing housing, or the area adjacent to such a bearing in order to facilitate bearing function or to protect base material from excessive wear. A material shall not be classified as a bearing coating if it can also be classified as a dry lubricative material or a solid film lubricant.

Bonding maskant—A temporary coating used to protect selected areas of aerospace parts from strong acid or alkaline solutions during processing for bonding.

Caulking and smoothing compounds—Semi-solid materials which are applied by hand application methods and are used to aerodynamically smooth exterior vehicle surfaces or fill cavities such as bolt hole accesses. A material shall not be classified as a caulking and smoothing compound if it can also be classified as a sealant.

Chemical agent-resistant coating (CARC)—An exterior topcoat designed to withstand exposure to chemical warfare agents or the decontaminants used on these agents.

Clear coating—A transparent coating usually applied over a colored opaque coating, metallic substrate, or placard to give improved gloss and protection to the color coat. In some cases, a clearcoat refers to any transparent coating without regard to substrate.

Commercial exterior aerodynamic structure primer—A primer used on aerodynamic components and structures that protrude from the fuselage, such as wings and attached components, control surfaces, horizontal stabilizers, vertical fins, wing-to-body fairings,

antennae, and landing gear and doors, for the purpose of extended corrosion protection and enhanced adhesion.

Commercial interior adhesive—Materials used in the bonding of passenger cabin interior components. These components must meet the FAA fireworthiness requirements.

Compatible substrate primer—Includes two categories: compatible epoxy primer and adhesive primer. *Compatible epoxy primer* is primer that is compatible with the filled elastomeric coating and is epoxy based. The compatible substrate primer is an epoxy-polyamide primer used to promote adhesion of elastomeric coatings such as impact-resistant coatings. *Adhesive primer* is a coating that (1) inhibits corrosion and serves as a primer applied to bare metal surfaces or prior to adhesive application, or (2) is applied to surfaces that can be expected to contain fuel. Fuel tank coatings are excluded from this category.

Corrosion prevention system—A coating system that provides corrosion protection by displacing water and penetrating mating surfaces, forming a protective barrier between the metal surface and moisture. Coatings containing oils or waxes are excluded from this category.

Critical use and line sealer maskant—A temporary coating, not covered under other maskant categories, used to protect selected areas of aerospace parts from strong acid or alkaline solutions such as those used in anodizing, plating, chemical milling and processing of magnesium, titanium, high-strength steel, high-precision aluminum chemical milling of deep cuts, and aluminum chemical milling of complex shapes. Materials used for repairs or to bridge gaps left by scribing operations (i.e. line sealer) are also included in this category.

Cryogenic flexible primer—A primer designed to provide corrosion resistance, flexibility, and adhesion of subsequent coating systems when exposed to loads up to and surpassing the yield point of the substrate at cryogenic temperatures (−275 °F and below).

Cryoprotective coating—A coating that insulates cryogenic or subcooled surfaces to limit propellant boil-off, maintain structural integrity of metallic structures during ascent or re-entry, and prevent ice formation.

Cyanoacrylate adhesive—A fast-setting, single component adhesive that cures at room temperature. Also known as "super glue."

Dry lubricative material—A coating consisting of lauric acid, cetyl alcohol, waxes, or other non-cross linked or resin-bound materials which act as a dry lubricant.

Electric or radiation-effect coating—A coating or coating system engineered to interact, through absorption or reflection, with specific regions of the electromagnetic energy spectrum, such as the ultraviolet, visible, infrared, or microwave regions. Uses include,

but are not limited to, lightning strike protection, electromagnetic pulse (EMP) protection, and radar avoidance. Coatings that have been designated as "classified" by the Department of Defense are exempt.

Electrostatic discharge and electromagnetic interference (EMI) coating—A coating applied to space vehicles, missiles, aircraft radomes, and helicopter blades to disperse static energy or reduce electromagnetic interference.

Elevated-temperature Skydrol-resistant commercial primer—A primer applied primarily to commercial aircraft (or commercial aircraft adapted for military use) that must withstand immersion in phosphate-ester (PE) hydraulic fluid (Skydrol 500b or equivalent) at the elevated temperature of 150 °F for 1,000 hours.

Epoxy polyamide topcoat—A coating used where harder films are required or in some areas where engraving is accomplished in camouflage colors.

Fire-resistant (interior) coating—For civilian aircraft, fire-resistant interior coatings are used on passenger cabin interior parts that are subject to the FAA fireworthiness requirements. For military aircraft, fire-resistant interior coatings are used on parts subject to the flammability requirements of MIL-STD-1630A and MIL-A-87721. For space applications, these coatings are used on parts subject to the flammability requirements of SE-R-0006 and SSP 30233.

Flexible primer—A primer that meets flexibility requirements such as those needed for adhesive bond primed fastener heads or on surfaces expected to contain fuel. The flexible coating is required because it provides a compatible, flexible substrate over bonded sheet rubber and rubber-type coatings as well as a flexible bridge between the fasteners, skin, and skin-to-skin joints on outer aircraft skins. This flexible bridge allows more topcoat flexibility around fasteners and decreases the chance of the topcoat cracking around the fasteners. The result is better corrosion resistance.

Flight test coating—A coating applied to aircraft other than missiles or single-use aircraft prior to flight testing to protect the aircraft from corrosion and to provide required marking during flight test evaluation.

Fuel tank adhesive—An adhesive used to bond components exposed to fuel and that must be compatible with fuel tank coatings.

Fuel tank coating—A coating applied to fuel tank components to inhibit corrosion and/or bacterial growth and to assure sealant adhesion in extreme environmental conditions.

High temperature coating—A coating designed to withstand temperatures of more than 350 °F.

Insulation covering—Material that is applied to foam insulation to protect the insulation from mechanical or environmental damage.

Intermediate release coating—A thin coating applied beneath topcoats to assist in removing the topcoat in depainting operations and generally to allow the use of less hazardous depainting methods.

Lacquer—A clear or pigmented coating formulated with a nitrocellulose or synthetic resin to dry by evaporation without a chemical reaction. Lacquers are resoluble in their original solvent.

Metalized epoxy coating—A coating that contains relatively large quantities of metallic pigmentation for appearance and/or added protection.

Mold release—A coating applied to a mold surface to prevent the molded piece from sticking to the mold as it is removed.

Nonstructural adhesive—An adhesive that bonds nonload bearing aerospace components in noncritical applications and is not covered in any other specialty adhesive categories.

Optical anti-reflection coating—A coating with a low reflectance in the infrared and visible wavelength ranges, which is used for anti-reflection on or near optical and laser hardware.

Part marking coating—Coatings or inks used to make identifying markings on materials, components, and/or assemblies. These markings may be either permanent or temporary.

Pretreatment coating—An organic coating that contains at least 0.5 percent acids by weight and is applied directly to metal or composite surfaces to provide surface etching, corrosion resistance, adhesion, and ease of stripping.

Rain erosion-resistant coating—A coating or coating system used to protect the leading edges of parts such as flaps, stabilizers, radomes, engine inlet nacelles, etc. against erosion caused by rain impact during flight.

Rocket motor bonding adhesive—An adhesive used in rocket motor bonding applications.

Rocket motor nozzle coating—A catalyzed epoxy coating system used in elevated temperature applications on rocket motor nozzles.

Rubber-based adhesive—Quick setting contact cements that provide a strong, yet flexible, bond between two mating surfaces that may be of dissimilar materials.

Scale inhibitor—A coating that is applied to the surface of a part prior to thermal processing to inhibit the formation of scale.

Screen print ink—Inks used in screen printing processes during fabrication of decorative laminates and decals.

Seal coat maskant—An overcoat applied over a maskant to improve abrasion and chemical resistance during production operations.

Sealant—A material used to prevent the intrusion of water, fuel, air, or other liquids or solids from certain areas of aerospace vehicles or components. There are two categories of sealants: extrudable/rollable/brushable sealants and sprayable sealants.

Silicone insulation material—Insulating material applied to exterior metal surfaces for protection from high temperatures caused by atmospheric friction or engine exhaust. These materials differ from ablative coatings in that they are not "sacrificial."

Solid film lubricant—A very thin coating consisting of a binder system containing as its chief pigment material one or more of the following: molybdenum, graphite, polytetrafluoroethylene (PTFE), or other solids that act as a dry lubricant between faying surfaces.

Specialized function coatings—Coatings that fulfill extremely specific engineering requirements that are limited in application and are characterized by low volume usage. This category excludes coatings covered in other Specialty Coating categories.

Structural autoclavable adhesive—An adhesive used to bond load-carrying aerospace components that is cured by heat and pressure in an autoclave.

Structural nonautoclavable adhesive—An adhesive cured under ambient conditions that is used to bond load-carrying aerospace components or for other critical functions, such as nonstructural bonding in the proximity of engines.

Temporary protective coating—A coating applied to provide scratch or corrosion protection during manufacturing, storage, or transportation. Two types include peelable protective coatings and alkaline removable coatings. These materials are not intended to protect against strong acid or alkaline solutions. Coatings that provide this type of protection from chemical processing are not included in this category.

Thermal control coating—Coatings formulated with specific thermal conductive or radiative properties to permit temperature control of the substrate.

Touch-up and Repair Coating—A coating used to cover minor coating imperfections appearing after the main coating operation.

Wet fastener installation coating—A primer or sealant applied by dipping, brushing, or daubing to fasteners that are installed before the coating is cured.

Wing coating—A corrosion-resistant topcoat that is resilient enough to withstand the flexing of the wings.

[63 FR 15026, Mar. 27, 1998]

APPENDIX B

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

Subpart T—National Emission Standards for Halogenated Solvent Cleaning

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

§ 63.460 Applicability and designation of source.

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

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

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

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

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

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

[59 FR 61805, Dec. 2, 1994; 59 FR 67750, Dec. 30, 1994, as amended at 60 FR 29485, June 5, 1995; 63 FR 68400, Dec. 11, 1998; 68 FR 37349, June 23, 2003]

§ 63.461 Definitions.

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

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

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

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

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

Batch cleaning machine means a solvent cleaning machine in which individual parts or a set of parts move through the entire cleaning cycle before new parts are introduced into the solvent cleaning machine. An open-top vapor cleaning machine is a type of batch cleaning machine. A solvent cleaning machine, such as a ferris wheel or a cross-rod degreaser, that clean multiple batch loads simultaneously and are manually loaded are batch cleaning machines.

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

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

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

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

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

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

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

Cover means a lid, top, or portal cover that shields the solvent cleaning machine openings from air disturbances when in place and is designed to be easily opened and closed without disturbing the vapor zone. Air disturbances include, but are not limited to, lip exhausts, ventilation fans, and general room drafts. Types of covers include, but are not limited to, sliding, biparting, and rolltop covers.

Cross-rod solvent cleaning machine means a batch solvent cleaning machine in which parts baskets are suspended from "cross-rods" as they are moved through the machine. In a cross-rod cleaning machine, parts are loaded semi-continuously, and enter and exit the machine from a single portal.

Downtime mode means the time period when a solvent cleaning machine is not cleaning parts and the sump heating coils, if present, are turned off.

Dwell means the technique of holding parts within the freeboard area but above the vapor zone of the solvent cleaning machine. Dwell occurs after cleaning to allow solvent to drain from the parts or parts baskets back into the solvent cleaning machine.

Dwell time means the required minimum length of time that a part must dwell, as determined by §63.465(d).

Emissions means halogenated hazardous air pollutant solvent consumed (i.e., halogenated hazardous air pollutant solvent added to the machine) minus the liquid halogenated hazardous air pollutant solvent removed from the machine and the halogenated hazardous air pollutant solvent removed from the machine in the solid waste.

Existing means any solvent cleaning machine the construction or reconstruction of which was commenced on or before November 29, 1993. A machine, the construction or reconstruction of which was commenced on or before November 29, 1993, but that did not meet the definition of a solvent cleaning machine on December 2, 1994, because it did not use halogenated HAP solvent liquid or vapor covered under this subpart to remove soils, becomes an existing source when it commences to use such liquid or vapor.

A solvent cleaning machine moved within a contiguous facility or to another facility under the same ownership, constitutes an existing machine.

Freeboard area means; for a batch cleaning machine, the area within the solvent cleaning machine that extends from the solvent/air interface to the top of the solvent cleaning machine; for an in-line cleaning machine, it is the area within the solvent cleaning machine that extends from the solvent/air interface to the bottom of the entrance or exit opening, whichever is lower.

