PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR PROGRAM
33 North Stone Avenue, Suite 700 • Tucson, AZ 85701 • Phone: (520) 724-7400

AIR QUALITY PERMIT
(As required by Title 17.12, Article II, Pima County Code)

ISSUED TO

LEARJET INC.
1255 E AERO PARK BLVD
TUCSON, ARIZONA  85756-9279

This air quality permit does not relieve applicant of responsibility for meeting all air pollution regulations

THIS PERMIT ISSUED SUBJECT TO THE SPECIFIC AND GENERAL CONDITIONS IDENTIFIED IN THIS PERMIT

PERMIT NUMBER 825
PERMIT CLASS I

ISSUED: October 19, 2017
EXPIRES: October 18, 2022

REVISED: July 25, 2018

Rupesh Patel, Air Program Manager, PDEQ
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SUMMARY

Learjet, Inc. owns and operates an aerospace completion and maintenance facility in Tucson, Arizona (the Tucson Service Center) ‘the facility’. Air pollution related processes at the facility consist of aerospace rework activities and supporting facilities. Aerospace rework activities include painting and depainting of aircraft, associated cleaning, aircraft interior rework (including wood furniture manufacturing), aircraft refueling and fuel storage, and process heating/drying. Supporting facilities include combustion engines for backup power and fire control, combustion units for space heating, surface coating of metal parts, spray painting, abrasive blasting, facility maintenance (painting, cleaning and mechanical support) and fuel storage.

The facility is a Major Source of Hazardous Air Pollutants (HAPs), Volatile Organic Compounds (VOC’s), and Nitrogen Oxide (NOX). It is located in an area of Pima County that is classified as attainment for all criteria pollutants. Potential emissions from the source are displayed below, in Table 1. Potential emissions were calculated using standard emission factors and information provided in the application for the permit renewal submitted September 19, 2016 and updated during the source review process. Additional emissions are listed as provided in the August 8, 2017 Minor Revision application. The numbers are for reference purposes only and are not intended for direct enforcement unless specified in the conditions of this permit as an enforceable emissions limitation by rule or as a voluntary accepted condition(s) by the Permittee.

Facility Wide Emissions

<table>
<thead>
<tr>
<th>Source</th>
<th>Potential to Emit Emissions (tpy)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NOx</td>
</tr>
<tr>
<td>Existing Equipment Emissions (Permit Renewal)</td>
<td></td>
</tr>
<tr>
<td>Boilers and Heaters</td>
<td>64.14</td>
</tr>
<tr>
<td>Engines</td>
<td>87.47</td>
</tr>
<tr>
<td>Fueling Operations</td>
<td>-</td>
</tr>
<tr>
<td>Storage Tanks</td>
<td>-</td>
</tr>
<tr>
<td>Aerospace Rework</td>
<td>-</td>
</tr>
<tr>
<td>Subtotal</td>
<td>151.61</td>
</tr>
<tr>
<td>Minor Revision Received August 8, 2017 – Relocation Project</td>
<td></td>
</tr>
<tr>
<td>Dust Collectors</td>
<td>-</td>
</tr>
<tr>
<td>Make-up Air Units</td>
<td>0.63</td>
</tr>
<tr>
<td>Aerospace Rework</td>
<td>-</td>
</tr>
<tr>
<td>Subtotal</td>
<td>0.63</td>
</tr>
<tr>
<td>Revision above significant emission threshold?</td>
<td>No</td>
</tr>
<tr>
<td>Total</td>
<td>152.24</td>
</tr>
<tr>
<td>Title V Source Thresholds?</td>
<td>100</td>
</tr>
<tr>
<td>Above Title V thresholds?</td>
<td>Yes</td>
</tr>
<tr>
<td>Federal NSR Thresholds²</td>
<td>250</td>
</tr>
<tr>
<td>Above Federal NSR thresholds?</td>
<td>No</td>
</tr>
</tbody>
</table>

1 GHG include CO2, N2O and CH4. Emissions shown are based on CO2 equivalent (CO2eq). No hydrofluorocarbon, perfluorocarbon, or sulfur hexafluoride emissions are expected from any of the equipment.

2 Federal NSR thresholds for a non-categorical stationary source in an attainment area for all regulated pollutants.
PART A: GENERAL CONDITIONS

(References to A.R.S. are references to the Arizona Revised Statutes, references to A.A.C. are references to the Arizona Administrative Code, and references to PCC are references to Title 17 of the Pima County Code)

I. PERMIT EXPIRATION AND RENEWAL

A. This permit is valid for a period of five years from the date of issuance.

B. The Permittee shall submit an application for renewal of this permit at least 6 months, but not more than 18 months prior to the date of permit expiration.

II. COMPLIANCE WITH PERMIT CONDITIONS

A. The Permittee shall comply with all conditions of this permit including all applicable requirements of the Arizona air quality statutes and Pima County air quality rules. Any permit noncompliance constitutes a violation of the Arizona Revised Statutes and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act.

B. 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 in order to maintain compliance with the conditions of this permit.

III. PERMIT REVISION, REOPENING, REVOCATION AND REISSUANCE, OR TERMINATION FOR CAUSE

A. The permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, termination; or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

B. The permit shall be reopened and revised under any of the following circumstances:

1. Additional applicable requirements under the Clean Air Act become applicable to a Class I source. Such a reopening shall only occur if there are three or more years remaining in the permit term. The reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless an application for renewal has been submitted pursuant to PCC 17.12.140.B. Any permit revision required pursuant to this subparagraph shall comply with the provisions in PCC 17.12.140 for permit renewal and shall reset the five-year permit term.

2. Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the Class I permit.

3. The Control Officer or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

4. The Control Officer or the Administrator determines that the permit needs to be revised or revoked to assure compliance with the applicable requirements.
C. Proceedings to reopen and reissue a permit, including appeal of any final action relating to a permit reopening, shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Such reopenings shall, except for reopenings under condition III.B.1 above, affect only those parts of the permit for which cause to reopen exist. Such reopenings shall be made as expeditiously as practicable. Permit reopenings for reasons other than those stated in condition III.B.1 above shall not result in a resetting of the five-year permit term.

IV. POSTING OF PERMIT

The Permittee, who has been granted an individual permit by PDEQ or a general permit and authorization to operate (ATO), shall maintain a complete copy of the permits and ATO’s onsite. If it is not feasible to maintain a copy of the permit and ATO onsite, the Permittee may request, in writing, to maintain a copy of the permit at an alternate location. Upon written approval by the Control Officer, the Permittee must maintain a complete copy of the permit at the approved alternative location. In addition, the machine(s), equipment, device(s), or other article(s) for which the permit or ATO has been issued shall be affixed with a unique and clearly visible and accessible identification (ID).

V. FEE PAYMENT

The Permittee shall pay fees to the Control Officer pursuant to PCC 17.12.510.

VI. ANNUAL EMISSIONS INVENTORY QUESTIONNAIRE

A. The Permittee shall complete and submit to the Control Officer an annual emissions inventory questionnaire. The questionnaire is due by March 31 or ninety days after the Control Officer makes the request and inventory form available, whichever occurs later, and shall include emission information for the previous calendar year. These requirements apply whether or not a permit has been issued and whether or not a permit application has been filed.

B. The questionnaire shall be on a form provided by or approved by the Control Officer and shall include the information required by PCC 17.12.160.

VII. COMPLIANCE CERTIFICATION

The Permittee shall submit a compliance certification to the Control Officer that describes the compliance status of the source with respect to each permit condition. Certifications shall be submitted on the dates and frequency specified in Part B of this permit.

A. The compliance certification shall include the following:

1. Identification of each term or condition contained in the permit including emission limitations, standards, or work practices that are the basis of the certification;

2. Identification of the method(s) or other means used by the Permittee for determining the compliance status with each term and condition during the certification period. Such methods and other means shall include, at a minimum, the methods and means required under PCC 17.12.040(A)(3), (monitoring including the related recordkeeping and reporting sections of this permit. If necessary, the Permittee also shall identify any other material information that must be included in the certification to comply with Section 113(c)(2) of the Clean Air Act, which prohibits knowingly making a false certification or omitting material information;
3. The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the methods or means designated in condition VII.A.2 above. The certification shall identify each deviation and take it into account for consideration in the compliance certification;

4. For emission units subject to 40 CFR Part 64, the certification shall also identify as possible exceptions to compliance any period during which compliance is required and in which an excursion or exceedance defined under 40 CFR Part 64 occurred;

5. All instances of deviations from permit requirements reported pursuant to condition XLB of Part A as well as progress reports on all outstanding compliance schedules submitted pursuant to PCC 17.12.080; and

6. Other facts the Control Officer may require to determine the compliance status of the facility.

B. A copy of all compliance certifications for Class I permits shall also be submitted to the EPA Administrator. The address for the EPA Administrator is:

EPA Region 9 Enforcement Office, 75 Hawthorne St (Air-5), San Francisco, CA 94105

VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS

Any document required to be submitted by this permit, including reports, shall contain a certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required by this permit shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

IX. INSPECTION AND ENTRY

The Permittee shall allow the Control Officer or the authorized representative of the Control Officer upon presentation of proper credentials to:

A. Enter upon the Permittee’s premises where a source is located, emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;

B. Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;

C. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

D. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and

E. Record any inspection by use of written, electronic, magnetic and photographic media.

X. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARD

If this source becomes subject to a standard promulgated by the Administrator pursuant to Section 112(d) of the Clean Air Act (National Emission Standards for Hazardous Air Pollutants - NESHAP), then the Permittee shall, within twelve months of the date on which the standard is promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard.
XI. EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCY REPORTING

A. Excess Emissions Reporting

1. Excess emissions shall be reported as follows:

a. The Permittee shall report to the Control Officer any emissions in excess of the limits established by this permit. Such report shall be in two parts as specified below:

i. Notification by telephone, facsimile or e-mail within 24 hours of the time when the Permittee first learned of the occurrence of excess emissions including all available information in condition XI.A.1.b below. The number to call to report excess emissions is 520-724-7400. The facsimile number to report excess emissions is 520-838-7432. The e-mail to report excess emissions is Air.Permits@pima.gov

ii. Detailed written notification by submission of an excess emissions report within 72 hours of the notification in XI.A.1.a.i above. Notifications should be mailed or e-mailed to:

PDEQ Air Program 33 N. Stone Avenue, Suite 700, Tucson, Arizona 85701.
Air.Permits@pima.gov

b. The report shall contain the following information:

i. Identity of each stack or other emission point where the excess emission occurred;

ii. Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;

iii. Date, time, and duration or expected duration of the excess emissions;

iv. Identity of the equipment from which the excess emissions emanated;

v. Nature and cause of the emissions;

vi. If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions; and

vii. The steps that were or are being taken to limit the excess emissions; If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with permit procedures.

2. In the case of continuous or recurring excess emissions, the notification requirements of this section shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in such notification an estimate of the time the excess emissions will continue. Excess emissions occurring after the estimated time period or changes in the nature of the emissions as originally reported shall require additional notification pursuant to XI.A.1 above.
Part A: General Provisions

B. Permit Deviations Reporting

The Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. Prompt reporting shall mean that the report was submitted to the Control Officer by certified mail, facsimile, e-mail (Air.Permits@pima.gov) or hand delivery within two working days of the time when emission limitations were exceeded due to an emergency or within two working days of the time when the Permittee first learned of the occurrence of a deviation from a permit requirement.

C. Emergency Provision

1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, that requires immediate corrective action to restore normal operation and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emission attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.

2. An emergency constitutes an affirmative defense to an action brought for noncompliance with the technology-based emission limitations if condition XI.C.3 below is met.