Freeboard height means; for a batch cleaning machine, the distance from the solvent/air interface, as measured during the idling mode, to the top of the cleaning machine; for an in-line cleaning machine, it is the distance from the solvent/air interface to the bottom of the entrance or exit opening, whichever is lower, as measured during the idling mode.

Freeboard ratio means the ratio of the solvent cleaning machine freeboard height to the smaller interior dimension (length, width, or diameter) of the solvent cleaning machine.

Freeboard refrigeration device (also called a chiller) means a set of secondary coils mounted in the freeboard area that carries a refrigerant or other chilled substance to provide a chilled air blanket above the solvent vapor. A primary condenser capable of meeting the requirements of §63.463(e)(2)(i) is defined as both a freeboard refrigeration device and a primary condenser for the purposes of these standards.

Halogenated hazardous air pollutant solvent or halogenated HAP solvent means methylene chloride (CAS No. 75–09–2), perchloroethylene (CAS No. 127–18–4), trichloroethylene (CAS No. 79–01–6), 1,1,1-trichloroethane (CAS No. 71–55–6), carbon tetrachloride (CAS No. 56–23–5), and chloroform (CAS No. 67–66–3).

Hoist means a mechanical device that carries the parts basket and the parts to be cleaned from the loading area into the solvent cleaning machine and to the unloading area at a controlled speed. A hoist may be operated by controls or may be programmed to cycle parts through the cleaning cycle automatically.

Idling mode means the time period when a solvent cleaning machine is not actively cleaning parts and the sump heating coils, if present, are turned on.

Idling-mode cover means any cover or solvent cleaning machine design that allows the cover to shield the cleaning machine openings during the idling mode. A cover that meets this definition can also be used as a working-mode cover if that definition is also met.

Immersion cold cleaning machine means a cold cleaning machine in which the parts are immersed in the solvent when being cleaned. A remote reservoir cold cleaning machine that is also an immersion cold cleaning machine is considered an immersion cold cleaning machine for purposes of this subpart.

In-line cleaning machine or continuous cleaning machine means a solvent cleaning machine that uses an automated parts handling system, typically a conveyor, to automatically provide a continuous supply of parts to be cleaned. These units are fully enclosed except for the conveyor inlet and exit portals. In-line cleaning machines can be either cold or vapor cleaning machines.

Leak-proof coupling means a threaded or other type of coupling that prevents solvents from leaking while filling or draining solvent to and from the solvent cleaning machine.

Lip exhaust means a device installed at the top of the opening of a solvent cleaning machine that draws in air and solvent vapor from the freeboard area and ducts the air and vapor away from the solvent cleaning area.

Monthly reporting period means any calendar month in which the owner or operator of a solvent cleaning machine is required to calculate and report the solvent emissions from each solvent cleaning machine.

New means any solvent cleaning machine the construction or reconstruction of which is commenced after November 29, 1993.

Open-top vapor cleaning machine means a batch solvent cleaning machine that has its upper surface open to the air and boils solvent to create solvent vapor used to clean and/or dry parts.

Part means any object that is cleaned in a solvent cleaning machine. Parts include, but are not limited to, discrete parts, assemblies, sets of parts, and parts cleaned in a continuous web cleaning machine (i.e., continuous sheets of metal, film).

Primary condenser means a series of circumferential cooling coils on a vapor cleaning machine through which a chilled substance is circulated or recirculated to provide continuous condensation of rising solvent vapors and, thereby, create a concentrated solvent vapor zone.

Reduced room draft means decreasing the flow or movement of air across the top of the freeboard area of the solvent cleaning machine to meet the specifications of §63.463(e)(2)(ii). Methods of achieving a reduced room draft include, but are not limited to, redirecting fans and/or air vents to not blow across the cleaning machine, moving the cleaning machine to a corner where there is less room draft, and constructing a partial or complete enclosure around the cleaning machine.

Remote reservoir cold cleaning machine means any device in which liquid solvent is pumped to a sink-like work area that drains solvent back into an enclosed container while parts are being cleaned, allowing no solvent to pool in the work area.

Remote reservoir continuous web cleaning machine means a continuous web cleaning machine in which there is no exposed solvent sump. In these units, the solvent is pumped

from an enclosed chamber and is typically applied to the continuous web part through a nozzle or series of nozzles. The solvent then drains from the part and is collected and recycled through the machine, allowing no solvent to pool in the work or cleaning area.

Soils means contaminants that are removed from the parts being cleaned. Soils include, but are not limited to, grease, oils, waxes, metal chips, carbon deposits, fluxes, and tars.

Solvent/air interface means, for a vapor cleaning machine, the location of contact between the concentrated solvent vapor layer and the air. This location of contact is defined as the mid-line height of the primary condenser coils. For a cold cleaning machine, it is the location of contact between the liquid solvent and the air.

Solvent/air interface area means; for a vapor cleaning machine, the surface area of the solvent vapor zone that is exposed to the air; for an in-line cleaning machine, it is the total surface area of all the sumps; for a cold cleaning machine, it is the surface area of the liquid solvent that is exposed to the air.

Solvent cleaning machine means any device or piece of equipment that uses halogenated HAP solvent liquid or vapor to remove soils from the surfaces of materials. Types of solvent cleaning machines include, but are not limited to, batch vapor, in-line vapor, in-line cold, and batch cold solvent cleaning machines. Buckets, pails, and beakers with capacities of 7.6 liters (2 gallons) or less are not considered solvent cleaning machines.

Solvent vapor zone means; for a vapor cleaning machine, the area that extends from the liquid solvent surface to the level that solvent vapor is condensed. This condensation level is defined as the midline height of the primary condenser coils.

Squeegee system means a system that uses a series of pliable surfaces to remove the solvent film from the surfaces of the continuous web part. These pliable surfaces, called squeegees, are typically made of rubber or plastic media, and need to be periodically replaced to ensure continued proper function.

Sump means the part of a solvent cleaning machine where the liquid solvent is located.

Sump heater coils means the heating system on a cleaning machine that uses steam, electricity, or hot water to heat or boil the liquid solvent.

Superheated part technology means a system that is part of the continuous web process that heats the continuous web part either directly or indirectly to a temperature above the boiling point of the cleaning solvent. This could include a process step, such as a tooling die that heats the part as it is processed, as long as the part remains superheated through the cleaning machine.

Superheated vapor system means a system that heats the solvent vapor, either passively or actively, to a temperature above the solvent's boiling point. Parts are held in the

superheated vapor before exiting the machine to evaporate the liquid solvent on them. Hot vapor recycle is an example of a superheated vapor system.

Vapor cleaning machine means a batch or in-line solvent cleaning machine that boils liquid solvent generating solvent vapor that is used as a part of the cleaning or drying cycle.

Water layer means a layer of water that floats above the denser solvent and provides control of solvent emissions. In many cases, the solvent used in batch cold cleaning machines is sold containing the appropriate amount of water to create a water cover.

Working mode means the time period when the solvent cleaning machine is actively cleaning parts.

Working-mode cover means any cover or solvent cleaning machine design that allows the cover to shield the cleaning machine openings from outside air disturbances while parts are being cleaned in the cleaning machine. A cover that is used during the working mode is opened only during parts entry and removal. A cover that meets this definition can also be used as an idling-mode cover if that definition is also met.

[59 FR 61805, Dec. 2, 1994; 60 FR 29485, June 5, 1995, as amended at 63 FR 24751, May 5, 1998; 64 FR 67798, Dec. 3, 1999]

§ 63.462 Batch cold cleaning machine standards.

(a) Each owner or operator of an immersion batch cold solvent cleaning machine shall comply with the requirements specified in paragraph (a)(1) or (a)(2) of this section.

(1) Employ a tightly fitting cover that shall be closed at all times except during parts entry and removal, and a water layer at a minimum thickness of 2.5 centimeters (1.0 inch) on the surface of the solvent within the cleaning machine, or

(2) Employ a tightly fitting cover that shall be closed at all times except during parts entry and removal and a freeboard ratio of 0.75 or greater.

(b) Each owner or operator of a remote-reservoir batch cold solvent cleaning machine shall employ a tightly fitting cover over the solvent sump that shall be closed at all times except during the cleaning of parts.

(c) Each owner or operator of a batch cold solvent cleaning machine complying with paragraph (a)(2) or (b) of this section shall comply with the work and operational practice requirements specified in paragraphs (c)(1) through (c)(9) of this section as applicable.

(1) All waste solvent shall be collected and stored in closed containers. The closed container may contain a device that allows pressure relief, but does not allow liquid solvent to drain from the container.

(2) If a flexible hose or flushing device is used, flushing shall be performed only within the freeboard area of the solvent cleaning machine.

(3) The owner or operator shall drain solvent cleaned parts for 15 seconds or until dripping has stopped, whichever is longer. Parts having cavities or blind holes shall be tipped or rotated while draining.

(4) The owner or operator shall ensure that the solvent level does not exceed the fill line.

(5) Spills during solvent transfer shall be wiped up immediately. The wipe rags shall be stored in covered containers meeting the requirements of paragraph (c)(1) of this section.

(6) When an air- or pump-agitated solvent bath is used, the owner or operator shall ensure that the agitator is operated to produce a rolling motion of the solvent but not observable splashing against tank walls or parts being cleaned.

(7) The owner or operator shall ensure that, when the cover is open, the cold cleaning machine is not exposed to drafts greater than 40 meters per minute (132 feet per minute), as measured between 1 and 2 meters (3.3 and 6.6 feet) upwind and at the same elevation as the tank lip.

(8) Except as provided in paragraph (c)(9) of this section, sponges, fabric, wood, and paper products shall not be cleaned.

(9) The prohibition in paragraph (c)(8) of this section does not apply to the cleaning of porous materials that are part of polychlorinated biphenyl (PCB) laden transformers if those transformers are handled throughout the cleaning process and disposed of in compliance with an approved PCB disposal permit issued in accordance with the Toxic Substances Control Act.

(d) Each owner or operator of a batch cold cleaning machine shall submit an initial notification report as described in §63.468 (a) and (b) and a compliance report as described in §63.468(c).

(e) Each owner or operator subject to the requirements of paragraph (c)(1) through (8) of this section may request to use measures other than those described in these paragraphs. The owner or operator must demonstrate to the Administrator (or delegated State, local, or Tribal authority) that the alternative measures will result in equivalent or better emissions control compared to the measures described in paragraphs (c)(1) through (8) of this section. For example, storing solvent and solvent-laden materials in an enclosed area that is ventilated to a solvent recovery or destruction device may be considered an acceptable alternative.

[59 FR 61805, Dec. 2, 1994; 60 FR 29485, June 5, 1995, as amended at 64 FR 67799, Dec. 3, 1999; 68 FR 37349, June 23, 2003]

§ 63.463 Batch vapor and in-line cleaning machine standards.

(a) Except as provided in §63.464 for all cleaning machines, each owner or operator of a solvent cleaning machine subject to the provisions of this subpart shall ensure that each existing or new batch vapor or in-line solvent cleaning machine subject to the provisions of this subpart conforms to the design requirements specified in paragraphs (a)(1) through (7) of this section. The owner or operator of a continuous web cleaning machine shall comply with the requirements of paragraph (g) or (h) of this section, as appropriate, in lieu of complying with this paragraph.

(1) Each cleaning machine shall be designed or operated to meet the control equipment or technique requirements in paragraph (a)(1)(i) or (a)(1)(ii) of this section.

(i) An idling and downtime mode cover, as described in §63.463(d)(1)(i), that may be readily opened or closed, that completely covers the cleaning machine openings when in place, and is free of cracks, holes, and other defects.

(ii) A reduced room draft as described in §63.463(e)(2)(ii).

(2) Each cleaning machine shall have a freeboard ratio of 0.75 or greater.

(3) Each cleaning machine shall have an automated parts handling system capable of moving parts or parts baskets at a speed of 3.4 meters per minute (11 feet per minute) or less from the initial loading of parts through removal of cleaned parts.

(4) Each vapor cleaning machine shall be equipped with a device that shuts off the sump heat if the sump liquid solvent level drops to the sump heater coils. This requirement does not apply to a vapor cleaning machine that uses steam to heat the solvent.

(5) Each vapor cleaning machine shall be equipped with a vapor level control device that shuts off sump heat if the vapor level in the vapor cleaning machine rises above the height of the primary condenser.

(6) Each vapor cleaning machine shall have a primary condenser.

(7) Each cleaning machine that uses a lip exhaust shall be designed and operated to route all collected solvent vapors through a properly operated and maintained carbon adsorber that meets the requirements of paragraph (e)(2)(vii) of this section.

(b) Except as provided in §63.464, each owner or operator of an existing or new batch vapor cleaning machine shall comply with either paragraph (b)(1) or (b)(2) of this section.