3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
   a. An emergency occurred and that the Permittee can identify the cause or causes of the emergency;
   b. The permitted facility was being properly operated at the time of the emergency;
   c. During the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
   d. The Permittee submitted notice of the emergency to the Control Officer by certified mail, facsimile, e-mail (Air.Permits@pima.gov) or hand delivery within two working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.

4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

D. Compliance Schedule

For any excess emission or permit deviation that cannot be corrected within 72 hours, the Permittee is required to submit a compliance schedule to the Control Officer within 21 days of such occurrence. The compliance schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with the permit terms or conditions that have been violated.
E. Affirmative Defenses for Excess Emissions Due to Malfunctions, Startup, and Shutdown. [PCC 17.12.180]

1. Applicability

This rule establishes affirmative defenses for certain emissions in excess of an emission standard or limitation and applies to all emission standards or limitations except for standards or limitations:

a. Promulgated pursuant to Sections 111 or 112 of the Clean Air Act;

b. Promulgated pursuant to Titles IV or VI of the Clean Air Act;

c. Contained in any Prevention of Significant Deterioration (PSD) or New Source Review (NSR) permit issued by the U.S. EPA; or

d. Included in a permit to meet the requirements of PCC 17.16.590.A.5.

2. Affirmative Defense for Malfunctions

Emissions in excess of an applicable emission limitation due to malfunction shall constitute a violation. When emissions in excess of an applicable emission limitation are due to a malfunction, the Permittee has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of section XI.A above and has demonstrated all of the following:

a. The excess emissions resulted from a sudden and unavoidable breakdown of process equipment or air pollution control equipment beyond the reasonable control of the Permittee;

b. The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;

c. If repairs were required, the repairs were made in an expeditious fashion when the applicable emission limitations were being exceeded. Off-shift labor and overtime were utilized where practicable to ensure that the repairs were made as expeditiously as possible. If off-shift labor and overtime were not utilized, the Permittee satisfactorily demonstrated that the measures were impracticable;

d. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;

e. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;

f. The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;

g. During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in PCC Chapter 17.08 that could be attributed to the emitting source;

h. The excess emissions did not stem from any activity or event that could have been foreseen and avoided, or planned, and could not have been avoided by better operations and maintenance practices;

i. All emissions monitoring systems were kept in operation if at all practicable; and
j. The Permittee’s actions in response to the excess emissions were documented by contemporaneous records.

3. Affirmative Defense for Startup and Shutdown

a. Except as provided in condition XI.E.3.b above, and unless otherwise provided for in the applicable requirement, emissions in excess of an applicable emission limitation due to startup and shutdown shall constitute a violation. When emissions in excess of an applicable emission limitation due to startup and shutdown, the Permittee has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of XI.A above and has demonstrated all of the following:

i. The excess emissions could not have been prevented through careful and prudent planning and design;

ii. If the excess emissions were the result of a bypass of control equipment, the bypass was unavoidable to prevent loss of life, personal injury, or severe damage to air pollution control equipment, production equipment, or other property;

iii. The source’s air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;

iv. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;

v. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;

vi. During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in PCC Chapter 17.08 that could be attributed to the emitting source;

vii. All emissions monitoring systems were kept in operation if at all practicable; and

viii. Contemporaneous records documented the Permittee’s actions in response to the excess emissions.

b. If excess emissions occur due to a malfunction during routine startup and shutdown, then those instances shall be treated as other malfunctions subject to condition XI.E.2 above.

4. Affirmative Defense for Malfunctions during Scheduled Maintenance

If excess emissions occur due to a malfunction during scheduled maintenance, then those instances will be treated as other malfunctions subject to condition XI.E.2 above.

5. Demonstration of Reasonable and Practicable Measures

For an affirmative defense under conditions XI.E.2 or 3 above, the Permittee shall demonstrate, through submission of the data and information required by conditions XI.E.1 – 5 and XLA of Part A, that all reasonable and practicable measures within the Permittee’s control were implemented to prevent the occurrence of the excess emissions.
XII. RECORDKEEPING REQUIREMENTS

A. The Permittee shall keep records of all required monitoring information including but not limited to the following:

1. The date, place as defined in the permit, and time of sampling or measurements;
2. The date(s) analyses were performed;
3. The name of the company or entity that performed the analyses;
4. A description of the analytical techniques or methods used;
5. The results of such analyses; and
6. The operating conditions as existing at the time of sampling or measurement.

B. The Permittee shall retain records of all required monitoring data and support information for a period of at least 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 or other data recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

C. All required records shall be maintained either in an unchangeable electronic format or in a handwritten logbook utilizing indelible ink.

XIII. REPORTING REQUIREMENTS

The Permittee shall submit the following reports:

A. Compliance Certification pursuant to section VII above.
B. Excess emission; permit deviation, and emergency reports in accordance with section XI above.
C. Performance test results in accordance with section XVII.F. below.
D. Other reports required by any condition in Part B of this permit.

XIV. DUTY TO PROVIDE INFORMATION

A. The Permittee shall furnish to the Control Officer, within a reasonable time, any information that the Control Officer may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Control Officer copies of records required to be kept by the permit. For information claimed to be confidential, the Permittee, shall furnish an additional copy of such records directly to the Administrator along with a claim of confidentiality.

B. If the Permittee has failed to submit any relevant facts or has submitted incorrect information in the permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a proposed permit.
XV. PERMIT AMENDMENT OR REVISION

The Permittee shall apply for a permit amendment or revision for changes to the facility which do not qualify for a facility change without revision under section XVI below as follows:

A. Administrative Permit Amendment (PCC 17.12.100);

B. Minor Permit Revision (PCC 17.12.110);

C. Significant Permit Revision (PCC 17.12.120).

The applicability and requirements for such action are defined in the above referenced regulations.

XVI. FACILITY CHANGES ALLOWED WITHOUT PERMIT REVISIONS

A. The Permittee may make changes at the permitted source without a permit revision if all of the following apply:

1. The changes are not modifications under any provision of Title I of the Clean Air Act (Air Pollution Prevention and Control) or under modifications as defined in A.R.S. 49-401.01;

2. The changes do not exceed the emissions allowable under the permit whether expressed therein as a rate of emissions or in terms of total emissions;

3. The changes do not violate any applicable requirements or trigger any additional applicable requirements;

4. The changes satisfy all requirements for a minor permit revision under PCC 17.12.110; and

5. The changes do not contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements.

B. The substitution of an item of process or pollution control equipment for an identical or substantially similar item of process or pollution control equipment shall qualify as a change that does not require a permit revision, if it meets all of the requirements of conditions XVI.A, D and E below.

C. Except for sources with authority to operate under general permits, permitted sources may trade increases and decreases in emissions within the permitted facility, as established in the permit under PCC 17.12.040.A.12 if an applicable implementation plan provides for the emissions trades, without applying for a permit revision and based on the seven working days’ notice prescribed in section XVLD below. This provision is available if the permit does not provide for the emissions trading as a minor permit revision.

D. For each change under conditions XVI.A through C above, a written notice, by certified mail or hand delivery, shall be received by the Control Officer and the Administrator a minimum of seven (7) working days in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided less than 7 working days in advance of the change but must be provided as far in advance of the change, or if advance notification is not practicable as soon after the change as possible.
E. Each notification shall include:

1. When the proposed change will occur;
2. A description of the change;
3. Any change in emissions of regulated air pollutants;
4. The pollutants emitted subject to the emissions trade, if any;
5. The provisions in the implementation plan that provide for the emissions trade with which the source will comply and any other information as may be required by the provisions in the implementation plan authorizing the trade;
6. If the emissions trading provisions of the implementation plan are invoked, then the permit requirements with which the source will comply; and
7. Any permit term or condition that is no longer applicable as a result of the change.

F. The permit shield described in Condition XX shall not apply to any change made under this section. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the implementation plan authorizing the emissions trade.

G. Except as otherwise provided for in the permit, making a change from one alternative operating scenario to another as provided under PCC 17.12.040.A.11 shall not require any prior notice under this section.

H. Notwithstanding any other part of this section, the Control Officer may require a permit to be revised for any change that when considered together with any other changes submitted by the same source under the provisions of this condition over the term of the permit, do not satisfy the conditions in XVI.A above.

XVII. TESTING REQUIREMENTS [PCC 17.11.210]

A. New sources required to conduct performance testing shall do so within 60 days after the source has achieved the capability to operate at its maximum production rate on a sustained basis but no later than 180 days after initial startup of such sources. The Permittee shall conduct performance testing as specified in Part B of the permit and at such other times as may be required by the Control Officer. The Permittee shall furnish the control officer a written report or the results of the tests.

B. Operational Conditions During Testing

Performance tests shall be conducted while the unit is operating at full load under representative operational conditions unless other conditions are required by the applicable test method or in this permit. With prior written approval from the Control Officer, testing may be performed at a lower rate. Operations during start-up, shutdown, and malfunction (as defined in PCC 17.04.340.A) shall not constitute representative operational conditions unless otherwise specified in the applicable requirement.

C. Tests shall be conducted and data reduced in accordance with the test methods and procedures contained in the Arizona Testing Manual, 40 CFR 52; Appendices D and E, 40 CFR 60; Appendices A through F; and 40 CFR 61, Appendices B and C unless modified by the Control Officer pursuant to PCC 17.11.210.B or by the Director pursuant to A.A.C. R18-2-312.B.
D. Test Plan

At least 14 calendar days prior to performing a test, the Permittee shall submit a test plan to the Control Officer, in accordance with PCC 17.11.210.D and the Arizona Testing Manual. This test plan must include the test duration, test location(s), test methods, and source operation and other parameters that may affect the test results.

E. Stack Sampling Facilities

The Permittee shall provide or cause to be provided, performance testing facilities as follows:

1. Sampling ports adequate for test methods applicable to the facility;
2. Safe sampling platform(s);
3. Safe access to sampling platform(s); and,
4. Utilities for sampling and testing equipment.

F. Interpretation of Final Results

Each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic mean of the results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs is required to be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee’s control, compliance may, upon the Control Officer’s approval, be determined using the arithmetic mean of the results of the other two runs. If the Control Officer or the Control Officer’s designee is present, tests may only be stopped with the Control Officer’s or such designee’s approval. If the Control Officer or the Control Officer’s designee is not present, tests may only be stopped for good cause. Good cause includes: forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee’s control. Termination of any test without good cause after the first run is commenced shall constitute a failure of the test. Supporting documentation, which demonstrates good cause, must be submitted.

G. Report of Final Test Results

A written report of the results of all performance tests shall be submitted to the Control Officer within 30 days after the test is performed. The report shall be submitted in accordance with the Arizona Testing Manual and PCC 17.11.210.A.

XVIII. PROPERTY RIGHTS

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

XIX. SEVERABILITY CLAUSE

The provisions of this permit are severable. In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force.
XX. PERMIT SHIELD

Compliance with the conditions of this permit shall be deemed compliance with any applicable requirement identified in the permit as of the date of permit issuance, provided that such applicable requirements are included and expressly identified in the permit. The permit shield shall not apply to any change made pursuant to conditions XV.B and XVI above.

XXI. ACCIDENT PREVENTION REQUIREMENTS UNDER THE CLEAN AIR ACT (CAA Section 112(r))

Should this stationary source, as defined in 40 CFR Part 68.3, become subject to the accidental release prevention regulations in Part 68, then the Permittee shall submit a risk management plan (RMP) by the date specified in Section 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 CFR Part 70 and Part B of this permit.

XXII. ASBESTOS REQUIREMENTS (Demolition/ Renovation)

Should this stationary source, pursuant to 40 CFR 61, Subpart M become subject to the National Emission Standards for Hazardous Air Pollutants - Asbestos regulations when conducting any renovation or demolition at this premises, then the Permittee shall submit proper notification as described in 40 CFR Subpart M and shall comply with all other applicable requirements of subpart M. The Permittee shall keep a record of all relevant paperwork on file.

XXIII. STRATOSPHERIC OZONE DEPLETING SUBSTANCES

The Permittee shall not use, sell, or offer for sale any fluid as a substitute material for use in any motor vehicle, residential, commercial, or industrial air conditioning system, refrigerator or freezer unit, or other cooling or heating device designed to use a chlorofluorocarbon (CFC) or hydrochlorofluorocarbon (HCFC) compound as a working fluid, unless such fluid has been approved for sale and such use by the Administrator. The Permittee shall keep a record of all paperwork relevant to the applicable requirements of 40 CFR 82, Subpart F onsite.

End of Part A
PART B - SPECIFIC CONDITIONS

SECTION I: DEPAINTING OPERATIONS
(CHEMICAL DEPAINTING)

I. Depainting Operations (Chemical Depainting)

These operations are facility-wide when using non-HAP chemical stripper(s).

A. APPLICABILITY

1. Affected sources

The affected sources to which the provisions of this section apply are specified below (I.A.1.a through c, of this section.)

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

I.A.1.b

b. With respect to depainting operations the Permittee shall comply with the following requirements and with the requirements specified in I.B of this section:

   (i) Exemption of Parts Normally Removed

   The provisions of this section (Section I) 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 these requirements regardless of whether or not their removal is considered to be normal practice for depainting.

   (ii) Exemption of Miscellaneous Operations

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

   (1) Aerospace vehicles or components that are intended for public display, no longer operational, and not easily capable of being moved.

   (2) Depainting of radomes; and

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

I.A.1.c

c. Exemption of Low HAP/VOC Strippers

The requirements of this section also do not apply to strippers 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.
I.B  **EMISSION LIMITS AND STANDARDS**

1.  **Organic HAP emissions—Chemical Depainting**

   a.  **General**

   I.B.1.a  

   Except as provided in paragraph B.1.b (below) 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.  

   [40 CFR 63.746(b)(1)]

I.B.1.b  

b.  **Spot Stripping and Decal Removal**

   For spot stripping and decal removal, each owner or operator of a new or existing depainting operation shall not, on an annual average basis, use more than:  

   [40 CFR 63.746(b)(3)]

   (i) 26 gallons of organic HAP-containing chemical strippers or alternatively 190 pounds of organic HAP per commercial aircraft depainted; or

   (ii) more than 50 gallons of organic HAP-containing chemical strippers or alternatively 365 pounds of organic HAP per military aircraft depainted.

2.  **Parts Normally Removed**

   Depainting of parts, subassemblies, and assemblies normally removed from the primary aircraft structure before depainting: Keep records according to E.2, below of this section.  

   [PCC 17.12.170.A]

I.C  **COMPLIANCE DETERMINATION**

1.  **Organic HAP emissions - Chemical Depainting**

   A non-HAP depainting operation complying with the emission limits of B.1.a of this section is considered in compliance when the conditions specified in paragraph C.1.b (below) of this section are met.  

   [40 CFR 63.749(f)(3) & 40 CFR 63.749(f)(3)(ii)]

   a.  **General**

      None Required.

I.C.1.b  

b.  **Spot Stripping and Decal Removal**

   For any spot stripping and decal removal, the value of C, as determined using the procedures specified in G.1.b of this section, is less than or equal to:  

   [40 CFR 63.749(f)(3)(ii)(A)]

   (i) 26 gallons of organic HAP-containing chemical stripper or 190 pounds of organic HAP per commercial aircraft depainted calculated on a yearly average; and

   (ii) 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.

2.  **Parts Normally Removed**

   None Required.
D. MONITORING REQUIREMENTS

Recordkeeping will serve as monitoring.

E. RECORDKEEPING REQUIREMENTS

1. Organic HAP Emissions - Chemical Depainting

Each owner or operator subject to the depainting standards specified in this section shall record the information specified in paragraphs I.E.1.a through I.E.1.c (below) of this section, as appropriate.

I.E.1.a

a. General

I.E.1.b

For all chemical strippers used in the depainting operation (including those used for spot stripping and decal removal):

(i) The name of each chemical stripper.

For spot stripping and decal removal:

(i) Monthly volumes of each organic HAP containing chemical stripper used or monthly weight of organic HAP-material used for spot stripping and decal removal.

(ii) 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.

I.E.2

2. Parts Normally Removed

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.

F. REPORTING REQUIREMENTS

For all depainting operation subject to this section, the Permittee shall submit the following information:

I.F.1

1. Semiannual Reports

Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:

a. Organic HAP Emissions - Chemical Depainting (All Depainting)

(i) Any 24-hour period where organic HAP were emitted from the depainting of aerospace vehicles, other than from the exempt operations listed in A.1 and B.1.b (above) of this section.
(ii) Any new chemical strippers used at the facility during the reporting period; [40 CFR 63.753(d)(1)(ii)]

(iii) The organic HAP content of these new chemical strippers; [40 CFR 63.753(d)(1)(iii)]

(iv) For each chemical stripper that undergoes reformulation, its organic HAP content; [40 CFR 63.753(d)(1)(iv)]

b. Parts Normally Removed

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 [40 CFR 63.753(d)(1)(viii)]

c. Statement of Compliance

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. [40 CFR 63.753(d)(1)(ix)]

2. Annual Reports

Annual reports occurring every 12 months from the date of the notification of compliance status that identify: [40 CFR 63.753(d)(2)]

a. Organic HAP Emissions - Chemical Depainting

(i) General

None Required.

(ii) Spot Stripping and Decal Removal

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 B.1.b of this section. [40 CFR 63.753(d)(2)(i)]

b. Parts Normally Removed

None Required.

G. TESTING REQUIREMENTS

1. Organic HAP Emissions - Chemical Depainting

a. General

None Required.

1.G.1.b

b. Spot Stripping and Decal Removal.

(i) Performance test period.

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. [40 CFR 63.749(f)(1)]

(ii) Test Procedures

Each owner or operator seeking to comply with I.B.1.b of this section (above), 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 G.1.b.ii.(1) through G.1.b.ii.(3) of this section (Section I.) [40 CFR 63.750(j)]

I.G.1.b.ii.(1)

(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 below (G.1.b.ii.(1).(A) through (C) of this section):

(A) 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. [40 CFR 63.750(d)(2)(i)]

I.G.1.b.ii.(1).(B)

(B) 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. [40 CFR 63.750(d)(2)(ii)]

(C) The volume applied may be determined from company records. [40 CFR 63.750(d)(2)(iii)]

I.G.1.b.ii.(2)

(2) Determine the total number of aircraft for which depainting operations began during the annual period as determined from company records. [40 CFR 63.750(j)(2)]

(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):

\[
C' = \frac{\sum_{i=1}^{N} V_{si}}{A} \quad \text{Eq. 20}
\]

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.

\[
C' = \frac{\sum_{i=1}^{N} \left( V_{si} D_{si} \left( \sum_{l=1}^{m} W_{il} \right) \right)}{A} \quad \text{Eq. 21}
\]
where:

\[ C = \text{annual average weight (lb per aircraft) of organic HAP (chemical stripper) used for spot stripping and decal removal.} \]

\[ M = \text{number of organic HAP contained in each chemical stripper, as applied.} \]

\[ n = \text{number of organic HAP-containing chemical strippers used in the annual period.} \]

\[ W_{hi} = \text{weight fraction (expressed as a decimal) of each organic HAP (i) contained in the chemical stripper, as applied, for each aircraft depainted.} \]

\[ D_{hi} = \text{density (lb/gal) of each organic HAP-containing chemical stripper (i), used in the annual period.} \]

\[ V_{Si} = \text{volume (gal) of organic HAP-containing chemical stripper (i) used during the annual period.} \]

\[ A = \text{number of aircraft for which depainting operations began during the annual period.} \]

2. \textit{Parts Normally Removed}

None Required.

\textbf{END SECTION I}
PART B - SPECIFIC CONDITIONS

SECTION II: DEPAINTING OPERATIONS
(NON-CHEMICAL TECHNOLOGIES AND INORGANIC HAP)

II. Depainting Operations (Non-Chemical Technologies and Inorganic HAP)

A. APPLICABILITY

1. Affected sources Operations in this Section are only permitted in Buildings E, K and Y

The affected sources to which the provisions of this section apply are specified below (A.1.a through A.1.c of this section.) [40 CFR 63.741(c)]

a. For inorganic HAP emissions, each spray booth or hangar that contains a dry media blasting depainting operation subject to B.2 of this section. [40 CFR 63.741(c)(7)]

b. With respect to depainting operations the Permittee shall comply with the following requirements and with the requirements specified in II.B of this section: [40 CFR 63.746(a)]

(i) Exemption of Parts Normally Removed

The provisions of this section (Section II) 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 these requirements regardless of whether or not their removal is considered to be normal practice for depainting. [40 CFR 63.746(a)(1)]

(ii) Exemption of Miscellaneous Operations

The following depainting operations are exempt from the requirements of this section (Section II): [40 CFR 63.746(a)(2) & (3)]

(1) Aerospace vehicles or components that are intended for public display, no longer operational, and not easily capable of being moved. [40 CFR 63.746(a)(2)]

(2) Depainting of radomes; and [40 CFR 63.746(a)(3)(i)]

(3) Depainting of parts, subassemblies, and assemblies normally removed from the primary aircraft structure before depainting. [40 CFR 63.746(a)(3)(ii)]

IlA.c c. Exempt Sanding Operations

Mechanical and hand sanding operations are exempt from the requirements in paragraph B.1, below, of this section. [40 CFR 63.746(b)(5)]
II.B  B. EMISSION LIMITS AND STANDARDS

1. **Organic HAP emissions—Non-Chemical Technologies**

   Except as provided in paragraph B.1.a 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. \[40\text{ CFR 63.746(b)(1)}\]

II.B.1.a  a. **Requirement to Maintain Equipment & Approved Temporary Substitute Chemical Methods**

   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. \[40\text{ CFR 63.746(b)(2)}\]

II.B.2  2. **Inorganic HAP emissions—Dry Media Blasting Equipment/Dry Particulate Filters**

   Each owner or operator of a new or existing depainting operation complying with the paragraph above (B.1 of this section), that generates airborne inorganic HAP emissions from dry media blasting equipment, shall also comply with the requirements specified in paragraphs B.2.a through B.2.e of this section. \[40\text{ CFR 63.746(b)(4)}\]

   a. **Requirement to Perform Depainting in an Enclosed Area**

   Perform the depainting operation in an enclosed area, unless a closed-cycle depainting system is used. \[40\text{ CFR 63.746(b)(4)(i)}\]

   b. **Requirement to Control Emissions with Dry Particulate Filters**

   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 G.2 of this section to meet or exceed the efficiency data points in Tables II.1 and II.2 of II.B.2 (below) or through a baghouse before exhausting it to the atmosphere. \[40\text{ CFR 63.746(b)(4)(ii)(B)}\]

<table>
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<th>Filtration efficiency requirement, %</th>
<th>Aerodynamic particle size range, µm</th>
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<td>&gt;0.70</td>
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</tbody>
</table>
II.B.2.c  c. **Requirements for Dry Particulate Filter Systems**

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

(i) Maintain the system in good working order;  

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

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

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

II.B.2.d  d. **Requirement to Shut Down Depainting Operation in Case of Malfunction**

If the pressure drop, as recorded pursuant to E.2 of this section, 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. Or, if the booth manufacturer's or locally prepared maintenance procedures for the filter 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 is returned within the specified limit(s).