(1) Each owner or operator of a batch vapor cleaning machine with a solvent/air interface area of 1.21 square meters (13 square feet) or less shall comply with the requirements specified in either paragraph (b)(1)(i) or (b)(1)(ii) of this section.

(i) Employ one of the control combinations listed in table 1 of this subpart or other equivalent methods of control as determined using the procedure in §63.469, equivalent methods of control.

Table 1_Control Combinations for Batch Vapor Solvent Cleaning Machines With a Solvent/Air Interface Area of 1.21 Square Meters (13 Square Feet) or Less

Option	Control combinations
1	Working-mode cover, freeboard ratio of 1.0, superheated vapor.
2	Freeboard refrigeration device, superheated vapor.
3	Working-mode cover, freeboard refrigeration device.
4	Reduced room draft, freeboard ratio of 1.0, superheated vapor.
5	Freeboard refrigeration device, reduced room draft.
6	Freeboard refrigeration device, freeboard ratio of 1.0.
7	Freeboard refrigeration device, dwell.
8	Reduced room draft, dwell, freeboard ratio of 1.0.
9	Freeboard refrigeration device, carbon adsorber.
10	Freeboard ratio of 1.0, superheated vapor, carbon adsorber.

Note: Unlike most of the control techniques available for complying with this rule, carbon adsorbers are not considered to be a pollution prevention measure. Use of such units may impose additional cost and burden for a number of reasons. First, carbon adsorption units are generally more expensive than other controls listed in the options. Second, these units may present cross-media impacts such as effluent discharges if not properly operated and maintained, and spent carbon beds have to be disposed of as hazardous waste. When making decisions about what controls to install on halogenated solvent cleaning machines to meet the requirements of this rule, all of these factors should be weighed and pollution prevention measures are encouraged wherever possible.

(ii) Demonstrate that their solvent cleaning machine can achieve and maintain an idling emission limit of 0.22 kilograms per hour per square meter (0.045 pounds per hour per

square foot) of solvent/air interface area as determined using the procedures in §63.465(a) and appendix A to this part.

(2) Each owner or operator of a batch vapor cleaning machine with a solvent/air interface area greater than 1.21 square meters (13 square feet) shall comply with the requirements specified in either paragraph (b)(2)(i) or (b)(2)(ii) of this section.

(i) Employ one of the control combinations listed in table 2 of this subpart or other equivalent methods of control as determined using the procedure in §63.469, equivalent methods of control.

Table 2_Control Combinations for Batch Vapor Solvent Cleaning Machines With a Solvent/Air Interface Area Greater than 1.21 Square Meters (13 Square Feet)

Option	Control combinations
1	Freeboard refrigeration device, freeboard ratio of 1.0, superheated vapor.
2	Dwell, freeboard refrigeration device, reduced room draft.
3	Working-mode cover, freeboard refrigeration device, superheated vapor.
4	Freeboard ratio of 1.0, reduced room draft, superheated vapor.
5	Freeboard refrigeration device, reduced room draft, superheated vapor.
6	Freeboard refrigeration device, reduced room draft, freeboard ratio of 1.0.
7	Freeboard refrigeration device, superheated vapor, carbon adsorber.

Note: Unlike most of the control techniques available for complying with this rule, carbon adsorbers are not considered to be a pollution prevention measure. Use of such units may impose additional cost and burden for a number of reasons. First, carbon adsorption units are generally more expensive than other controls listed in the options. Second, these units may present cross-media impacts such as effluent discharges if not properly operated and maintained, and spent carbon beds have to be disposed of as hazardous waste. When making decisions about what controls to install on halogenated solvent cleaning machines to meet the requirements of this rule, all of these factors should be weighed and pollution prevention measures are encouraged wherever possible.

(ii) Demonstrate that their solvent cleaning machine can achieve and maintain an idling emission limit of 0.22 kilograms per hour per square meter (0.045 pounds per hour per square foot) of solvent/air interface area as determined using the procedures in §63.465(a) and appendix A of this part.

(c) Except as provided in §63.464 for all cleaning machines, each owner or operator of an in-line cleaning machine shall comply with paragraph (c)(1) or (2) of this section as appropriate. The owner or operator of a continuous web cleaning machine shall comply with the requirements of paragraph (g) or (h) of this section, as appropriate, in lieu of complying with this paragraph.

(1) Each owner or operator of an existing in-line cleaning machine shall comply with the requirements specified in either paragraph (c)(1)(i) or (c)(1)(ii) of this section.

(i) Employ one of the control combinations listed in table 3 of this subpart or other equivalent methods of control as determined using the procedure in §63.469, equivalent methods of control.

Table 3_Control Combinations for Existing In-Line Solvent Cleaning Machines

Option	Control combinations
1	Superheated vapor, freeboard ratio of 1.0.
2	Freeboard refrigeration device, freeboard ratio of 1.0.
3	Dwell, freeboard refrigeration device.
4	Dwell, carbon adsorber.

Note: Unlike most of the control techniques available for complying with this rule, carbon adsorbers are not considered to be a pollution prevention measure. Use of such units may impose additional cost and burden for a number of reasons. First, carbon adsorption units are generally more expensive than other controls listed in the options. Second, these units may present cross-media impacts such as effluent discharges if not properly operated and maintained, and spent carbon beds have to be disposed of as hazardous waste. When making decisions about what controls to install on halogenated solvent cleaning machines to meet the requirements of this rule, all of these factors should be weighed and pollution prevention measures are encouraged wherever possible.

(ii) Demonstrate that their solvent cleaning machine can achieve and maintain an idling emission limit of 0.10 kilograms per hour per square meter (0.021 pounds per hour per square foot) of solvent/air interface area as determined using the procedures in §63.465(a) and appendix A to this part.

(2) Each owner or operator of a new in-line cleaning machine shall comply with the requirements specified in either paragraph (c)(2)(i) or (c)(2)(ii) of this section.

(i) Employ one of the control combinations listed in table 4 of this subpart or other equivalent methods of control as determined using the procedure in §63.469, equivalent methods of control section.

Table 4_Control Combinations for New In-Line Solvent Cleaning Machines

Option	Control combinations
1	Superheated vapor, freeboard refrigeration device.
2	Freeboard refrigeration device, carbon adsorber.
3	Superheated vapor, carbon adsorber.

Note: Unlike most of the control techniques available for complying with this rule, carbon adsorbers are not considered to be a pollution prevention measure. Use of such units may impose additional cost and burden for a number of reasons. First, carbon adsorption units are generally more expensive than other controls listed in the options. Second, these units may present cross-media impacts such as effluent discharges if not properly operated and maintained, and spent carbon beds have to be disposed of as hazardous waste. When making decisions about what controls to install on halogenated solvent cleaning machines to meet the requirements of this rule, all of these factors should be weighed and pollution prevention measures are encouraged wherever possible.

(ii) Demonstrate that their solvent cleaning machine can achieve and maintain an idling emission limit of 0.10 kilograms per hour per square meter (0.021 pounds per hour per square foot) of solvent/air interface area as determined using the procedures in §63.465(a) and appendix A to this part.

(d) Except as provided in §63.464 for all cleaning machines, each owner or operator of an existing or new batch vapor or in-line solvent cleaning machine shall meet all of the following required work and operational practices specified in paragraphs (d)(1) through (12) of this section as applicable. The owner or operator of a continuous web cleaning

machine shall comply with the requirements of paragraph (g) or (h) of this section, as appropriate, in lieu of complying with this paragraph.

(1) Control air disturbances across the cleaning machine opening(s) by incorporating the control equipment or techniques in paragraph (d)(1)(i) or (d)(1)(ii) of this section.

(i) Cover(s) to each solvent cleaning machine shall be in place during the idling mode, and during the downtime mode unless either the solvent has been removed from the machine or maintenance or monitoring is being performed that requires the cover(s) to not be in place.

(ii) A reduced room draft as described in §63.463(e)(2)(ii).

(2) The parts baskets or the parts being cleaned in an open-top batch vapor cleaning machine shall not occupy more than 50 percent of the solvent/air interface area unless the parts baskets or parts are introduced at a speed of 0.9 meters per minute (3 feet per minute) or less.

(3) Any spraying operations shall be done within the vapor zone or within a section of the solvent cleaning machine that is not directly exposed to the ambient air (i.e., a baffled or enclosed area of the solvent cleaning machine).

(4) Parts shall be oriented so that the solvent drains from them freely. Parts having cavities or blind holes shall be tipped or rotated before being removed from any solvent cleaning machine unless an equally effective approach has been approved by the Administrator.

(5) Parts baskets or parts shall not be removed from any solvent cleaning machine until dripping has stopped.

(6) During startup of each vapor cleaning machine, the primary condenser shall be turned on before the sump heater.

(7) During shutdown of each vapor cleaning machine, the sump heater shall be turned off and the solvent vapor layer allowed to collapse before the primary condenser is turned off.

(8) When solvent is added or drained from any solvent cleaning machine, the solvent shall be transferred using threaded or other leakproof couplings and the end of the pipe in the solvent sump shall be located beneath the liquid solvent surface.

(9) Each solvent cleaning machine and associated controls shall be maintained as recommended by the manufacturers of the equipment or using alternative maintenance practices that have been demonstrated to the Administrator's satisfaction to achieve the same or better results as those recommended by the manufacturer.

(10) Each operator of a solvent cleaning machine shall complete and pass the applicable sections of the test of solvent cleaning procedures in appendix A to this part if requested during an inspection by the Administrator.

(11) Waste solvent, still bottoms, and sump bottoms shall be collected and stored in closed containers. The closed containers may contain a device that would allow pressure relief, but would not allow liquid solvent to drain from the container.

(12) Sponges, fabric, wood, and paper products shall not be cleaned.

(e) Each owner or operator of a solvent cleaning machine complying with paragraph (b), (c), (g), or (h) of this section shall comply with the requirements specified in paragraphs (e)(1) through (4) of this section.

(1) Conduct monitoring of each control device used to comply with §63.463 of this subpart as provided in §63.466.

(2) Determine during each monitoring period whether each control device used to comply with these standards meets the requirements specified in paragraphs (e)(2)(i) through (xi) of this section.

(i) If a freeboard refrigeration device is used to comply with these standards, the owner or operator shall ensure that the chilled air blanket temperature (in °F), measured at the center of the air blanket, is no greater than 30 percent of the solvent's boiling point.

(ii) If a reduced room draft is used to comply with these standards, the owner or operator shall comply with the requirements specified in paragraphs (e)(2)(ii)(A) and (e)(2)(ii)(B) of this section.

(A) Ensure that the flow or movement of air across the top of the freeboard area of the solvent cleaning machine or within the solvent cleaning machine enclosure does not exceed 15.2 meters per minute (50 feet per minute) at any time as measured using the procedures in §63.466(d).

(B) Establish and maintain the operating conditions under which the wind speed was demonstrated to be 15.2 meters per minute (50 feet per minute) or less as described in §63.466(d).

(iii) If a working-mode cover is used to comply with these standards, the owner or operator shall comply with the requirements specified in paragraphs (e)(2)(iii)(A) and (e)(2)(iii)(B) of this section.

(A) Ensure that the cover opens only for part entrance and removal and completely covers the cleaning machine openings when closed.

(B) Ensure that the working-mode cover is maintained free of cracks, holes, and other defects.

(iv) If an idling-mode cover is used to comply with these standards, the owner or operator shall comply with the requirements specified in paragraphs (e)(2)(iv)(A) and (e)(2)(iv)(B) of this section.

(A) Ensure that the cover is in place whenever parts are not in the solvent cleaning machine and completely covers the cleaning machine openings when in place.

(B) Ensure that the idling-mode cover is maintained free of cracks, holes, and other defects.

(v) If a dwell is used to comply with these standards, the owner or operator shall comply with the requirements specified in paragraphs (e)(2)(v)(A) and (e)(2)(v)(B) of this section.

(A) Determine the appropriate dwell time for each type of part or parts basket, or determine the maximum dwell time using the most complex part type or parts basket, as described in §63.465(d).

(B) Ensure that, after cleaning, each part is held in the solvent cleaning machine freeboard area above the vapor zone for the dwell time determined for that particular part or parts basket, or for the maximum dwell time determined using the most complex part type or parts basket.

(vi) If a superheated vapor system is used to comply with these standards, the owner or operator shall comply with the requirements specified in paragraphs (e)(2)(vi)(A) through (e)(2)(vi)(C) of this section.

(A) Ensure that the temperature of the solvent vapor at the center of the superheated vapor zone is at least 10 °F above the solvent's boiling point.