II.B.3  3. **Parts Normally Removed**

Keep records according to E.3, below of this section.

II.C  **C. COMPLIANCE DETERMINATION**

1. **Organic HAP emissions—Non-Chemical Technologies**

   None Required.

2. **Inorganic HAP emissions—Dry Media Blasting Equipment/Dry Particulate Filters**

   Each depainting operation is in compliance when:

   a. The operating requirements specified in B.2 of this section are followed; and  

   b. It is shut down immediately whenever the pressure drop is outside the limit(s) established for them and is not restarted until the pressure drop is returned within these limit(s), as required under B.2.e of this section.

3. **Parts Normally Removed**

   None Required.

II.D  **D. MONITORING REQUIREMENTS**

1. **Organic HAP emissions—Non-Chemical Technologies**

   Recordkeeping will serve as monitoring.
2. **Inorganic HAP emissions—Dry Media Blasting Equipment/Dry Particulate Filters**

Each owner or operator using a dry particulate filter system in accordance with the requirements of B.2 of this section shall, while depainting operations are occurring, continuously monitor the pressure drop across the particulate filters and read and record the pressure drop following the recordkeeping requirements of E.2 of this section. [40 CFR 63.751(d)]

3. **Parts Normally Removed**

Recordkeeping will serve as monitoring.

### E. RECORDKEEPING REQUIREMENTS

Each owner or operator subject to the depainting standards specified in subsection B of this section shall record the information specified in paragraphs E.1 through E.3 of this section, as appropriate. [40 CFR 63.752(e)]

1. **Organic HAP emissions—Non-Chemical Technologies**

   **II.E.1**

   Non-chemical based equipment. If dry media blasting equipment is used to comply with the organic HAP emission limit specified in B.1 of this section: [40 CFR 63.752(e)(5)]

   a. The names and types of non-chemical based equipment; and [40 CFR 63.752(e)(5)(i)]

   **II.E.1.b**

   b. For periods of malfunction, [40 CFR 63.752(e)(5)(ii)]

      (i) The non-chemical method or technique that malfunctioned; [40 CFR 63.752(e)(5)(ii)(A)]

      (ii) The date that the malfunction occurred; [40 CFR 63.752(e)(5)(ii)(B)]

      (iii) A description of the malfunction; [40 CFR 63.752(e)(5)(ii)(C)]

      (iv) The methods used to depaint aerospace vehicles during the malfunction period; [40 CFR 63.752(e)(5)(ii)(D)]

      (v) The dates that these methods were begun and discontinued; and [40 CFR 63.752(e)(5)(ii)(E)]

      (vi) The date that the malfunction was corrected. [40 CFR 63.752(e)(5)(ii)(F)]

2. **Inorganic HAP emissions - Dry Media Blasting Equipment/Dry Particulate Filters**

   **II.E.2**

   Inorganic HAP emissions. The Permittee shall record the actual pressure drop across the particulate filters once each 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 or in locally prepared operating procedures. [40 CFR 63.752(e)(7)]

3. **Parts Normally Removed**

   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. [40 CFR 63.752(e)(4)]
II.F  REPORTING REQUIREMENTS

Depainting operation. For all depainting operations subject to this subpart, the Permittee shall submit the following information: [40 CFR 63.753(d)]

1. Semiannual Report

Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify: [40 CFR 63.753(d)(1)]

a. Organic HAP emissions—Non-Chemical Technologies

(i) Any 24-hour period where organic HAP were emitted from the depainting of aerospace vehicles, other than from the exempt operations listed in A.1.c and B.1 of this section. [40 CFR 63.753(d)(1)(i)]

(ii) Any new chemical strippers used at the facility during the reporting period; [40 CFR 63.753(d)(1)(ii)]

(iii) The organic HAP content of these new chemical strippers; [40 CFR 63.753(d)(1)(iii)]

(iv) For each chemical stripper that undergoes reformulation, its organic HAP content; [40 CFR 63.753(d)(1)(iv)]

(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; [40 CFR 63.753(d)(1)(v)]

(vi) For periods of malfunctions:

(1) The non-chemical method or technique that malfunctioned; [40 CFR 63.753(d)(1)(vi)(A)]

(2) The date that the malfunction occurred; [40 CFR 63.753(d)(1)(vi)(B)]

(3) A description of the malfunction; [40 CFR 63.753(d)(1)(vi)(C)]

(4) The methods used to depaint aerospace vehicles during the malfunction period; [40 CFR 63.753(d)(1)(vi)(D)]

(5) The dates that these methods were begun and discontinued; and [40 CFR 63.753(d)(1)(vi)(E)]

(6) The date that the malfunction was corrected; [40 CFR 63.753(d)(1)(vi)(F)]

b. Inorganic HAP emissions—Dry Media Blasting Equipment/Dry Particulate Filters

All periods where a nonchemical depainting operation subject to B.1 and B.2 of this section for the control of inorganic HAP emissions was not immediately shut down when the pressure drop, or recommended booth parameter(s) was outside the limit(s) specified by the filter or booth manufacturer or in locally prepared operational procedures; [40 CFR 63.753(d)(1)(vii)]

c. Parts Normally Removed

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 [40 CFR 63.753(d)(1)(viii)]
d. **Statement of Compliance**

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. [40 CFR 63.753(d)(1)(ix)]

**II.F.2 2. Annual Report**

Annual reports occurring every 12 months from the date of the notification of compliance status that identify:

a. **Organic HAP emissions—Non-Chemical Technologies**

None Required.

b. **Inorganic HAP emissions—Dry Media Blasting Equipment/Dry Particulate Filters**

The number of times the pressure drop limit(s) for each filter system were outside the limit(s) specified by the filter or booth manufacturer or in locally prepared operating procedures. [40 CFR 63.753(d)(2)(ii)]

c. **Parts Normally Removed**

None Required.

**II.G  G. TESTING REQUIREMENTS**

1. **Organic HAP emissions—Non-Chemical Technologies**

None Required.

2. **Inorganic HAP emissions—Dry Media Blasting Equipment/Dry Particulate Filters**

**II.G.2**

Dry particulate filters used to comply with B.2 of this section 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 40 CFR 63, to meet or exceed the efficiency data points found in Tables II.1 and II.2, or II.3 and II.4 of this section for existing or new sources respectively. [40 CFR 63.750(o)]

**II.G.3**

3. **Parts Normally Removed**

None Required.

**END SECTION II**
III. Hand-wipe Cleaning Operations (Organic HAPs and VOC)

III.A  A. APPLICABILITY

1. **Affected sources**

   The affected sources to which the provisions of this section apply are specified below (A.1.a of this section.)

   a. Each cleaning operation as follows:

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

2. **Exemption of Low HAP/VOC Cleaning Solvents**

   Each owner or operator of a new or existing cleaning operation subject to this section shall comply with the requirements of this section, as applicable, unless the cleaning solvent used contains HAP and VOC below the de minimis levels specified in the following paragraph (A.2.a of this section):

   a. HAP and VOC at concentrations less than 0.1 percent for carcinogens or 1.0 percent for noncarcinogens, as determined from manufacturer's representations.

3. **Exempt Cleaning Operations**

   The following cleaning operations are exempt from the composition requirements of B.2 of this section:

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

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

   c. Cleaning and surface activation prior to adhesive bonding;

   d. Cleaning of electronic parts and assemblies containing electronic parts;

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

   f. Cleaning of fuel cells, fuel tanks, and confined spaces;

   g. Surface cleaning of solar cells, coated optics, and thermal control surfaces;

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

   i. Cleaning of metallic and nonmetallic materials used in honeycomb cores during the manufacture or maintenance of these cores, and cleaning of the completed cores used in the manufacture of aerospace vehicles or components;
III.A.3.j  j. Cleaning of aircraft transparencies, polycarbonate, or glass substrates;  

k. Cleaning and cleaning solvent usage associated with research and development, quality control, and laboratory testing;  

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

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

III.B  B. EMISSION LIMITS AND STANDARDS  

1. Housekeeping Measures  

For all new or existing cleaning operations subject to this section. The Permittee shall comply with the housekeeping requirements in these paragraphs (B.1.a through B.1.c of this section) unless the cleaning solvent used is identified in Table III.1 of this section.  

a. 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.  

b. Store fresh and spent cleaning solvents, except semi-aqueous solvent cleaners, used in aerospace cleaning operations in closed containers.  

c. 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.  

III.B.1.c  

2. Hand-wipe Cleaning Solvent Composition Standards  

For all new or existing hand-wipe cleaning operations (excluding cleaning of spray gun equipment performed in accordance with Section IV, Part B, Specific Conditions of this permit) subject to this section, the Permittee shall use cleaning solvents that meet one of the requirements specified in paragraphs B.2.a or B.2.b (below) of this section.  

a. Meet one of the composition requirements in Table III.1 of this section; or  

b. Have a composite vapor pressure of 45 mm Hg (24.1 in. H₂O) or less at 20 °C (68 °F).
Table III.1—Composition Requirements for Approved Cleaning Solvents

<table>
<thead>
<tr>
<th>Cleaning Solvent Type</th>
<th>Composition requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aqueous</td>
<td>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.</td>
</tr>
<tr>
<td>Hydrocarbon-based</td>
<td>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.</td>
</tr>
</tbody>
</table>

3. **Exempt Cleaning Operations**

**III.B.3** Keep records specified in paragraph E.2.d of this section.

**III.C. COMPLIANCE DETERMINATION**

1. **Housekeeping measures**

   Each hand-wipe cleaning operation subject to this section shall be considered in noncompliance if the owner or operator fails to institute and carry out the housekeeping measures required under B.1 of this section.

   [40 CFR 63.749(c)]

2. **Hand-wipe Cleaning Solvent Composition Standards**

   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 IV.B.2.c, Part B, Specific Conditions of this permit (disassembled spray gun cleaning,) meet either the composition requirements specified in B.2.a or the vapor pressure requirement specified in B.2.b of this section.

   [40 CFR 63.749(c)(1)]

3. **Exempt Cleaning Operations**

   None Required.

**III.D. MONITORING REQUIREMENTS**

1. **Housekeeping Measures**

   None Required.

2. **Hand-wipe Cleaning Solvent Composition Standards**

   Recordkeeping will serve as monitoring.

3. **Exempt Cleaning Operations**

   Recordkeeping will serve as monitoring.
III. E. RECORDKEEPING REQUIREMENTS

1. **Housekeeping Measures**

   None Required.

2. **Hand-wipe Cleaning Solvent Composition Standards**

   For all new or existing cleaning operations subject to this section, the Permittee shall record the information specified in paragraphs E.2.a through E.2.c of this section, as appropriate. [40 CFR 63.752(b)]

   **III.E.2.a**
   
   a. The name, vapor pressure, and documentation showing the organic HAP constituents of each cleaning solvent used for affected cleaning operations at the facility. [40 CFR 63.752(b)(1)]

   b. For each cleaning solvent used in hand-wipe cleaning operations that complies with the composition requirements specified in B.2.a of this section:

      (i) The name of each cleaning solvent used; [40 CFR 63.752(b)(2)(i)]

      (ii) All data and calculations that demonstrate that the cleaning solvent complies with one of the composition requirements; and [40 CFR 63.752(b)(2)(ii)]

      (iii) Annual records of the volume of each solvent used, as determined from facility purchase records or usage records. [40 CFR 63.752(b)(2)(iii)]

   c. For each cleaning solvent used in hand-wipe cleaning operations that does not comply with the composition requirements in B.2.a of this section, but does comply with the vapor pressure requirement in B.2.b of this section:

      (i) The name of each cleaning solvent used; [40 CFR 63.752(b)(3)(i)]

      (ii) The composite vapor pressure of each cleaning solvent used; [40 CFR 63.752(b)(3)(ii)]

      (iii) All vapor pressure test results, if appropriate, data, and calculations used to determine the composite vapor pressure of each cleaning solvent; and [40 CFR 63.752(b)(3)(iii)]

      (iv) The amount (in gallons) of each cleaning solvent used each month at each operation. [40 CFR 63.752(b)(3)(iv)]

   d. **Exempt Cleaning Operations**

      For each cleaning solvent used for the exempt hand-wipe cleaning operations specified in A.3 of this section that does not conform to the vapor pressure or composition requirements of B.2 of this section:

      (i) The identity and amount (in gallons) of each cleaning solvent used each month at each operation; and [40 CFR 63.752(b)(4)(i)]

      (ii) A list of the processes set forth in A.3 of this section to which the cleaning operation applies. [40 CFR 63.752(b)(4)(ii)]
III.F REPORTING REQUIREMENTS

1. **Housekeeping Measures**
   
   None Required.

2. **Hand-wipe Cleaning Solvent Composition Standards**
   
   Each owner or operator of a hand-wipe cleaning operation subject to this subpart shall submit the following information: [40 CFR 63.753(b)]

   a. **Semiannual Reports**
      
      Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify: [40 CFR 63.753(b)(1)]

      (i) Any instance where a noncompliant cleaning solvent is used for a non-exempt hand-wipe cleaning operation; [40 CFR 63.753(b)(1)(i)]

      (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 B.2.a of this section; [40 CFR 63.753(b)(1)(ii)]

      (iii) 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. [40 CFR 63.753(b)(1)(v)]

3. **Exempt Cleaning Operations**
   
   None Required.

III.G TESTING REQUIREMENTS

1. **Housekeeping Measures**
   
   None Required.

2. **All Hand-wipe Cleaning (Including Exempt Cleaning Operations)**
   
   a. **Composition determination**
      
      Compliance with the hand-wipe cleaning solvent approved composition list specified in B.2.a of this section for hand-wipe cleaning solvents shall be demonstrated using data supplied by the manufacturer of the cleaning solvent. The data shall identify all components of the cleaning solvent and shall demonstrate that one of the approved composition definitions is met. [40 CFR 63.750(a)]

   b. **Vapor pressure determination**
      
      The composite vapor pressure of hand-wipe cleaning solvents used in a cleaning operation subject to this section shall be determined as follows: [40 CFR 63.750(b)]

      i. 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. [40 CFR 63.750(b)(1)]
ii. 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 40 CFR 63) 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:

\[
P_{c} = \frac{\sum_{i=1}^{n} W_i \frac{(VP_i)}{MW_i}}{MW_w + \sum_{i=1}^{n} \frac{W_i}{MW_e} + \sum_{i=1}^{n} \frac{W_i}{MW_i}}
\]

where:

- \(W_i\) = Weight of the “i”th VOC compound, grams.
- \(W_w\) = Weight of water, grams.
- \(We\) = Weight of non-HAP, non VOC compound, grams.
- \(MW_i\) = Molecular weight of the “i”th VOC compound, g/g-mole.
- \(MW_w\) = Molecular weight of water, g/g-mole.
- \(MW_e\) = Molecular weight of exempt compound, g/g-mole.
- \(P_{c}\) = VOC composite partial pressure at 20 °C, mm Hg.
- \(VP_i\) = Vapor pressure of the “i”th VOC compound at 20 °C, mm Hg.

**END SECTION III**
PART B: SPECIFIC CONDITIONS

SECTION IV: SPRAY GUN CLEANING OPERATIONS

IV. Spray Gun Cleaning Operations (Organic HAP and VOC)

IV.A  A. APPLICABILITY

1. Affected sources

   The affected sources to which the provisions of this section apply are specified below (A.1.a of this section.)

   a. Each cleaning operation as follows:

      (i) Each facility-wide spray gun cleaning operation constitutes an affected source.

   [40 CFR 63.741(c)(1)]

2. Exemption of Low HAP/VOC Cleaning Solvents

   Each owner or operator of a new or existing cleaning operation subject to this section shall comply with
   the requirements of this section, as applicable, unless the cleaning solvent used contains HAP and VOC
   below the de minimis levels specified in the following paragraph (A.2.a of this section):

   a. HAP and VOC at concentrations less than 0.1 percent for carcinogens or 1.0 percent for
      noncarcinogens, as determined from manufacturer's representations.

   [40 CFR 63.741(f)]

IV.B  B. EMISSION LIMITS AND STANDARDS

1. Housekeeping measures

   Each owner or operator of a new or existing cleaning operation subject to this section shall comply with
   the housekeeping requirements in these paragraphs (B.1.a through B.1.c of this section) unless the
   cleaning solvent used is identified in Table IV.1 of this section (below).

   a. 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.

   [40 CFR 63.744(a)(1)]

   b. Store fresh and spent cleaning solvents, except semi-aqueous solvent cleaners, used in aerospace
      cleaning operations in closed containers.

   [40 CFR 63.744(a)(2)]

   c. 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.

   [40 CFR 63.744(a)(3)]

IV.B.1.b

2. Spray Gun Cleaning Required Techniques

   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 B.2.a through
   B.2.c of this section.

   [40 CFR 63.744(c)]
a. **Enclosed system**

**IV.B.2.a.(i)**

(i) 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.  

[40 CFR 63.744(c)(1)(i)]

(ii) If leaks are found during the monthly inspection required in D.2 of this section, 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.  

[40 CFR 63.744(c)(1)(ii)]

**IV.B.2.b**

b. **Non-atomized 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.  

[40 CFR 63.744(c)(2)]

c. **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.  

[40 CFR 63.744(c)(3)]

### Table IV.1 - Composition Requirements for Approved Cleaning Solvents

<table>
<thead>
<tr>
<th>Cleaning solvent type</th>
<th>Composition requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aqueous</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Hydrocarbon-based</strong></td>
<td>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.</td>
</tr>
</tbody>
</table>

### IV.C COMPLIANCE DETERMINATION

1. **Housekeeping Measures**

Each spray gun cleaning operation subject to this section shall be considered in noncompliance if the owner or operator fails to institute and carry out the housekeeping measures required under B.1 of this section. Incidental emissions resulting from the activation of pressure release vents and valves on enclosed cleaning systems are exempt from this paragraph.  

[40 CFR 63.749(c)]

2. **Spray Gun Cleaning Required Techniques**

An affected spray gun cleaning operation shall be considered in compliance when each of the following conditions is met:  

[40 CFR 63.749(c)(2)]

a. One of the three techniques specified in B.2.a through B.2.c of this section is used;  

[40 CFR 63.749(c)(2)(i)]
b. The technique selected is operated according to the procedures specified in B.2.a through B.2.c of this section as appropriate; and

[40 CFR 63.749(c)(2)(ii)]

IV.C.2.c  
c. **Enclosed system**

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.

[40 CFR 63.749(c)(2)(iii)]

d. **Non-atomized cleaning**

None Required.

e. **Disassembled spray gun cleaning**

None Required.

**IV.D**  
D. **MONITORING REQUIREMENTS**

1. **Housekeeping Measures**

   None Required.

2. **Spray Gun Cleaning Required Techniques**

   a. **Enclosed spray gun cleaners**

   When using an enclosed spray gun cleaner under B.2.a, the Permittee shall visually inspect the seals and all other potential sources of leaks associated with each enclosed gun spray cleaner system at least once per month. Each inspection shall occur while the system is in operation.

   [40 CFR 63.751(a)]

   b. **Non-atomized cleaning**

   None Required.

c. **Disassembled spray gun cleaning**

   None Required.

**IV.E**  
E. **RECORDKEEPING REQUIREMENTS**

1. **Housekeeping Measures**

   None Required.

2. **Spray Gun Cleaning Required Techniques**

   **IV.E.2**

   For all new or existing cleaning operations subject to this subpart, the Permittee shall record the information specified in paragraphs E.2.a through E.2.d of this section, as appropriate.

   [40 CFR 63.752(b)]

   a. The name, vapor pressure, and documentation showing the organic HAP constituents of each cleaning solvent used for affected spray gun cleaning operations at the facility.

   [40 CFR 63.752(b)(1)]
b. Enclosed systems

A record of all leaks from enclosed spray gun cleaners identified pursuant to D.2 of this section that includes for each leak found:

- Source identification;  
- Date leak was discovered;
- Date leak was repaired; and
- If no leaks were discovered, the record shall state so.

(iv.) If no leaks were discovered, the record shall state so.  

[40 CFR 63.752(b)(5)]

(i) Source identification;  
(ii) Date leak was discovered;
(iii) Date leak was repaired; and
(iv.) If no leaks were discovered, the record shall state so.  

[PCC 17.12.040.A.4.v]

c. Non-atomized cleaning

None Required.

d. Disassembled spray gun cleaning

None Required.

IV. F. REPORTING REQUIREMENTS

1. Housekeeping Measures

None Required.

2. Spray Gun Cleaning Operations Required Techniques

Each owner or operator of a cleaning operation subject to this subpart shall submit the following information:

- Semiannual Reports

Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:

(i) Any instance where a noncompliant spray gun cleaning method is used;  

(ii) Enclosed systems

Any instance where a leaking enclosed spray gun cleaner remains unrepaired and in use for more than 15 days; and

(iii) Non-atomized cleaning

None Required.

(iv) Disassembled spray gun cleaning

None Required.
IV.F.2.a.(v)  (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. [40 CFR 63.753(b)(1)(v)]

IV.G  TESTING REQUIREMENTS

None Required.

END SECTION IV
PART B: SPECIFIC CONDITIONS

SECTION V: FLUSH CLEANING OPERATIONS

V. Flush Cleaning Operations (Organic HAPs and VOC)

V.A. APPLICABILITY

1. Affected sources
   The affected sources to which the provisions of this section apply are specified below (A.1.a of this section.) [40 CFR 63.741(b) & (c)]
   a. Each cleaning operation as follows: [40 CFR 63.741(c)(1)]
      (i) All facility-wide flush cleaning operations constitute an affected source. [40 CFR 63.741(c)(1)(iii)]

2. Exemption of Low HAP/VOC Cleaning Solvents
   Each owner or operator of a new or existing cleaning operation subject to this section shall comply with the requirements of this section, as applicable, unless the cleaning solvent used contains HAP and VOC below the de minimis levels specified in the following paragraph (A.2.a of this section): [40 CFR 63.744(a) & 40 CFR 63.744(d)]
   a. HAP and VOC at concentrations less than 0.1 percent for carcinogens or 1.0 percent for noncarcinogens, as determined from manufacturer's representations. [40 CFR 63.741(f)]

V.B. EMISSION LIMITS AND STANDARDS

1. Housekeeping Measures
   Each owner or operator of a new or existing cleaning operation subject to this section shall comply with the housekeeping requirements in these paragraphs (B.1.a through B.1.c of this section) unless the cleaning solvent used is identified in Table V.1 of this section (below). [40 CFR 63.744(a)]
   a. 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. [40 CFR 63.744(a)(1)]

V.B.1.b
   b. Store fresh and spent cleaning solvents, except semi-aqueous solvent cleaners, used in aerospace cleaning operations in closed containers. [40 CFR 63.744(a)(2)]

V.B.1.c
   c. 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. [40 CFR 63.744(a)(3)]

2. Requirement to Control Emissions from Flush Cleaning
   Each owner or operator of a flush cleaning operation subject to this section (excluding those in which semi-aqueous cleaning solvents are used, or solvents meeting the composition requirements in Table V.1 of this section, below, 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. [40 CFR 63.744(d)]
Table V.1—Composition Requirements for Approved Cleaning Solvents

<table>
<thead>
<tr>
<th>Cleaning solvent type</th>
<th>Composition requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aqueous</td>
<td>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.</td>
</tr>
<tr>
<td>Hydrocarbon-based</td>
<td>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.</td>
</tr>
</tbody>
</table>

V.C  C. COMPLIANCE DETERMINATION

1. *Housekeeping Measures*

   None Required.