(B) Ensure that the manufacturer's specifications for determining the minimum proper dwell time within the superheated vapor system is followed.

(C) Ensure that parts remain within the superheated vapor for at least the minimum proper dwell time.

(vii) If a carbon adsorber in conjunction with a lip exhaust or other exhaust internal to the cleaning machine is used to comply with these standards, the owner or operator shall comply with the following requirements:

(A) Ensure that the concentration of organic solvent in the exhaust from this device does not exceed 100 parts per million of any halogenated HAP compound as measured using the procedure in §63.466(e). If the halogenated HAP solvent concentration in the carbon

adsorber exhaust exceeds 100 parts per million, the owner or operator shall adjust the desorption schedule or replace the disposable canister, if not a regenerative system, so that the exhaust concentration of halogenated HAP solvent is brought below 100 parts per million.

(B) Ensure that the carbon adsorber bed is not bypassed during desorption.

(C) Ensure that the lip exhaust is located above the solvent cleaning machine cover so that the cover closes below the lip exhaust level.

(viii) If a superheated part system is used to comply with the standards for continuous web cleaning machines in paragraph (g) of this section, the owner or operator shall ensure that the temperature of the continuous web part is at least 10 degrees Fahrenheit above the solvent boiling point while the part is traveling through the cleaning machine.

(ix) If a squeegee system is used to comply with the continuous web cleaning requirements of paragraph (g)(3)(iii) or (h)(2)(i) of this section, the owner or operator shall comply with the following requirements.

(A) Determine the appropriate maximum product throughput for the squeegees used in the squeegee system, as described in §63.465(f).

(B) Conduct the weekly monitoring required by §63.466(a)(3). Record the results required by §63.467(a)(6).

(C) Calculate the total amount of continuous web product processed since the squeegees were replaced and compare to the maximum product throughput for the squeegees.

(D) Ensure squeegees are replaced at or before the maximum product throughput is attained.

(E) Redetermine the maximum product throughput for the squeegees if any solvent film is visible on the continuous web part immediately after it exits the cleaning machine.

(x) If an air knife system is used to comply with the continuous web cleaning requirements of paragraph (g)(3)(iii) or (h)(2)(i) of this section, the owner or operator shall comply with the following requirements.

(A) Determine the air knife parameter and parameter value that demonstrate to the Administrator's satisfaction that the air knife is properly operating. An air knife is properly operating if no visible solvent film remains on the continuous web part after it exits the cleaning machine.

(B) Maintain the selected air knife parameter value at the level determined in paragraph (a) of this section.

(C) Conduct the weekly monitoring required by §63.466(a)(3).

(D) Redetermine the proper air knife parameter value if any solvent film is visible on the continuous web part immediately after it exits the cleaning machine.

(xi) If a combination squeegee and air knife system is used to comply with the continuous web cleaning requirements of paragraph (g)(3)(iii) or (h)(2)(i) of this section, the owner or operator shall comply with the following requirements.

(A) Determine the system parameter and value that demonstrate to the Administrator's satisfaction that the system is properly operating.

(B) Maintain the selected parameter value at the level determined in paragraph (a) of this section.

(C) Conduct the weekly monitoring required by §63.466(a)(3).

(D) Redetermine the proper parameter value if any solvent film is visible on the continuous web part immediately after it exits the cleaning machine.

(3) If any of the requirements of paragraph (e)(2) of this section are not met, determine whether an exceedance has occurred using the criteria in paragraphs (e)(3)(i) and (e)(3)(ii) of this section.

(i) An exceedance has occurred if the requirements of paragraphs (e)(2)(ii)(B), (e)(2)(iii)(A), (e)(2)(iv)(A), (e)(2)(v), (e)(2)(vi)(B), (e)(2)(vi)(C), (e)(2)(vii)(B), or (e)(2)(vii)(C) of this section have not been met.

(ii) An exceedance has occurred if the requirements of paragraphs (e)(2)(i), (e)(2)(ii)(A), (e)(2)(iii)(B), (e)(2)(iv)(B), (e)(2)(vi)(A), or (e)(2)(vii)(A) of this section have not been met and are not corrected within 15 days of detection. Adjustments or repairs shall be made to the solvent cleaning system or control device to reestablish required levels. The parameter must be remeasured immediately upon adjustment or repair and demonstrated to be within required limits.

(4) The owner or operator shall report all exceedances and all corrections and adjustments made to avoid an exceedance as specified in §63.468(h).

(f) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the idling emission limit standards in paragraphs (b)(1)(ii), (b)(2)(ii), (c)(1)(ii), or (c)(2)(ii) of this section shall comply with the requirements specified in paragraphs (f)(1) through (f)(5) of this section.

(1) Conduct an initial performance test to comply with the requirements specified in paragraphs (f)(1)(i) and (f)(1)(ii) of this section.

(i) Demonstrate compliance with the applicable idling emission limit.

(ii) Establish parameters that will be monitored to demonstrate compliance. If a control device is used that is listed in paragraph (e)(2) of this section, then the requirements for that control device as listed in paragraph (e)(2) of this section shall be used unless the owner or operator can demonstrate to the Administrator's satisfaction that an alternative strategy is equally effective.

(2) Conduct the periodic monitoring of the parameters used to demonstrate compliance as described in §63.466(f).

(3) Operate the solvent cleaning machine within parameters identified in the initial performance test.

(4) If any of the requirements in paragraphs (f)(1) through (f)(3) of this section are not met, determine whether an exceedance has occurred using the criteria in paragraphs (f)(4)(i) and (f)(4)(ii) of this section.

(i) If using a control listed in paragraph (e) of this section, the owner or operator shall comply with the appropriate parameter values in paragraph (e)(2) and the exceedance delineations in paragraphs (e)(3)(i) and (e)(3)(ii) of this section.

(ii) If using a control not listed in paragraph (e) of this section, the owner or operator shall indicate whether the exceedance of the parameters that are monitored to determine the proper functioning of this control would be classified as an immediate exceedance or whether a 15 day repair period would be allowed. This information must be submitted to the Administrator for approval.

(5) The owner or operator shall report all exceedances and all corrections and adjustments made to avoid an exceedance as specified in §63.468(h).

(g) Except as provided in §63.464 and in paragraph (h) of this section for remote reservoir continuous web cleaning machines, each owner or operator of a continuous web cleaning machine shall comply with paragraphs (g)(1) through (4) of this section for each continuous web cleaning machine.

(1) Except as provided in paragraph (g)(2) of this section, install, maintain, and operate one of the following control combinations on each continuous web cleaning machine.

(i) For each existing continuous web cleaning machine, the following control combinations are allowed:

(A) Superheated vapor or superheated part technology, and a freeboard ratio of 1.0 or greater.

(B) Freeboard refrigeration device and a freeboard ratio of 1.0 or greater.

(C) Carbon adsorption system meeting the requirements of paragraph (e)(2)(vii) of this section.

(ii) For each new continuous web cleaning machine, the following control combinations are allowed:

(A) Superheated vapor or superheated part technology, and a freeboard refrigeration device.

(B) A freeboard refrigeration device and a carbon adsorber meeting the requirements of paragraph (e)(2)(vii) of this section.

(C) Superheated vapor or superheated part technology, and a carbon adsorber meeting the requirements of paragraph (e)(2)(vii) of this section.

(2) If a carbon adsorber system can be demonstrated to the Administrator's satisfaction to have an overall solvent control efficiency (*i.e.*, capture efficiency removal efficiency) of 70 percent or greater, this system is equivalent to the options in paragraph (g) of this section.

(3) In lieu of complying with the provisions of paragraph (a) of this section, the owner or operator of a continuous web cleaning machine shall comply with the following provisions:

(i) Each cleaning machine shall meet one of the following control equipment or technique requirements:

(A) An idling and downtime mode cover, as described in paragraph (d)(1)(i) of this section, that may be readily opened or closed; that completely covers the cleaning machine openings when in place; and is free of cracks, holes, and other defects. A continuous web part that completely occupies an entry or exit port when the machine is idle is considered to meet this requirement.

(B) A reduced room draft as described in paragraph (e)(2)(ii) of this section.

(C) Gasketed or leakproof doors that separate both the continuous web part feed reel and take-up reel from the room atmosphere if the doors are checked according to the requirements of paragraph (e)(2)(iii) of this section.

(D) A cleaning machine that is demonstrated to the Administrator's satisfaction to be under negative pressure during idling and downtime and is vented to a carbon adsorption system that meets the requirements of either paragraph (e)(2)(vii) of this section or paragraph (g)(2) of this section.

(ii) Each continuous web cleaning machine shall have a freeboard ratio of 0.75 or greater unless that cleaning machine is a remote reservoir continuous web cleaning machine.

(iii) Each cleaning machine shall have an automated parts handling system capable of moving parts or parts baskets at a speed of 3.4 meters per minute (11 feet per minute) or less from the initial loading of parts through removal of cleaned parts, unless the cleaning machine is a continuous web cleaning machine that has a squeegee system or air knife system installed, maintained, and operated on the continuous web cleaning machine meeting the requirements of paragraph (e) of this section.

(iv) Each vapor cleaning machine shall be equipped with a device that shuts off the sump heat if the sump liquid solvent level drops to the sump heater coils. This requirement does not apply to a vapor cleaning machine that uses steam to heat the solvent.

(v) Each vapor cleaning machine shall be equipped with a vapor level control device that shuts off sump heat if the vapor level in the vapor cleaning machine rises above the height of the primary condenser.

(vi) Each vapor cleaning machine shall have a primary condenser.

(vii) Each cleaning machine that uses a lip exhaust or any other exhaust within the solvent cleaning machine shall be designed and operated to route all collected solvent vapors through a properly operated and maintained carbon adsorber that meets the requirements of either paragraph (e)(2)(vii) or (g)(2) of this section.

(4) In lieu of complying with the provisions of paragraph (d) of this section, the owner or operator of a continuous web cleaning machine shall comply with the following provisions:

(i) Control air disturbances across the cleaning machine opening(s) by incorporating one of the following control equipment or techniques:

(A) Cover(s) to each solvent cleaning machine shall be in place during the idling mode and during the downtime mode unless either the solvent has been removed from the machine or maintenance or monitoring is being performed that requires the cover(s) in place. A continuous web part that completely occupies an entry or exit port when the machine is idle is considered to meet this requirement.

(B) A reduced room draft as described in paragraph (e)(2)(ii) of this section.

(C) Gasketed or leakproof doors or covers that separate both the continuous web part feed reel and take-up reel from the room atmosphere if the doors are checked according to the requirements of paragraph (e)(2)(iii) of this section.

(D) A cleaning machine that is demonstrated to the Administrator's satisfaction to be under negative pressure during idling and downtime and is vented to a carbon adsorption system that meets either the requirements of paragraph (e)(2)(vii) of this section or paragraph (g)(2) of this section.

(ii) Any spraying operations shall be conducted in a section of the solvent cleaning machine that is not directly exposed to the ambient air (*i.e.*, a baffled or enclosed area of the solvent cleaning machine) or within a machine having a door or cover that meets the requirements of paragraph (g)(4)(i)(C) of this section.

(iii) During startup of each vapor cleaning machine, the primary condenser shall be turned on before the sump heater.

(iv) During shutdown of each vapor cleaning machine, the sump heater shall be turned off and the solvent vapor layer allowed to collapse before the primary condenser is turned off.

(v) When solvent is added or drained from any solvent cleaning machine, the solvent shall be transferred using threaded or other leakproof couplings, and the end of the pipe in the solvent sump shall be located beneath the liquid solvent surface.

(vi) Each solvent cleaning machine and associated controls shall be maintained as recommended by the manufacturers of the equipment or using alternative maintenance practices that have been demonstrated to the Administrator's satisfaction to achieve the same or better results as those recommended by the manufacturer.

(vii) Waste solvent, still bottoms, sump bottoms, and waste absorbent materials used in the cleaning process for continuous web cleaning machines shall be collected and stored in waste containers. The closed containers may contain a device that would allow pressure relief, but would not allow liquid solvent to drain from the container.

(viii) Except as provided in paragraph (g)(4)(ix) of this section, sponges, fabric, wood, and paper products shall not be cleaned.

(ix) The prohibition in paragraph (g)(4)(viii) of this section does not apply to absorbent materials that are used as part of the cleaning process of continuous web cleaning machines, including rollers and roller covers.

(h) Except as provided in §63.464, each owner or operator of a remote reservoir continuous web cleaning machine shall comply with paragraphs (h)(1) through (4) of this section.