2. *Requirement to Control Emissions from Flush Cleaning*

   An affected flush cleaning operation shall be considered in compliance if the operating requirements specified in B.2 of this section are implemented and carried out. [40 CFR 63.749(c)(3)]

V.D  D. MONITORING REQUIREMENTS

1. *Housekeeping Measures*

   None Required.

2. *Requirement to Control Emissions from Flush Cleaning*

   Recordkeeping will serve as monitoring.

V.E  E. RECORDKEEPING REQUIREMENTS

1. *Housekeeping Measures*

   None Required.

2. *Requirement to Control Emissions from Flush Cleaning*

   Each owner or operator of a new or existing cleaning operation subject to this section shall record the information specified in the paragraph below (E.2.a of this section) as appropriate. [40 CFR 63.752(b)]

   a. The name, vapor pressure, and documentation showing the organic HAP constituents of each cleaning solvent used for affected flush cleaning operations at the facility. [40 CFR 63.752(b)(1)]
**F. REPORTING REQUIREMENTS**

1. *Housekeeping Measures*
   
   None Required.

2. *Requirement to Control Emissions from Flush Cleaning*

**F.2** Each owner or operator of a cleaning operation subject to this subpart shall submit the following information:

   a. *Semiannual Reports*

   Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:

   (i) 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.

**G. TESTING REQUIREMENTS**

None Required.

**END SECTION V**
PART B - SPECIFIC CONDITIONS

SECTION VI: UNCONTROLLED PRIMER AND TOPCOAT APPLICATION
COMPLIANT COATINGS WITHOUT AVERAGING

VI. Uncontrolled Primer and Topcoat Application Without Averaging (Organic HAPs and VOC)

VI.A A. APPLICABILITY

1. Affected Sources: These operations can only occur in Buildings E, K and Y

The affected sources to which the provisions of this section apply are specified below (A.1.a and A.1.b of this section.)

a. each primer application operation, which is the total of all primer applications at the facility.

b. each topcoat application operation, which is the total of all topcoat applications at the facility.  
   [40 CFR 63.741(c)(2) & (3)]

2. Each owner or operator of a new or existing primer or topcoat application operation subject to this section shall comply with the requirements specified in this section (VI.B of this section, below,) for those coatings that are uncontrolled (no control device is used to reduce organic HAP emissions from the operation)  
   [40 CFR 63.745(a)]

3. Miscellaneous Exemptions

The following topcoat and primer application operations are exempt from the requirements of this section (Section VI of this section):

(i) Exemption of Public Displays

Aerospace vehicles or components that are intended for public display, no longer operational, and not easily capable of being moved.  
   [40 CFR 63.745(a)]

(ii) Exemption of Low HAP/VOC Primers and Topcoats

Operations utilizing primers and topcoats 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.  
   [40 CFR 63.741(f)]

(iii) Exemption of Specialty Coatings

Use of specialty coatings, adhesives, adhesive bonding primers, or sealants at aerospace facilities.  
   [40 CFR 63.741(f)]

4. Low Volume Coatings Exemptions

The requirements for primers and topcoats in VI.B of this section 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 1891 (50 gal), and the combined annual total of all such primers and topcoats used at a facility does not exceed 757 liters (200 gallons). Primers and topcoats exempted under paragraph A.3.(ii), above, of this section and under B.2.c of this section are not included in the 50 and 200 gallons limits.  
   [40 CFR 63.741(g)]
5. **Waterborne Coatings Exemptions**

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 B.1 of this section, is exempt from the following requirements of this section: subsection C, subsection E, subsection F and subsection G. A facility shall maintain the manufacturer's supplied data and annual purchase records for each exempt waterborne coating readily available for inspection and review and shall retain these data for 5 years. [40 CFR 63.741(i)]

### VI.B. EMISSION LIMITS AND STANDARDS

#### VI.B.1. Uncontrolled Coatings - Organic HAP and VOC

Each owner or operator shall comply with the organic HAP and VOC content limits specified in paragraphs B.1.a through B.1.b of this section (Section VI of this section) for those coatings that are uncontrolled. [40 CFR 63.745(c)]

- **a. Uncontrolled Primer Application Operations (Compliant Coatings)**
  
  (i) **Primer Organic HAP Emissions Limit**

  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. [40 CFR 63.745(c)(1)]

  (ii) **Primer VOC Emissions Limit**

  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. [40 CFR 63.745(c)(2)]

- **b. Uncontrolled Topcoat Application Operations (Compliant Coatings)**

  (i) **Topcoat Organic HAP Emissions Limit**

  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. [40 CFR 63.745(c)(3)]
(ii) Topcoat VOC Emissions Limit

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. [40 CFR 63.745(c)(4)]

2. Application Equipment - Required Application Techniques (Primers and Topcoats)

Except as provided in paragraph B.2.c 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 B.2.a and B.2.b, below, of this section. [40 CFR 63.745(f)]

VI.B.2.a  a. Required Application Techniques

All primers and topcoats (including self-priming topcoats) shall be applied using one or more of the application techniques specified in paragraphs B.2.a.(i) through B.2.a.(viii) of this section. [40 CFR 63.745(f)(1)]

(i) Flow/curtain coat application; [40 CFR 63.745(f)(1)(i)]

(VI.B.2.a.(ii))

(ii) Dip coat application; [40 CFR 63.745(f)(1)(ii)]

(iii) Roll coating; [40 CFR 63.745(f)(1)(iii)]

(iv) Brush coating; [40 CFR 63.745(f)(1)(iv)]

(v) Cotton-tipped swab application; [40 CFR 63.745(f)(1)(v)]

(vi) Electrodeposition (dip) coating; [40 CFR 63.745(f)(1)(vi)]

(vii) High volume low pressure (HVLP) spraying; or [40 CFR 63.745(f)(1)(vii)]

(viii) Electrostatic spray application [40 CFR 63.745(f)(1)(viii)]

VI.B.2.b  b. Requirement to Use Most Stringent Procedure

All application devices used to apply primers or topcoats (including self-priming topcoats) shall be operated according to company procedures, local specified operating procedures, and/or the manufacturer's specifications, whichever is most stringent, at all times. Equipment modified by the facility shall maintain a transfer efficiency equivalent to HVLP and electrostatic spray application techniques. [40 CFR 63.745(f)(2)]

VI.B.2.c  c. Application Equipment - Exemptions

The following situations are exempt from the requirements of paragraph B.2.a of this section: [40 CFR 63.745(f)(3)]

(i) Any situation that normally requires the use of an airbrush or an extension on the spray gun to properly reach limited access spaces; [40 CFR 63.745(f)(3)(i)]
(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 B.2.a of this section; 

[40 CFR 63.745(f)(3)(ii)]

(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 B.2.a of this section;

[40 CFR 63.745(f)(3)(iii)]

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

[40 CFR 63.745(f)(3)(iv)]

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

[40 CFR 63.745(f)(3)(v)]

(vi) Touch-up and repair operations.

[40 CFR 63.745(f)(3)(vi)]

VI.C C. COMPLIANCE DETERMINATION

VI.C.1 1. Uncontrolled Coatings - Organic HAP and VOC

Compliance with the organic HAP and VOC content limits specified in paragraphs B.1.a through B.1.b of this section shall be accomplished by using the methods specified in paragraphs C.1.a and C.1.b (below) of this section either by themselves or in conjunction with one another.

[40 CFR 63.745(e)]

a. Compliant Coatings without Averaging (Normal Operating Scenario)

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

[40 CFR 63.745(e)(1)]

b. Noncompliant Coatings—Averaging Alternative (Alternative Operating Scenario)

Use the averaging provisions described in Alternate Operating Scenario I of this permit (Part C, AOS I).

[40 CFR 63.745(e)(2)]

2. Uncontrolled Primer Application Operations (Compliant Coatings without Averaging)

The primer application operation is considered in compliance when the conditions specified in paragraphs C.2.a through C.2.c of this section, as applicable, are met. Failure to meet any one of the conditions identified in these paragraphs shall constitute noncompliance.

[40 CFR 63.749(d)(3)]

a. Primer Organic HAP and VOC Emissions Limits

For all compliant uncontrolled primers, all values of $H_i$ (as determined using the procedures specified in G.1) 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 $G_i$ (as determined using the procedures specified in G.2) 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.

[40 CFR 63.749(d)(3)(i)]

b. Application Equipment - Required Application Techniques (Primers)

(i) Uses an application technique specified in VI.B.2.a(i) through VI.B.2.a(viii).

[40 CFR 63.749(d)(3)(iii)(A)]
c. **Requirement to Use Most Stringent Procedure (Primers)**

Operates all application techniques in accordance with the manufacturer's specifications or locally prepared operating procedures, whichever is more stringent.  

\[40\text{ CFR 63.749(d)(3)(iv)}\]

VI.C.3 3. **Uncontrolled Topcoat Application Operations (Compliant Coatings without Averaging)**

The topcoat application operation is considered in compliance when the conditions specified in VI.C.3.a through C.3.c of this section, as applicable, are met. Failure to meet any of the conditions identified in these paragraphs shall constitute noncompliance.  

\[40\text{ CFR 63.749(d)(4)}\]

a. **Topcoat Organic HAP and VOC Emissions Limits**

For all compliant uncontrolled topcoats, all values of \(H_i\) (as determined using the procedures specified in G.1) 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 \(G_i\) (as determined using the procedures specified in G.2) 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.  

\[40\text{ CFR 63.749(d)(4)(i)}\]

b. **Application Equipment - Required Application Techniques (Topcoats)**

Uses an application technique specified in II.B.2.a (i) through II.B.2.a (viii).  

\[40\text{ CFR 63.749(d)(4)(iii)(A)}\]

c. **Requirement to Use Most Stringent Procedure (Topcoats)**

Operates all application techniques in accordance with the manufacturer's specifications or locally prepared operating procedures.  

\[40\text{ CFR 63.749(d)(4)(iv)}\]

VI.D  D. **MONITORING REQUIREMENTS**

1. **Uncontrolled Primer and Topcoat Application Operations—Organic HAP and VOC (Compliant Coatings without Averaging)**

Recordkeeping will serve as monitoring.

2. **Application Equipment—Required Application Techniques (Primers and Topcoats)**

None Required.

3. **Requirement to Use Most Stringent Procedure (Primers and Topcoats)**

None Required.

VI.E  E. **RECORDKEEPING REQUIREMENTS**

1. **Uncontrolled Primer and Topcoat Application Operations—Organic HAP and VOC (Compliant Coatings without Averaging)**

Each owner or operator required to comply with the organic HAP and VOC content limits specified in B.1 of this section shall record the information specified in paragraphs E.1.a through E.1.b (below) of this section, as appropriate.  

\[40\text{ CFR 63.752(c)}\]
a. Record of Coating Composition, Use and Emissions

For uncontrolled primers and topcoats that meet the organic HAP and VOC content limits in paragraphs B.1.a through B.1.b (above) of this section without averaging:

(i). The name and VOC content as received and as applied of each primer and topcoat used at the facility.