(1) Except as provided in paragraph (h)(2) of this section, install, maintain, and operate one of the following controls on each new remote reservoir continuous web cleaning machine.

(i) Superheated vapor or superheated part technology.

(ii) A carbon adsorber meeting the requirements of paragraph (e)(2)(vii) of this section.

(iii) If a carbon adsorber system can be demonstrated to the Administrator's satisfaction to have an overall solvent control efficiency (*i.e.*, capture efficiency removal efficiency) of 70 percent or greater, this system is equivalent to the options in paragraphs (h)(1)(i) and (h)(1)(ii) of this section.

(2) In lieu of complying with the provisions of paragraph (a) of this section, the owner or operator of a remote reservoir continuous web cleaning machine shall comply with the following provisions:

(i) Each cleaning machine shall have an automated parts handling system capable of moving parts or parts baskets at a speed of 3.4 meters per minute (11 feet per minute) or less from the initial loading of parts through removal of cleaned parts, unless the cleaning machine is a continuous web cleaning machine that has a squeegee system or air knife system installed, maintained, and operated on the continuous web cleaning machine meeting the requirements of paragraph (e) of this section.

(ii) Each vapor cleaning machine shall be equipped with a device that shuts off the sump heat if the sump liquid solvent level drops to the sump heater coils.

(iii) Each vapor cleaning machine shall be equipped with a vapor level control device that shuts off sump heat if the vapor level in the vapor cleaning machine rises above the height of the primary condenser.

(iv) Each vapor cleaning machine shall have a primary condenser.

(v) Each cleaning machine that uses a lip exhaust or any other exhaust within the solvent cleaning machine shall be designed and operated to route all collected solvent vapors through a properly operated and maintained carbon adsorber that meets the requirements of either paragraph (e)(2)(vii) or (g)(2) of this section.

(3) In lieu of complying with the provisions of paragraph (d) of this section, the owner or operator of a remote reservoir continuous web cleaning machine shall comply with the following provisions:

(i) Any spraying operations shall be conducted in a section of the solvent cleaning machine that is not directly exposed to the ambient air (*i.e.*, a baffled or enclosed area of the solvent cleaning machine) or within a machine having a door or cover that meets the requirements of paragraph (g)(4)(i)(C) of this section.

(ii) During startup of each vapor cleaning machine, the primary condenser shall be turned on before the sump heater.

(iii) During shutdown of each vapor cleaning machine, the sump heater shall be turned off and the solvent vapor layer allowed to collapse before the primary condenser is turned off.

(iv) When solvent is added or drained from any solvent cleaning machine, the solvent shall be transferred using threaded or other leakproof couplings, and the end of the pipe in the solvent sump shall be located beneath the liquid solvent surface.

(v) Each solvent cleaning machine and associated controls shall be maintained as recommended by the manufacturers of the equipment or using alternative maintenance practices that have been demonstrated to the Administrator's satisfaction to achieve the same or better results as those recommended by the manufacturer.

(vi) Waste solvent, still bottoms, sump bottoms, and waste absorbent materials used in the cleaning process for continuous web cleaning machines shall be collected and stored in waste containers. The closed containers may contain a device that would allow pressure relief, but would not allow liquid solvent to drain from the container.

(vii) Except as provided in paragraph (h)(3)(viii) of this section, sponges, fabric, wood, and paper products shall not be cleaned.

(viii) The prohibition in paragraph (h)(3)(vii) of this section does not apply to absorbent materials that are used as part of the cleaning process of continuous web cleaning machines, including rollers and roller covers.

[59 FR 61805, Dec. 2, 1994; 60 FR 29485, June 5, 1995, as amended at 64 FR 67799, Dec. 3, 1999; 65 FR 54422, Sept. 8, 2000; 68 FR 37349, June 23, 2003]

§ 63.464 Alternative standards.

(a) As an alternative to meeting the requirements in §63.463, each owner or operator of a batch vapor or in-line solvent cleaning machine can elect to comply with the requirements of §63.464. An owner or operator of a solvent cleaning machine who elects to comply with §63.464 shall comply with the requirements specified in either paragraph (a)(1) or (a)(2) of this section.

(1) If the cleaning machine has a solvent/air interface, as defined in §63.461, the owner or operator shall comply with the requirements specified in paragraphs (a)(1)(i) and (a)(1)(ii) of this section.

(i) Maintain a log of solvent additions and deletions for each solvent cleaning machine.

(ii) Ensure that the emissions from each solvent cleaning machine are equal to or less than the applicable emission limit presented in table 5 of this subpart as determined using the procedures in §63.465(b) and (c).

Table 5_Emission Limits for Batch Vapor and In-Line Solvent Cleaning Machines With a Solvent/Air Interface

	3-month

Solvent cleaning machine	rolling average monthly emission limit (kilograms/ square meters/ month)
Batch vapor solvent cleaning machines.....	150
Existing in-line solvent cleaning machines.....	153
New in-line solvent cleaning machines.....	99

(2) If the cleaning machine is a batch vapor cleaning machine and does not have a solvent/air interface, the owner or operator shall comply with the requirements specified in paragraphs (a)(2)(i) and (a)(2)(ii) of this section.

(i) Maintain a log of solvent additions and deletions for each solvent cleaning machine.

(ii) Ensure that the emissions from each solvent cleaning machine are equal to or less than the appropriate limits as described in paragraphs (a)(2)(ii)(A) and (a)(2)(ii)(B) of this section.

(A) For cleaning machines with a cleaning capacity, as reported in §63.468(d), that is less than or equal to 2.95 cubic meters, the emission limit shall be determined using table 6 or equation 1. If using table 6, and the cleaning capacity of the cleaning machine falls between two cleaning capacity sizes, then the lower of the two emission limits applies.

(B) For cleaning machines with a cleaning capacity as reported in §63.468(d), that is greater than 2.95 cubic meters, the emission limit shall be determined using equation 1.

$EL = 330 * (Vol)^{0.6}$ (1)

where:

EL = the 3-month rolling average monthly emission limit (kilograms/month).

Table 6_Emission Limits for Cleaning Machines Without a Solvent/Air Interface

Cleaning capacity (cubic meters)	3-month rolling average monthly emission limit (kilograms/month)

0.00	0
0.05	55
0.10	83
0.15	106
0.20	126
0.25	144
0.30	160
0.35	176
0.40	190
0.45	204
0.50	218
0.55	231
0.60	243
0.65	255
0.70	266
0.75	278
0.80	289
0.85	299
0.90	310
0.95	320
1.00	330
1.05	340
1.10	349
1.15	359
1.20	368
1.25	377
1.30	386
1.35	395
1.40	404
1.45	412
1.50	421
1.55	429
1.60	438
1.65	446
1.70	454
1.75	462
1.80	470
1.85	477
1.90	485
1.95	493
2.00	500
2.05	508
2.10	515
2.15	522
2.20	530
2.25	537

2.30	544
2.35	551
2.40	558
2.45	565
2.50	572
2.55	579
2.60	585
2.65	592
2.70	599
2.75	605
2.80	612
2.85	619
2.90	625
2.95	632

Vol = the cleaning capacity of the solvent cleaning machine (cubic meters).

(b) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with §63.464(a) shall demonstrate compliance with the applicable 3-month rolling average monthly emission limit on a monthly basis as described in §63.465(b) and (c).

(c) If the applicable 3-month rolling average emission limit is not met, an exceedance has occurred. All exceedances shall be reported as required in §63.468(h).

(d) As an alternative to meeting the requirements in §63.463, each owner or operator of a continuous web cleaning machine can demonstrate an overall cleaning system control efficiency of 70 percent or greater using the procedures in §63.465(g). This demonstration can be made for either a single cleaning machine or for a solvent cleaning system that contains one or more cleaning machines and ancillary equipment, such as storage tanks and distillation units. If the demonstration is made for a cleaning system, the facility must identify any modifications required to the procedures in §63.465(g) and they must be approved by the Administrator.

[59 FR 61805, Dec. 2, 1994, as amended at 64 FR 67801, Dec. 3, 1999; 65 FR 54423, Sept. 8, 2000]

§ 63.465 Test methods.

(a) Except as provided in paragraphs (f) and (g) of this section for continuous web cleaning machines, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with an idling emission limit standard in §63.463(b)(1)(ii), (b)(2)(ii), (c)(1)(ii), or (c)(2)(ii) shall determine the idling emission rate of the solvent cleaning machine using Reference Method 307 in appendix A of this part.

(b) Except as provided in paragraph (g) of this section for continuous web cleaning machines, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with §63.464 shall, on the first operating day of every month ensure that the solvent cleaning machine system contains only clean liquid solvent. This includes, but is not limited to, fresh unused solvent, recycled solvent, and used solvent that has been cleaned of soils. A fill line must be indicated during the first month the measurements are made. The solvent level within the machine must be returned to the same fill-line each month, immediately prior to calculating monthly emissions as specified in paragraph (c) of this section. The solvent cleaning machine does not have to be emptied and filled with fresh unused solvent prior to the calculations.

(c) Except as provided in paragraphs (f) and (g) of this section for continuous web cleaning machines, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with §63.464 shall, on the first operating day of the month, comply with the requirements specified in paragraphs (c)(1) through (3) of this section.

(1) Using the records of all solvent additions and deletions for the previous monthly reporting period required under §63.464(a), determine solvent emissions (Ei) using equation 2 for cleaning machines with a solvent/air interface and equation 3 for cleaning machines without a solvent/air interface:

$$E_i = \frac{SA_i - LSR_i - SSR_i}{AREA_i} \qquad (2)$$

$$E_n = SA_i - LSR_i - SSR_i \qquad (3)$$

where:

E_i=the total halogenated HAP solvent emissions from the solvent cleaning machine during the most recent monthly reporting period i, (kilograms of solvent per square meter of solvent/air interface area per month).

E_n=the total halogenated HAP solvent emissions from the solvent cleaning machine during the most recent monthly reporting period i, (kilograms of solvent per month).

SA_i=the total amount of halogenated HAP liquid solvent added to the solvent cleaning machine during the most recent monthly reporting period i, (kilograms of solvent per month).

LSR_i=the total amount of halogenated HAP liquid solvent removed from the solvent cleaning machine during the most recent monthly reporting period i, (kilograms of solvent per month).

SSR_i=the total amount of halogenated HAP solvent removed from the solvent cleaning machine in solid waste, obtained as described in paragraph (c)(2) of this section, during the most recent monthly reporting period i, (kilograms of solvent per month).

$AREA_i$=the solvent/air interface area of the solvent cleaning machine (square meters).

(2) Determine SSR_i using the method specified in paragraph (c)(2)(i) or (c)(2)(ii) of this section.

(i) From tests conducted using EPA reference method 25d.

(ii) By engineering calculations included in the compliance report.

(3) Determine the monthly rolling average, EA, for the 3-month period ending with the most recent reporting period using equation 4 for cleaning machines with a solvent/air interface or equation 5 for cleaning machines without a solvent/air interface:

$$EA_i = \frac{\sum_{j=1}^{3} E_i}{3} \qquad (4)\ EA_n = \frac{\sum_{j=1}^{3} E_n}{3} \qquad (5)$$

Where:

EA_i=the average halogenated HAP solvent emissions over the preceding 3 monthly reporting periods, (kilograms of solvent per square meter of solvent/air interface area per month).

EA_n=the average halogenated HAP solvent emissions over the preceding 3 monthly reporting periods (kilograms of solvent per month).

E_i=halogenated HAP solvent emissions for each month (j) for the most recent 3 monthly reporting periods (kilograms of solvent per square meter of solvent/air interface area).

E_n=halogenated HAP solvent emissions for each month (j) for the most recent 3 monthly reporting periods (kilograms of solvent per month).

j=1 = the most recent monthly reporting period.

j=2 = the monthly reporting period immediately prior to j=1.

j=3 = the monthly reporting period immediately prior to j=2.

(d) Each owner or operator of a batch vapor or in-line solvent cleaning machine using a dwell to comply with §63.463 shall determine the appropriate dwell time for each part or parts basket using the procedure specified in paragraphs (d)(1) and (d)(2) of this section.

(1) Determine the amount of time for the part or parts basket to cease dripping once placed in the vapor zone. The part or parts basket used for this determination must be at room temperature before being placed in the vapor zone.

(2) The proper dwell time for parts to remain in the freeboard area above the vapor zone is no less than 35 percent of the time determined in paragraph (d)(1) of this section.

(e) An owner or operator of a source shall determine their potential to emit from all solvent cleaning operations, using the procedures described in paragraphs (e)(1) through (e)(3) of this section. A facility's total potential to emit is the sum of the HAP emissions from all solvent cleaning operations, plus all HAP emissions from other sources within the facility.

(1) Determine the potential to emit for each individual solvent cleaning using equation 6.

$PTE_i=H_i \times W_i \times SAI_i$ (6)

Where:

PTE_i=the potential to emit for solvent cleaning machine i (kilograms of solvent per year).

H_i=hours of operation for solvent cleaning machine i (hours per year).

=8760 hours per year, unless otherwise restricted by a Federally enforceable requirement.

W_i=the working mode uncontrolled emission rate (kilograms per square meter per hour).

=1.95 kilograms per square meter per hour for batch vapor and cold cleaning machines.

=1.12 kilograms per square meter per hour for in-line cleaning machines.

SAI_i = solvent/air interface area of solvent cleaning machine i (square meters). Section 63.461 defines the solvent/air interface area for those machines that have a solvent/air interface. Cleaning machines that do not have a solvent/air interface shall calculate a solvent/air interface area using the procedure in paragraph (e)(2) of this section.

(2) Cleaning machines that do not have a solvent/air interface shall calculate a solvent/air interface area using equation 7.

$SAI=2.20 * (Vol)^{0.6}$ (7)

Where:

SAI=the solvent/air interface area (square meters).

Vol=the cleaning capacity of the solvent cleaning machine (cubic meters).

(3) Sum the PTE_i for all solvent cleaning operations to obtain the total potential to emit for solvent cleaning operations at the facility.

(f) Each owner or operator of a continuous web cleaning machine using a squeegee system to comply with §63.463(g)(3) shall determine the maximum product throughput using the method in this paragraph. The maximum product throughput for each squeegee

type used at a facility must be determined prior to December 2, 1999, the compliance date for these units.

(1) Conduct daily visual inspections of the continuous web part. This monitoring shall be conducted at the point where the continuous web part exits the squeegee system. It is not necessary for the squeegees to be new at the time monitoring is begun if the following two conditions are met:

(i) The continuous web part leaving the squeegee system has no visible solvent film.

(ii) The amount of continuous web that has been processed through the squeegees since the last replacement is known.

(2) Continue daily monitoring until a visible solvent film is noted on the continuous web part.

(3) Determine the length of continuous web product that has been cleaned using the squeegee since it was installed.

(4) The maximum product throughput for the purposes of this rule is equal to the time it takes to clean 95 percent of the length of product determined in paragraph (f)(3) of this section. This time period, in days, may vary depending on the amount of continuous web product cleaned each day.

(g) Each owner or operator of a continuous web cleaning machine demonstrating compliance with the alternative standard of §63.464(d) shall, on the first day of every month, ensure that the solvent cleaning machine contains only clean liquid solvent. This includes, but is not limited to, fresh unused solvent, recycled solvent, and used solvent that has been cleaned of soils. A fill-line must be indicated during the first month the measurements are made. The solvent level with the machine must be returned to the same fill-line each month, immediately prior to calculating overall cleaning system control efficiency emissions as specified in paragraph (h) in this section. The solvent cleaning machine does not need to be emptied and filled with fresh unused solvent prior to the calculation.

(h) Each owner or operator of a continuous web cleaning machines complying with §63.464(d) shall, on the first operating day of the month, comply with the following requirements.

(1) Using the records of all solvent additions, solvent deletions, and solvent recovered from the carbon adsorption system for the previous monthly reporting period required under §63.467(e), determine the overall cleaning system control efficiency (E_o) using Equation 8 of this section as follows:

$$E_o = R_i / (R_i + Sa_i - SSR_i) \qquad \text{(Eq. 8)}$$

Where:

E_o = overall cleaning system control efficiency.

R_i = the total amount of halogenated HAP liquid solvent recovered from the carbon adsorption system and recycled to the solvent cleaning system during the most recent monthly reporting period, i, (kilograms of solvent per month).

Sa_i = the total amount of halogenated HAP liquid solvent added to the solvent cleaning system during the most recent monthly reporting period, i, (kilograms of solvent per month).

SSR_i = the total amount of halogenated HAP solvent removed from the solvent cleaning system in solid waste, obtained as described in paragraph (c)(2) of this section, during the most recent monthly reporting period, i, (kilograms of solvent per month).

[59 FR 61805, Dec. 2, 1994, as amended at 64 FR 67801, Dec. 3, 1999; 65 FR 54423, Sept. 8, 2000]

§ 63.466 Monitoring procedures.

(a) Except as provided in paragraph (g) of this section, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the equipment standards in §63.463(b)(1)(i), (b)(2)(i), (c)(1)(i), (c)(2)(i), (g)(1), or (g)(2) shall conduct monitoring and record the results on a weekly basis for the control devices, as appropriate, specified in paragraphs (a)(1) through (5) of this section.

(1) If a freeboard refrigeration device is used to comply with these standards, the owner or operator shall use a thermometer or thermocouple to measure the temperature at the center of the air blanket during the idling mode.

(2) If a superheated vapor system is used to comply with these standards, the owner or operator shall use a thermometer or thermocouple to measure the temperature at the center of the superheated solvent vapor zone while the solvent cleaning machine is in the idling mode.

(3) If a squeegee system, air knife system, or combination squeegee and air knife system is used to comply with the requirements of §63.463(g) or (h), the owner or operator shall visually inspect the continuous web part exiting the solvent cleaning machine to ensure that no solvent film is visible on the part.

(4) Except as provided in paragraph (a)(5) of this section, if a superheated part system is used to comply with the requirements of §63.463(g) or (h), the owner or operator shall use a thermometer, thermocouple, or other temperature measurement device to measure the temperature of the continuous web part while it is in the solvent cleaning machine. This measurement can also be taken at the exit of the solvent cleaning machine.

(5) As an alternative to complying with paragraph (a)(4) of this section, the owner or operator can provide data, sufficient to satisfy the Administrator, that demonstrate that the part temperature remains above the boiling point of the solvent at all times that the part is within the continuous web solvent cleaning machine. This data could include design and operating conditions such as information supporting any exothermic reaction inherent in the processing.

(b) Except as provided in paragraph (g) of this section, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the equipment standards of §63.463 (b)(1)(i), (b)(2)(i), (c)(1)(i), or (c)(2)(i) shall conduct monitoring and record the results on a monthly basis for the control devices, as appropriate, specified in paragraphs (b)(1) and (b)(2) of this section.

(1) If a cover (working-mode, downtime-mode, and/or idling-mode cover) is used to comply with these standards, the owner or operator shall conduct a visual inspection to determine if the cover is opening and closing properly, completely covers the cleaning machine openings when closed, and is free of cracks, holes, and other defects.

(2) If a dwell is used, the owner or operator shall determine the actual dwell time by measuring the period of time that parts are held within the freeboard area of the solvent cleaning machine after cleaning.

(c) Except as provided in paragraph (g) of this section, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the equipment or idling standards in §63.463 shall monitor the hoist speed as described in paragraphs (c)(1) through (c)(4) of this section.

(1) The owner or operator shall determine the hoist speed by measuring the time it takes for the hoist to travel a measured distance. The speed is equal to the distance in meters divided by the time in minutes (meters per minute).

(2) The monitoring shall be conducted monthly. If after the first year, no exceedances of the hoist speed are measured, the owner or operator may begin monitoring the hoist speed quarterly.

(3) If an exceedance of the hoist speed occurs during quarterly monitoring, the monitoring frequency returns to monthly until another year of compliance without an exceedance is demonstrated.

(4) If an owner or operator can demonstrate to the Administrator's satisfaction in the initial compliance report that the hoist cannot exceed a speed of 3.4 meters per minute (11 feet per minute), the required monitoring frequency is quarterly, including during the first year of compliance.

(d) Except as provided in paragraph (g) of this section, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the equipment standards in

§63.463 (b)(1)(i), (b)(2)(i), (c)(1)(i), or (c)(2)(i) using a reduced room draft shall conduct monitoring and record the results as specified in paragraph(d)(1) or (d)(2) of this section.

(1) If the reduced room draft is maintained by controlling room parameters (i.e., redirecting fans, closing doors and windows, etc.), the owner or operator shall conduct an initial monitoring test of the windspeed and of room parameters, quarterly monitoring of windspeed, and weekly monitoring of room parameters as specified in paragraphs (d)(1)(i) and (d)(1)(ii) of this section.

(i) Measure the windspeed within 6 inches above the top of the freeboard area of the solvent cleaning machine using the procedure specified in paragraphs (d)(1)(i)(A) through (d)(1)(i)(D) of this section.

(A) Determine the direction of the wind current by slowly rotating a velometer or similar device until the maximum speed is located.

(B) Orient a velometer in the direction of the wind current at each of the four corners of the machine.

(C) Record the reading for each corner.

(D) Average the values obtained at each corner and record the average wind speed.

(ii) Monitor on a weekly basis the room parameters established during the initial compliance test that are used to achieve the reduced room draft.

(2) If an enclosure (full or partial) is used to achieve a reduced room draft, the owner or operator shall conduct an initial monitoring test and, thereafter, monthly monitoring tests of the windspeed within the enclosure using the procedure specified in paragraphs (d)(2)(i) and (d)(2)(ii) of this section and a monthly visual inspection of the enclosure to determine if it is free of cracks, holes and other defects.

(i) Determine the direction of the wind current in the enclosure by slowly rotating a velometer inside the entrance to the enclosure until the maximum speed is located.

(ii) Record the maximum wind speed.

(e) Except as provided in paragraph (g) of this section, each owner or operator using a carbon adsorber to comply with this subpart shall measure and record the concentration of halogenated HAP solvent in the exhaust of the carbon adsorber weekly with a colorimetric detector tube. This test shall be conducted while the solvent cleaning machine is in the working mode and is venting to the carbon adsorber. The exhaust concentration shall be determined using the procedure specified in paragraphs (e)(1) through (e)(3) of this section.

(1) Use a colorimetric detector tube designed to measure a concentration of 100 parts per million by volume of solvent in air to an accuracy of ± 25 parts per million by volume.

(2) Use the colorimetric detector tube according to the manufacturer's instructions.

(3) Provide a sampling port for monitoring within the exhaust outlet of the carbon adsorber that is easily accessible and located at least 8 stack or duct diameters downstream from any flow disturbance such as a bend, expansion, contraction, or outlet; downstream from no other inlet; and 2 stack or duct diameters upstream from any flow disturbance such as a bend, expansion, contraction, inlet or outlet.

(f) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the idling emission limit standards of §63.463 (b)(1)(ii), (b)(2)(ii), (c)(1)(ii), or (c)(2)(ii) shall comply with the requirements specified in paragraphs (f)(1) and (f)(2) of this section.

(1) If using controls listed in paragraphs (a) through (e) of this section, the owner or operator shall comply with the monitoring frequency requirements in paragraphs (a) through (e) of this section.

(2) If using controls not listed in paragraphs (a) through (e) of this section, the owner or operator shall establish the monitoring frequency for each control and submit it to the Administrator for approval in the initial test report.

(g) Each owner or operator using a control device listed in paragraphs (a) through (e) of this section can use alternative monitoring procedures approved by the Administrator.

[59 FR 61805, Dec. 2, 1994, as amended at 64 FR 67802, Dec. 3, 1999]

§ 63.467 Recordkeeping requirements.

(a) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of §63.463 shall maintain records in written or electronic form specified in paragraphs (a)(1) through (7) of this section for the lifetime of the machine.

(1) Owner's manuals, or if not available, written maintenance and operating procedures, for the solvent cleaning machine and control equipment.

(2) The date of installation for the solvent cleaning machine and all of its control devices. If the exact date for installation is not known, a letter certifying that the cleaning machine and its control devices were installed prior to, or on, November 29, 1993, or after November 29, 1993, may be substituted.

(3) If a dwell is used to comply with these standards, records of the tests required in §63.465(d) to determine an appropriate dwell time for each part or parts basket.

(4) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the idling emission limit standards of §63.463(b)(1)(ii), (b)(2)(ii), (c)(1)(ii), or (c)(2)(ii) shall maintain records of the initial performance test, including the idling emission rate and values of the monitoring parameters measured during the test.

(5) Records of the halogenated HAP solvent content for each solvent used in a solvent cleaning machine subject to the provisions of this subpart.

(6) If a squeegee system is used to comply with these standards, records of the test required by §63.466(f) to determine the maximum product throughput for the squeegees and records of both the weekly monitoring required by §63.466(a)(3) for visual inspection and the length of continuous web product cleaned during the previous week.

(7) If an air knife system or a combination squeegee and air knife system is used to comply with these standards, records of the determination of the proper operating parameter and parameter value for the air knife system.