(ii). The mass of organic HAP emitted per unit volume of coating as applied (less water) (Hi) and the mass of VOC emitted per unit volume of coating as applied (less water and exempt solvents) (Gi) for each coating formulation within each coating category used each month (as calculated using the procedures specified in G.1 and G.2);

(iii). All data, calculations, and test results (including EPA Method 24 results) used in determining the values of Hi and Gi; and

(iv). The volume (gal) of each coating formulation within each coating category used each month.

b. Record of “low HAP content” Primers Used

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). The name and VOC content as received and as applied of each primer and topcoat used at the facility.

(ii). Annual purchase records of the total volume of each primer purchased; and

(iii). 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.

c. Operating Scenario Log

The Permittee shall record in a log the operating scenario the Permittee is working under including each transition date between the normal and alternate operating scenarios.

2. Application Equipment—Required Application Techniques (Primers and Topcoats)

None Required.

3. Requirement to Use Most Stringent Procedure (Primers and Topcoats)

None Required.
VI.F  REPORTING REQUIREMENTS

1. Uncontrolled Primer and Topcoat Application Operations - Organic HAP and VOC (Compliant Coatings without Averaging)

Each owner or operator of a primer or topcoat application operation subject to this subpart shall submit the following information: [40 CFR 63.753(c)]

a. Semiannual Reports

Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify: [40 CFR 63.753(c)(1)]

(i). For primers and topcoats where compliance is not being achieved through the use of averaging, each value of Hi and Gi, as recorded under E.1.a.(ii), that exceeds the applicable organic HAP or VOC content limit specified in B.1. [40 CFR 63.753(c)(1)(i)]

(ii). If the operations have been in compliance for the semiannual period, a statement that the operations have been in compliance with the applicable standards. [40 CFR 63.753(c)(1)(vii)]

2. Application Equipment - Required Application Techniques (Primers and Topcoats)

None Required.

3. Requirement to Use Most Stringent Procedure (Primers and Topcoats)

None Required.

VI.G  TESTING REQUIREMENTS

1. Uncontrolled Primer and Topcoat Application Operations - Organic HAP Emissions Determination (Compliant Coatings without Averaging)

For those uncontrolled primers and topcoats complying with the primer and topcoat organic HAP content limits specified in B.1 of this section 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. [40 CFR 63.750(c)]

VI.G.1.a  a. For coatings that contain no exempt solvents, determine the total organic HAP content using manufacturer's supplied data or Method 24 of 40 CFR part 60, appendix A, to determine the VOC content. The VOC content shall be used as a surrogate for total HAP content for coatings that contain no exempt solvent. If there is a discrepancy between the manufacturer's formulation data and the results of the Method 24 analysis, compliance shall be based on the results from the Method 24 analysis.

When Method 24 is used to determine the VOC content of water-reducible coatings, the precision adjustment factors in Reference Method 24 shall be used. If the adjusted analytical VOC content is less than the formulation solvent content, then the analytical VOC content should be set equal to the formulation solvent content. [40 CFR 63.750(c)(1)]

b. For each coating formulation as applied, determine the organic HAP weight fraction, water weight fraction (if applicable), and density from manufacturer's data. If these values cannot be determined using the manufacturer's data, the owner or operator shall submit an alternative procedure for determining their values for approval by the Administrator. Recalculation is required only when a change occurs in the coating formulation. [40 CFR 63.750(c)(2)]
c. For each coating as applied, calculate the mass of organic HAP emitted per volume of coating (lb/gal) less water as applied using equations 1, 2, and 3:  

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

where:

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

\( D_{ci} \) = density (lb of coating per gal of coating) of coating i.

\( W_{wi} \) = weight fraction (expressed as a decimal) of water in coating i.

\( D_w \) = density of water, 8.33 lb/gal.

\[ M_{Hi} = D_{ci} W_{Hi} \quad \text{Eq. 2} \]

where:

\( M_{Hi} \) = mass (lb) of organic HAP in one gal of coating i.

\( D_{ci} \) = density (lb of coating per gal of coating) of coating i.

\( W_{Hi} \) = weight fraction (expressed as a decimal) of organic HAP in coating i.

\[ H_i = \frac{M_{Hi}}{1 - V_{wi}} \quad \text{Eq. 3} \]

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.

VI.G.2 2. Uncontrolled Primer and Topcoat Application Operations - VOC Content Level Determination (Compliant Coatings without Averaging)

For those uncontrolled primers and topcoats complying with the primer and topcoat VOC content levels specified in B.1 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:  

\[ 40 \text{ CFR 63.750(e)} \]

a. Determine the VOC content of each formulation (less water and exempt solvents) as applied using manufacturer's supplied data or Method 24 of 40 CFR part 60, appendix A, to determine the VOC content. The VOC content shall be used as a surrogate for total HAP content for coatings that contain no exempt solvent. If there is a discrepancy between the manufacturer's formulation data and the results of the Method 24 analysis, compliance shall be based on the results from the Method 24 analysis:  

\[ 40 \text{ CFR 63.750(e)(1)} \]

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:  

\[ 40 \text{ CFR 63.750(e)(1)} \]
VI.G.2.b  

b. For each coating applied, calculate the mass of VOC emitted per volume of coating (lb/gal) (less water and exempt solvents) as applied using equations 5, 6, and 7:  

\[ V_{\text{wi}} = \frac{D_{\text{ci}} W_{\text{wi}}}{D_{w}} \quad \text{Eq. 5} \]

where:

- \( V_{\text{wi}} \) = volume (gal) of water in one gal of coating i.
- \( D_{\text{ci}} \) = density (lb of coating per gal of coating) of coating i.
- \( W_{\text{wi}} \) = weight fraction (expressed as a decimal) of water in coating i.
- \( D_{w} \) = density of water, 8.33 lb/gal.

\[ M_{\text{Vi}} = D_{\text{ci}} W_{\text{Vi}} \quad \text{Eq. 6} \]

where:

- \( M_{\text{Vi}} \) = mass (lb) of VOC in one gal of coating i.
- \( D_{\text{ci}} \) = density (lb of coating per gal of coating) of coating i.
- \( W_{\text{Vi}} \) = weight fraction (expressed as a decimal) of VOC in coating i.

\[ G_i = \frac{M_{\text{Vi}}}{(1 - V_{\text{wi}}) - V_{\text{Xi}}} \quad \text{Eq. 7} \]

where:

- \( G_i \) = mass of VOC emitted per volume of coating i (lb/gal) (less water and exempt solvents) as applied.
- \( M_{\text{Vi}} \) = mass (lb) of VOC in one gal of coating i.
- \( V_{\text{wi}} \) = volume (gal) of water in one gal of coating i.
- \( V_{\text{Xi}} \) = volume (gal) of exempt solvents in one gal of coating i.

VI.G.2.c  
c. VOC content level determination - compliant primers, topcoats, and specialty coatings.

(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 G.2.c.(ii) of this section, upon the VOC content obtained using EPA Method 24.  

\[ 40 \text{ CFR 63.750(e)(3)(i)} \]

(ii) If the VOC content of a coating obtained using Method 24 would indicate noncompliance as determined under either C.1.a or C.2.a, an owner or operator may elect to average the coating with other uncontrolled coatings and (re)calculate \( G_i \) (using the procedure specified in Part C, AOS I), 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 Part C, AOS I) for the averaged coatings shall then be used to determine compliance.  

\[ 40 \text{ CFR 63.750(e)(3)(ii)} \]
3. Application Equipment—Required Application Techniques (Primers and Topcoats)

None Required.

4. Requirement to Use Most Stringent Procedure (Primers and Topcoats)

None Required.

END SECTION VI
PART B - SPECIFIC CONDITIONS

SECTION VII: CONTROLLED INORGANIC HAP PRIMER AND TOPCOAT APPLICATION
COMPLIANT COATINGS WITHOUT AVERAGING

VII. Inorganic HAP Primer and Topcoat Application Without Averaging (Inorganic HAPs)

VII.A  A. APPLICABILITY

Affected Sources: Operations in this Section can only occur in Buildings E, K and Y

1. For inorganic HAP emissions, the affected sources to which the provisions of this section apply are each spray booth or hangar that contains a primer or topcoat application operation. [40 CFR 63.741(c)(7)]

2. For each new or existing primer or topcoat application operation subject to this section in which any of the coatings that are spray applied contain inorganic HAP, the Permittee shall comply with the applicable requirements in Section VII.B. [40 CFR 63.745(g)]

3. Miscellaneous Exemptions

The following topcoat and primer application operations are exempt from the requirements in VII of this section: [40 CFR 63.745(g)(4)(i. – x.)]

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

VII.B  B. EMISSION LIMITS AND STANDARDS

1. Inorganic HAP emissions – Emission Control Requirements

a. The Permittee shall comply with the applicable requirements listed in VII.2.a.i - iii below.

i. Apply these coatings in a booth or hangar in which air flow is directed downward onto or across the part or assembly being coated and exhausted through one or more outlets. [40 CFR 63.745(g)(1)]
ii. Control the air stream from this operation as follows: [40 CFR 63.745(g)(2)]

(A) For existing sources, the Permittee must choose one of the following: [40 CFR 63.745(g)(2)(i)]

1. Before exhausting it to the atmosphere, pass the air stream through a dry particulate filter system certified using the methods described in 40 CFR 63.750(o) to meet or exceed the efficiency data points in Tables VII.1 and VII.2 of this section; or [40 CFR 63.745(g)(2)(i)(A)]

   Table VII.1—Two-Stage Arrestor; Liquid Phase Challenge for Existing Sources

<table>
<thead>
<tr>
<th>Filtration efficiency requirement, %</th>
<th>Aerodynamic particle size range, µm</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;90</td>
<td>&gt;5.7</td>
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<tr>
<td>&gt;50</td>
<td>&gt;4.1</td>
</tr>
<tr>
<td>&gt;10</td>
<td>&gt;2.2</td>
</tr>
</tbody>
</table>

2. Before exhausting it to the atmosphere, pass the air stream through a waterwash system that shall remain in operation during all coating application operations; or [40 CFR 63.745(g)(2)(i)(B)]

3. 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 VII.1 and VII.2 of this section and is approved by the Control Officer. [40 CFR 63.745(g)(2)(i)(C)]

(B) For new sources, the Permittee must choose one of the following: [40 CFR 63.745(g)(2)(ii)]

1. Before exhausting it to the atmosphere, pass the air stream through a dry particulate filter system certified using the methods described in 40 CFR 63.750(o) to meet or exceed the efficiency data points in Tables VII.3 and VII.4 of this section; or [40 CFR 63.745(g)(2)(ii)(A)]

   Table VII.3—Three-Stage Arrestor; Liquid Phase Challenge for New Sources

<table>
<thead>
<tr>
<th>Filtration efficiency requirement, %</th>
<th>Aerodynamic particle size range, µm</th>
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</thead>
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<td>&gt;2.0</td>
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<tr>
<td>&gt;80</td>
<td>&gt;1.0</td>
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<td>&gt;65</td>
<td>&gt;0.42</td>
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</table>
Table VII.4—Three-Stage Arrestor; Solid Phase Challenge for New Sources

<table>
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<tr>
<th>Filtration efficiency requirement, %</th>
<th>Aerodynamic particle size range, µm</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;95</td>
<td>&gt;2.5</td>
</tr>
<tr>
<td>&gt;85</td>
<td>&gt;1.1</td>
</tr>
<tr>
<td>&gt;75</td>
<td>&gt;0.70</td>
</tr>
</tbody>
</table>

(2) 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.