(b) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with §63.463 shall maintain records specified in paragraphs (b)(1) through (b)(4) of this section either in electronic or written form for a period of 5 years.

(1) The results of control device monitoring required under §63.466.

(2) Information on the actions taken to comply with §63.463(e) and (f). This information shall include records of written or verbal orders for replacement parts, a description of the repairs made, and additional monitoring conducted to demonstrate that monitored parameters have returned to accepted levels.

(3) Estimates of annual solvent consumption for each solvent cleaning machine.

(4) If a carbon adsorber is used to comply with these standards, records of the date and results of the weekly measurement of the halogenated HAP solvent concentration in the carbon adsorber exhaust required in §63.466(e).

(c) Except as provided in paragraph (e) of this section for continuous web cleaning machines, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of §63.464 shall maintain records specified in paragraphs (c)(1) through (3) of this section either in electronic or written form for a period of 5 years.

(1) The dates and amounts of solvent that are added to the solvent cleaning machine.

(2) The solvent composition of wastes removed from cleaning machines as determined using the procedure described in §63.465(c)(2).

(3) Calculation sheets showing how monthly emissions and the rolling 3-month average emissions from the solvent cleaning machine were determined, and the results of all calculations.

(d) Each owner or operator of a solvent cleaning machine without a solvent/air interface complying with the provisions of §63.464 shall maintain records on the method used to determine the cleaning capacity of the cleaning machine.

(e) Each owner or operator of a continuous web cleaning machine complying with the provisions of §63.464(d) shall maintain the following records in either electronic or written form for a period of 5 years.

(1) The dates and amounts of solvent that are added to the solvent cleaning machine.

(2) The dates and amounts of solvent that are recovered from the desorption of the carbon adsorber system.

(3) The solvent composition of wastes removed from each cleaning machine as determined using the procedures in §63.465(c)(2).

(4) Calculation sheets showing the calculation and results of determining the overall cleaning system control efficiency, as required by §63.465.

[59 FR 61805, Dec. 2, 1994, as amended at 64 FR 67802, Dec. 3, 1999; 68 FR 37349, June 23, 2003]

§ 63.468 Reporting requirements.

(a) Each owner or operator of an existing solvent cleaning machine subject to the provisions of this subpart shall submit an initial notification report to the Administrator no later than August 29, 1995. This report shall include the information specified in paragraphs (a)(1) through (a)(6) of this section.

(1) The name and address of the owner or operator.

(2) The address (i.e., physical location) of the solvent cleaning machine(s).

(3) A brief description of each solvent cleaning machine including machine type (batch vapor, batch cold, vapor in-line or cold in-line), solvent/air interface area, and existing controls.

(4) The date of installation for each solvent cleaning machine or a letter certifying that the solvent cleaning machine was installed prior to, or after, November 29, 1993.

(5) The anticipated compliance approach for each solvent cleaning machine.

(6) An estimate of annual halogenated HAP solvent consumption for each solvent cleaning machine.

(b) Each owner or operator of a new solvent cleaning machine subject to the provisions of this subpart shall submit an initial notification report to the Administrator. New sources for which construction or reconstruction had commenced and initial startup had not occurred before December 2, 1994, shall submit this report as soon as practicable before startup but no later than January 31, 1995. New sources for which the construction or reconstruction commenced after December 2, 1994, shall submit this report as soon as practicable before the construction or reconstruction is planned to commence. This report shall include all of the information required in §63.5(d)(1) of subpart A (General Provisions), with the revisions and additions in paragraphs (b)(1) through (b)(3) of this section.

(1) The report shall include a brief description of each solvent cleaning machine including machine type (batch vapor, batch cold, vapor in-line, or cold-line), solvent/air interface area, and existing controls.

(2) The report shall include the anticipated compliance approach for each solvent cleaning machine.

(3) In lieu of §63.5(d)(1)(ii)(H) of subpart A of this part, the owner or operator must report an estimate of annual halogenated HAP solvent consumption for each solvent cleaning machine.

(c) Each owner or operator of a batch cold solvent cleaning machine subject to the provisions of this subpart shall submit a compliance report to the Administrator. For existing sources, this report shall be submitted to the Administrator no later than 150 days after the compliance date specified in §63.460(d). For new sources, this report shall be submitted to the Administrator no later than 150 days after startup or May 1, 1995, whichever is later. This report shall include the requirements specified in paragraphs (c)(1) through (c)(4) of this section.

(1) The name and address of the owner or operator.

(2) The address (i.e., physical location) of the solvent cleaning machine(s).

(3) A statement, signed by the owner or operator of the solvent cleaning machine, stating that the solvent cleaning machine for which the report is being submitted is in compliance with the provisions of this subpart.

(4) The compliance approach for each solvent cleaning machine.

(d) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of §63.463 shall submit to the Administrator an initial statement of compliance for each solvent cleaning machine. For existing sources, this

report shall be submitted to the Administrator no later than 150 days after the compliance date specified in §63.460(d). For new sources, this report shall be submitted to the Administrator no later than 150 days after startup or May 1, 1995, whichever is later. This statement shall include the requirements specified in paragraphs (d)(1) through (d)(6) of this section.

(1) The name and address of the owner or operator.

(2) The address (i.e., physical location) of the solvent cleaning machine(s).

(3) A list of the control equipment used to achieve compliance for each solvent cleaning machine.

(4) For each piece of control equipment required to be monitored, a list of the parameters that are monitored and the values of these parameters measured on or during the first month after the compliance date.

(5) Conditions to maintain the wind speed requirements of §63.463(e)(2)(ii), if applicable.

(6) Each owner or operator of a solvent cleaning machine complying with the idling emission limit standards of §63.463(b)(1)(ii), (b)(2)(ii), (c)(1)(ii), and (c)(2)(ii) shall submit a test report for tests of idling emissions meeting the specifications in Method 307 of appendix A to this subpart. This report shall comply with the requirements specified in paragraphs (d)(6)(i) through (d)(6)(iv) of this section.

(i) This test must be on the same specific model cleaner used at the source. The test can be done by the owner or operator of the affected machine or can be supplied by the vendor of that solvent cleaning machine or a third party.

(ii) This report must clearly state the monitoring parameters, monitoring frequency and the delineation of exceedances for each parameter.

(iii) If a solvent cleaning machine vendor or third party test report is used to demonstrate compliance, it shall include the following for the solvent cleaning machine tested: Name of person(s) or company that performed the test, model name, the date the solvent cleaning machine was tested, serial number, and a diagram of the solvent cleaning machine tested.

(iv) If a solvent cleaning machine vendor or third party test report is used, the owner or operator of the solvent cleaning machine shall comply with the requirements specified in either paragraphs (d)(6)(iv)(A) and (d)(6)(iv)(B) of this section.

(A) Submit a statement by the solvent cleaning machine vendor that the unit tested is the same as the unit the report is being submitted for.

(B) Demonstrate to the Administrator's satisfaction that the solvent emissions from the solvent cleaning machine for which the test report is being submitted are equal to or less than the solvent emissions from the solvent cleaning machine in the vendor test report.

(7) If a carbon adsorber is used to comply with these standards, the date and results of the weekly measurement of the halogenated HAP solvent concentration in the carbon adsorber exhaust required in §63.466(e).

(e) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of §63.464 shall submit to the Administrator an initial statement of compliance for each solvent cleaning machine. For existing sources, this report shall be submitted to the Administrator no later than 150 days after the compliance date specified in §63.460(d). For new sources, this report shall be submitted to the Administrator no later than 150 days after startup or May 1, 1995, whichever is later. The statement shall include the information specified in paragraphs (e)(1) through (e)(4) of this section.

(1) The name and address of the solvent cleaning machine owner or operator.

(2) The address of the solvent cleaning machine(s).

(3) The solvent/air interface area for each solvent cleaning machine or, for cleaning machines without a solvent/air interface, a description of the method used to determine the cleaning capacity and the results.

(4) The results of the first 3-month average emissions calculation.

(f) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of §63.463 shall submit an annual report by February 1 of the year following the one for which the reporting is being made. This report shall include the requirements specified in paragraphs (f)(1) through (f)(3) of this section.

(1) A signed statement from the facility owner or his designee stating that, "All operators of solvent cleaning machines have received training on the proper operation of solvent cleaning machines and their control devices sufficient to pass the test required in §63.463(d)(10)."

(2) An estimate of solvent consumption for each solvent cleaning machine during the reporting period.

(3) The reports required under paragraphs (f) and (g) of this section can be combined into a single report for each facility.

(g) Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of §63.464 shall submit a solvent emission report every

year. This solvent emission report shall contain the requirements specified in paragraphs (g)(1) through (g)(4) of this section.

(1) The size and type of each unit subject to this subpart (solvent/air interface area or cleaning capacity).

(2) The average monthly solvent consumption for the solvent cleaning machine in kilograms per month.

(3) The 3-month monthly rolling average solvent emission estimates calculated each month using the method as described in §63.465(c).

(4) The reports required under paragraphs (f) and (g) of this section can be combined into a single report for each facility.

(h) Each owner or operator of a batch vapor or in-line solvent cleaning machine shall submit an exceedance report to the Administrator semiannually except when, the Administrator determines on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the source or, an exceedance occurs. Once an exceedance has occurred the owner or operator shall follow a quarterly reporting format until a request to reduce reporting frequency under paragraph (i) of this section is approved. Exceedance reports shall be delivered or postmarked by the 30th day following the end of each calendar half or quarter, as appropriate. The exceedance report shall include the applicable information in paragraphs (h) (1) through (3) of this section.

(1) Information on the actions taken to comply with §63.463 (e) and (f). This information shall include records of written or verbal orders for replacement parts, a description of the repairs made, and additional monitoring conducted to demonstrate that monitored parameters have returned to accepted levels.

(2) If an exceedance has occurred, the reason for the exceedance and a description of the actions taken.

(3) If no exceedances of a parameter have occurred, or a piece of equipment has not been inoperative, out of control, repaired, or adjusted, such information shall be stated in the report.

(i) An owner or operator who is required to submit an exceedance report on a quarterly (or more frequent) basis may reduce the frequency of reporting to semiannual if the conditions in paragraphs (i)(1) through (i)(3) of this section are met.

(1) The source has demonstrated a full year of compliance without an exceedance.

(2) The owner or operator continues to comply with all relevant recordkeeping and monitoring requirements specified subpart A (General Provisions) and in this subpart.

(3) The Administrator does not object to a reduced frequency of reporting for the affected source as provided in paragraph (e)(3)(iii) of subpart A (General Provisions).

(j) The Administrator has determined, pursuant to section 502(a) of the Act, that if you are an owner or operator of any batch cold solvent cleaning machine that is not a major source and is not located at a major source, as defined under 40 CFR 63.2, 70.2, or 71.2, you are exempt from title V permitting requirements under 40 CFR parts 70 or 71, as applicable, for that source, provided you are not otherwise required to obtain a title V permit. If you own or operate any other solvent cleaning machine subject to the provisions of this subpart, you are also subject to title V permitting requirements. Your title V permitting authority may defer your source from these permitting requirements until December 9, 2004, if your source is not a major source and is not located at a major source as defined under 40 CFR 63.2, 70.2, or 71.2, and is not otherwise required to obtain a title V permit. If you receive a deferral under this section, you must submit a title V permit application by December 9, 2005. You must continue to comply with the provisions of this subpart applicable to area sources, even if you receive a deferral from title V permitting requirements.

(k) Each owner or operator of a solvent cleaning machine requesting an equivalency determination, as described in §63.469 shall submit an equivalency request report to the Administrator. For existing sources, this report must be submitted to the Administrator no later than June 3, 1996. For new sources, this report must be submitted and approved by the Administrator prior to startup.

[59 FR 61805, Dec. 2, 1994; 60 FR 29485, June 5, 1995, as amended at 64 FR 69643, Dec. 14, 1999]

§ 63.469 Equivalent methods of control.

Upon written application, the Administrator may approve the use of equipment or procedures after they have been satisfactorily demonstrated to be equivalent, in terms of reducing emissions of methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride or chloroform to the atmosphere, to those prescribed for compliance within a specified paragraph of this subpart. The application must contain a complete description of the equipment or procedure and the proposed equivalency testing procedure and the date, time, and location scheduled for the equivalency demonstration.

§ 63.470 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or Tribal agency.

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

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the requirements in §§63.460, 63.462(a) through (d), and 63.463 through 63.464 (except for the authorities in §63.463(d)(9)). Use the procedures in §63.469 to request the use of alternative equipment or procedures.

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart.

(3) Approval of major alternatives to monitoring under §63.8(f), as defined in §63.90, and as required in this subpart.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.

[68 FR 37349, June 23, 2003]

Appendix A to Subpart T of Part 63—Test of Solvent Cleaning Procedures

General Questions

___ 1. What is the maximum allowable speed for parts entry and removal?

A. 8.5 meters per minute (28 feet per minute).

B. 3.4 meters per minute (11 feet per minute).

C. 11 meters per minute (36 feet per minute).

D. No limit.

___ 2. How do you ensure that parts enter and exit the solvent cleaning machine at the speed required in the regulation?

A. Program on computerized hoist monitors speed.

B. Can judge the speed by looking at it.

C. Measure the time it takes the parts to travel a measured distance.

___ 3. Identify the sources of air disturbances.

A. Fans

B. Open doors

C. Open windows

D. Ventilation vents

E. All of the above

___ 4. What are the three operating modes?

A. Idling, working and downtime

B. Precleaning, cleaning, and drying

C. Startup, shutdown, off

D. None of the above

___ 5. When can parts or parts baskets be removed from the solvent cleaning machine?

A. When they are clean

B. At any time

C. When dripping stops

D. Either A or C is correct

___ 6. How must parts be oriented during cleaning?

A. It does not matter as long as they fit in the parts basket.

B. So that the solvent pools in the cavities where the dirt is concentrated.

C. So that solvent drains from them freely.

___ 7. During startup, what must be turned on first, the primary condenser or the sump heater?

A. Primary condenser

B. Sump heater

C. Turn both on at same time

D. Either A or B is correct

___ 8. During shutdown, what must be turned off first, the primary condenser or the sump heater?

A. Primary condenser

B. Sump heater

C. Turn both off at same time

D. Either A or B is correct

___ 9. In what manner must solvent be added to and removed from the solvent cleaning machine?

A. With leak proof couplings

B. With the end of the pipe in the solvent sump below the liquid solvent surface.

C. So long as the solvent does not spill, the method does not matter.

D. A and B

___ 10. What must be done with waste solvent and still and sump bottoms?

A. Pour down the drain

B. Store in closed container

C. Store in a bucket

D. A or B

___ 11. What types of materials are prohibited from being cleaned in solvent cleaning machines using halogenated HAP solvents?

A. Sponges

B. Fabrics

C. Paper

D. All of the above

Control Device Specific Questions

[ ] Freeboard Refrigeration Device

___ 1. What temperature must the FRD achieve?

A. Below room temperature

B. 50 °F

C. Below the solvent boiling point

D. 30 percent below the solvent boiling point

[ ] Working-Mode Cover

___ 2. When can a cover be open?

A. While parts are in the cleaning machine

B. During parts entry and removal

C. During maintenance

D. During measurements for compliance purposes

E. A and C

F. B, C, and D

___ 3. Covers must be maintained in what condition?

A. Free of holes

B. Free of cracks

C. So that they completely seal cleaner opening

D. All of the above

[ ] Dwell

___ 4. Where must the parts be held for the appropriate dwell time?

A. In the vapor zone

B. In the freeboard area above the vapor zone

C. Above the cleaning machine

D. In the immersion sump

Answers

General Questions

1. B

2. A or C

3. E

4. A

5. C

6. C

7. A

8. B

9. D

10. B

11. D

Control Device Specific Questions

1. D

2. F

3. D

4. B

[59 FR 61818, Dec. 2, 1994; 60 FR 29485, June 5, 1995]

Appendix B to Subpart T of Part 63—General Provisions Applicability to Subpart T

Reference	Applies to subpart T		Comments
	BCC	BVI	
63.1(a) (1)-(3)	Yes	Yes	
63.1(a)(4)	Yes	Yes	Subpart T (this appendix) specifies applicability of each paragraph in subpart A to subpart T.
63.1(a)(5)	No	No	
63.1(a) (6)-(8)	Yes	Yes	
63.1(a)(9)	No	No	
63.1(a)(10)	Yes	Yes	
63.1(a)(11)	No	No	Subpart T allows submittal of notifications and reports through the U.S. mail, fax, and courier. Subpart T requires that the postmark for notifications and reports submitted through the U.S. mail or other non-Governmental mail carriers be on or before deadline specified in an applicable requirement.
63.1(a) (12)-(14)	Yes	Yes	
63.1(b)(1)	No	No	Subpart T specifies applicability.
63.1(b)(2)	No	Yes	
63.1(b)(3)	No	No	Subpart T requires that a record of halogenated cleaning machine applicability determination be kept on site for 5 years, or until the cleaning machine changes its operations. The record shall be sufficiently detailed to allow the Administrator to make a finding about the source's applicability status with regard to subpart T.
63.1(c)(1)	Yes	Yes	
63.1(c)(2)	Yes	Yes	Subpart T, § 63.46(8)(h), indicates a Title V permit exemption for halogenated HAP batch cold solvent cleaning machines that are not major sources and not located at a major source. This section also specifies a deferral from the requirement of a Title V permit for owners or operators of solvent cleaning machines

			subject to subpart T provisions, other than halogenated HAP batch cold solvent cleaning machines, that are not major sources, and not located at a major source.
63.1(c)(3)	No	No	
63.1(c)(4)	Yes	Yes	
63.1(c)(5)	Yes	Yes	Subpart T does not require continuous monitoring systems (CMS) or continuous opacity monitoring systems. Therefore, notifications and requirements for CMS and COMS specified in subpart A do not apply to subpart T.
63.1(d)	No	No	
63.1(e)	No	Yes	
63.2	Yes	Yes	Subpart T definitions (§ 63.461) for existing and new overlap with the definitions for existing source and new source in subpart A (§ 63.2). Both subpart A and T also define Administrator.
63.3(a)-(c)	Yes	Yes	
63.4(a) (1)-(3)	Yes	Yes	
63.4(a)(4)	No	No	
63.4(a)(5)	Yes	Yes	
63.4(b)-(c)	Yes	Yes	
63.5(a)(1)	Yes	Yes	
63.5(a)(2)	Yes	Yes	
63.5(b)(1)	Yes	Yes	
63.5(b)(2)	No	No	
63.5(b)(3)	No	No	Subpart T overrides the requirement for approval prior to constructing a new or reconstructing an existing major source.
63.5(b)(4)-(6)	Yes	Yes	
63.5(c)	No	No	
63.5 (d)-(f)	No	No	Subpart T overrides the requirement to submit an application for approval of construction or reconstruction of a halogenated solvent cleaning machine.
63.6(a)	Yes	Yes	
63.6(b) (1)-(5)	Yes	Yes	Subpart T, § 63.460, specifies compliance dates.
63.6(b)(6)	No	No	
63.6(b)(7)	No	No	Subpart T has the same requirements for affected halogenated HAP solvent cleaning

machine subcategories that are located at area sources as it does for those located at major sources.

63.6(c)(1)-(2)..... Yes..... Yes..... Subpart T allows 3 years from the date of promulgation for both area and major existing sources to comply.

63.6(c) (3)-(4)..... No..... No.....

63.6(c)(5)..... Yes..... Yes..... Subpart T has the same requirements for affected halogenated HAP solvent cleaning machine subcategories that are located at area sources as it does for those located at major sources. Subpart T allows 3 years from the date of promulgation for both area and major existing sources to comply.

63.6(d)..... No..... No.....

63.6(e)(1)-(2)..... Yes..... Yes.....

63.6(e)(3)..... No..... No..... Subpart T overrides the requirement of a startup, shutdown, and malfunction plan. Subpart T specifies startup and shutdown procedures to be followed by an owner or operator for batch vapor and in-line cleaning machines.

63.6(f)-(g)..... Yes..... Yes.....

63.6(h)..... No..... No..... Subpart T does not require compliance with an opacity or visible emission standard.

63.6(i) (1)-(14)..... Yes..... Yes.....

63.6(i)(15)..... No..... No.....

63.6(i)(16)..... Yes..... Yes.....

63.6(j)..... Yes..... Yes.....

63.7(a)..... No..... Yes..... Subpart T gives owners or operators the option to perform an idling emission performance test as a way of demonstrating compliance. Other options are also available that do not require a performance test.

63.7(b)..... No..... Yes..... This is only required for those owners or operators that choose the idling emission standard as their compliance option.

63.7(c)(1)..... No..... Yes..... This is only required for those owners or

			operators that choose the idling emission standard as their compliance option.
63.7(c) (2)-(3)	No	No	Subpart T does not require a site-specific test plan for the idling emission performance test.
63.7(c)(4)	No	No	Subpart T does not require a performance test that involves the retrieval of gas samples, and therefore this does not apply.
63.7(d)	No	No	Requirements do not apply to the idling emission performance test option.
63.7(e)	No	Yes	
63.7(f)	No	Yes	
63.7(g)	No	Yes	Subpart T specifies what is required to demonstrate idling emission standard compliance through the use of the Environmental Protection Agency test method 307 and control device monitoring. Reports and records of testing and monitoring are required for compliance verification. Three runs of the test are required for compliance, as specified in § 63.7(e) of subpart A.
63.7(h)	No	No	Subpart T does not require the use of a performance test to comply with the standard. The idling emission standard option (which requires an idling emission performance test) is an alternative option offered to owners or operators of batch vapor and in-line cleaning machines for compliance flexibility.
63.8 (a)-(b)	Yes	Yes	
63.8 (c)-(e)	No	No	Subpart T does not require the use of continuous monitoring systems to demonstrate compliance.
63.8(f)	Yes	Yes	
63.8(g)	No	No	Subpart T does not require continuous opacity monitoring systems and continuous monitoring systems data.
63.9(a) (1)-(4)	Yes	Yes	
63.9(b)(1)	Yes	Yes	
63.9(b)(2)	Yes	Yes	Subpart T includes all of those requirements stated in subpart A, except that subpart A also requires a statement

			as to whether the affected source is a major or an area source, and an identification of the relevant standard (including the source's compliance date). Subpart T also has some more specific information requirements specific to the affected source (see subpart T, §§ 63.468(a)-(b)).
63.9(b)(3)	Yes	Yes	The subpart A and subpart T initial notification reports differ (see above).
63.9(b)(4)	No	No	Subpart T does not require an application for approval of construction or reconstruction.
63.9(b)(5)	Yes	Yes	
63.9(c)	Yes	Yes	
63.9(d)	Yes	Yes	
63.9(e)	Yes	Yes	Under subpart T, this requirement only applies to owners or operators choosing to comply with the idling emissions standard.
63.9(f)	No	No	Subpart T does not require opacity or visible emission observations.
63.9(g)(1)	No	No	Subpart T does not require the use of continuous monitoring systems or continuous opacity monitoring systems.
63.9(h)	No	No	Section 63.468 of subpart T requires an initial statement of compliance for existing sources to be submitted to the Administrator no later than 150 days after the compliance date specified in § 63.460(d) of subpart T. For new sources, this report is to be submitted to the Administrator no later than 150 days from the date specified in § 63.460(c).
63.9(i)	Yes	Yes	
63.9(j)	Yes	Yes	
63.10(a)	Yes	Yes	
63.10(b)	No	No	Recordkeeping requirements are specified in subpart T.
63.10(c) (1)-(15)	No	No	Subpart T does not require continuous monitoring systems.
63.10(d)(1)	Yes	Yes	
63.10(d)(2)	No	No	Reporting requirements are specified in

			subpart T.
63.10(e) (l)-(2)	No	No	Subpart T does not require continuous emissions monitoring systems.
63.10(e)(3)	No	No	Subpart T does not require continuous monitoring systems.
63.10(e)(4)	No	No	Subpart T does not require continuous opacity monitoring systems.
63.10(f)	Yes	Yes	
63.11(a)	Yes	Yes	
63.11(b)	No	No	Flares are not a control option under subpart T.
63.12 (a)-(c)	Yes	Yes	
63.13 (a)-(c)	Yes	Yes	
63.14	No	No	Subpart T requirements do not require the use of the test methods incorporated by reference in subpart A.
63.15(a)-(b)	Yes	Yes	

BCC=Batch Cold Cleaning Machines.
BVI=Batch Vapor and In-line Cleaning Machines.

[59 FR 61818, Dec. 2, 1994; 60 FR 29485, June 5, 1995]

CERTIFICATE OF SERVICE

I, Pam Owen, hereby certify that a copy of this permit has been mailed by first class mail to Aerojet - General Corporation, PO Box 1036, Camden, AR, 71711-1036, on this 8th day of August, 2007.

Pam Owen

Pam Owen, AAII, Air Division