[40 CFR 63.745(g)(2)(ii)(B)]

VII.B.1.a.ii(C)

(C) All operations that 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 VII.B.1.a.ii.(B) of this section:

[40 CFR 63.745(g)(2)(iii)]

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

[40 CFR 63.745(g)(2)(iii)(A)]

(2) 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.

[40 CFR 63.745(g)(2)(iii)(B)]

VII.C C. MAINTENANCE & MONITORING REQUIREMENTS

1. The Permittee shall meet the following requirements when a dry particulate filter system is used:

[40 CFR 63.745(g)(2)(iv)]

   a. Maintain the system in good working order;

   [40 CFR 63.745(g)(2)(iv)(A)]

   b. Install a differential pressure gauge across the filter banks;

   [40 CFR 63.745(g)(2)(iv)(B)]

   c. Continuously monitor the pressure drop across the filter and read and record the pressure drop once per shift; and

   [40 CFR 63.745(g)(2)(iv)(C)]

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

   [40 CFR 63.745(g)(2)(iv)(D)]

2. If the pressure drop across the dry particulate filter system, as recorded pursuant to VII.E.1 of this Section, is outside the limit(s) specified by the filter manufacturer or in locally prepared operating procedures, the Permittee shall shut down the operation immediately and take corrective action. The operation shall not be resumed until the pressure drop is returned within the specified limit(s).

[40 CFR 63.745(g)(3)]

3. Dry particulate filter & HEPA filter systems—primer and topcoat application operations

   a. When meeting the requirements of VIIB & VII.C.1 of this Section, the Permittee 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 VII.E of this Section.

   [40 CFR 63.751(c)]
Part B: Specific Conditions

Section VII: Controlled Inorganic HAP Primers and Topcoats Compliant Coatings Without Averaging

b. **Reduction of monitoring data**

   i. 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).  

   ii. The Permittee shall convert all emission data into units specified in this permit for reporting purposes. After conversion into units specified in this permit, the data may be rounded to the same number of significant digits as used in this permit to specify the emission limit (e.g., rounded to the nearest 1% overall reduction efficiency).

**VII.D**  
**COMPLIANCE DETERMINATION**

1. **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:

   a. It is operated according to the requirements specified in VII.B.1.a.i, ii & VII.C.2 of this Section; and

   b. It is shut down immediately whenever the pressure drop is outside the limit(s) established for them and is not restarted until the pressure drop is returned within these limit(s), as required under VII.C.2 of this Section.

**VII.E**  
**RECORDKEEPING REQUIREMENTS**

1. **Primer and Topcoat Application Operations - Inorganic HAP Emissions**

   a. When complying with VII.B & VII.C.1 & 2 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, the Permittee shall record the pressure drop across the operating system once each shift during which coating operations occur.

   b. This log shall include the acceptable limit(s) of pressure drop, as specified by the filter manufacturer or in locally prepared operating procedures.

**VII.F**  
**REPORTING REQUIREMENTS**

1. **Primer and topcoat application operations**

   The Permittee shall submit the following information:

   a. Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify:

      i. Each exceedance of the operating parameter(s) established for the dry particulate filter system under the initial performance test during which compliance was demonstrated.

      ii. 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 was outside the limit(s) specified by the filter manufacturer or in locally prepared operating procedures.
Part B: Specific Conditions

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iii. If the operations have been in compliance for the semiannual period, a statement that the operations have been in compliance with the applicable standards.  [40 CFR 63.753(c)(1)(vii)]

b. Annual reports beginning 12 months after the date of the notification of compliance status listing the number of times the pressure drop for each dry filter was outside the limit(s) specified by the filter manufacturer or in locally prepared operating procedures.  [40 CFR 63.753(c)(2)]

VII.G  PERFORMANCE TESTS

1. Inorganic HAP Emissions - Dry Particulate Filter Certification Requirements.

Dry particulate filters used to comply with VII.B.1.a.ii & VII.C.1 must be certified by the filter manufacturer or distributor, paint/depainting booth supplier, and/or the Permittee using Method 319 in Appendix A of 40 CFR 63 subpart A, to meet or exceed the efficiency data points found in Tables VII.1 and VII.2, or VII.3 and VII.4 of VII.B.1.a.ii(A)(1) and VII.B.1.a.ii(B)(1) for existing or new sources respectively.  [40 CFR 63.750(o)]

END SECTION VII
PART B - SPECIFIC CONDITIONS

SECTION VIII: WASTE STORAGE AND HANDLING OPERATIONS

VIII. Waste Storage and Handling Operations

A. APPLICABILITY

1. Affected Sources

The affected sources to which the provisions of this section apply are specified below (A.1.a of this section) [40 CFR 63.741(b) & (c)]

a. Each waste storage and handling operation, which is the total of all waste handling and storage at the facility. [40 CFR 63.741(c)(6)]

2. Exemption of Hazardous Wastes

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. [40 CFR 63.741(e)]

B. EMISSION LIMITS AND STANDARDS

1. Handling and Storage of Waste

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. [40 CFR 63.748]

C. COMPLIANCE DETERMINATION

1. Handling and Storage of Waste

For those wastes subject to this subpart, failure to comply with the requirements specified in B.1 of this section shall be considered a violation. [40 CFR 63.749(i)]

D. MONITORING REQUIREMENTS

None Required.

E. RECORDKEEPING REQUIREMENTS

None Required.

F. REPORTING REQUIREMENTS

None Required.

G. TESTING REQUIREMENTS

None Required.

END SECTION VIII
PART B - SPECIFIC CONDITIONS

SECTION IX:

40 CFR Part 63, SUBPART JJ – NESHAP FOR WOOD FURNITURE MANUFACTURING OPERATIONS

For the purpose of clarity, the outline format in this Section differs from the format used in the permit. References to permit conditions in this Section refer to this Section, as stated below, unless directly referring to a different Section in this permit. References to Subparts in this Section, refer to Subparts to 40 CFR Part 63. References to Subpart JJ refers to 40 CFR Part 63, §§63.800 – 808 and Tables 1-6, inclusive.

APPLICABILITY

1. **Affected Source**

   a. The affected source to which this Section applies is each facility (operation) that is engaged, either in part or in whole, in the manufacture of wood furniture or wood furniture components and that is located at the Permittee’s plant site that is a major source as defined in Subpart A, §63.2, excluding an incidental wood furniture manufacturer (IWFM). Currently the affected operations are limited to Building (Hangar) H and the source is considered an IWFM. [PCC 17.16.530.B (27) & 40 CFR 63.2, 40 CFR 63.800(a) & 40 CFR 63.801]

   b. At such time that the ICWF operations at the plant site exceed the throughput threshold in condition 4.b of this Section, the source shall be considered a new affected source. [40 CFR 63.801 “Affected Source”, 40 CFR 63.800(h), 40 CFR 63.802(b)]

   c. The affected source shall consist of the Permittee’s total collection of equipment, activities or both that is within a single contiguous area and under common control of the Permittee that is included in Subpart JJ and for which a relevant standard is established as provided in this Section. [40 CFR 63.800(e)]

2. For an affected source, in addition to the requirements of this Section, the Permittee shall comply with the requirements of Subpart A (General Provisions), according to the applicability of Subpart A to such sources, as identified in Table 1 to Subpart JJ (see Reference 1 at the end of this Section). [40 CFR 63.800(c)]

DEFINITIONS & NOMENCLATURE

3. a. All terms used in this Section that are not defined in Subpart JJ (see Reference 2 at the end of this Section), shall have the meaning given to them in the Clean Air Act and in Subpart A. [40 CFR 801(a)]

   b. The nomenclature used in this Section shall have same meaning as provided in Subpart JJ (see Reference 3 at the end of this Section). [40 CFR 801(b)]

EMISSION LIMITS AND STANDARDS

4. **Incidental Wood Furniture Manufacturer Exclusion**

   In accordance with the definition of **Incidental Wood Furniture Manufacturer (IWFM)**, the Permittee shall maintain the purchase or usage records of all finishing materials and adhesives used by the Permittee in its wood furniture or wood furniture component manufacturing operations at the Permittee’s plant site. For the purpose of this provision the Permittee must be able to demonstrate the material throughput of the source by maintaining a monthly list, inventory, and/or log of the finishing material and adhesive volume totals, in gallons, which have been purchased or used. [40 CFR 63.800(a), 40 CFR 63.801]
a. If the Permittee remains at or below an annual throughput of 1200 gallons/year of finishing materials or adhesives for the source, as measured on a 12-consecutive month basis, the Permittee shall not be subject to conditions 5 through 44 of this Section. [PCC 17.11.190]

b. If the Permittee exceeds an annual throughput of 1200 gallons/year of finishing materials or adhesives for the source, as measured on a 12-consecutive month basis, the Permittee shall become an affected source and shall be subject to the requirements of Subpart JJ as provided in conditions 5 through 44 of this Section. The Permittee shall submit a notification in writing within 60 days after the source first becomes subject to the relevant standards. The compliance date for the relevant standards provided in conditions 5 through 44 of this Section, unless otherwise provided, shall be the first day of the month following the month wherein the 12-consecutive month total exceeds 1200 gallons. [40 CFR 63.9(b)(2), 40 CFR 63.800(a), PCC 17.11.190]

c. Notwithstanding when the Permittee first exceeds the throughput limit in condition 4.b above, if at a later time, the Permittee’s throughput falls below the limit, condition 4.a above shall apply until such time that the Permittee again exceeds the limit as provided in condition 4.b above. Thereafter the Permittee shall meet the continuous compliance demonstrations in this Section when the throughput exceeds the limit. The Permittee shall indicate any months that the annual throughput in condition 4.b above is less than 1200 gallons/year, as measured on a 12-consecutive month basis, in the compliance certification report required by Section VII of Part A of this permit. [40 CFR 63.800(a), PCC 17.11.190]

5. New Affected Source Emission Limits

For the affected source the Permittee shall comply with the following: [40 CFR 63.802(b)]

a. Limit VHAP emissions from finishing operations by meeting the emission limitations for new sources presented in Table 3 to Subpart JJ, as provided below, using any of the compliance methods in condition 19 of this Section. To determine VHAP emissions from a finishing material containing formaldehyde or styrene, the owner or operator of the affected source shall use the methods presented in condition 18.b for determining styrene and formaldehyde usage. [40 CFR 63.802(b)(1)]

<table>
<thead>
<tr>
<th>Emission Point</th>
<th>New Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Finishing Operations:</strong></td>
<td></td>
</tr>
<tr>
<td>(a) Achieve a weighted average VHAP content across all coatings (maximum kg VHAP/kg solids [lb VHAP/lb solids], as applied)</td>
<td>a 0.8</td>
</tr>
<tr>
<td>(b) Use compliant finishing materials (maximum kgVHAP/kg solids [lb VHAP/lb solids], as applied):</td>
<td></td>
</tr>
<tr>
<td>- Stains</td>
<td>a 1.0</td>
</tr>
<tr>
<td>- Washcoats</td>
<td>a b 0.8</td>
</tr>
<tr>
<td>- Sealers</td>
<td>a 0.8</td>
</tr>
<tr>
<td>- Topcoats</td>
<td>a 0.8</td>
</tr>
<tr>
<td>- Basecoats</td>
<td>a b 0.8</td>
</tr>
<tr>
<td>- enamels</td>
<td>a b 0.8</td>
</tr>
<tr>
<td>- thinners (maximum percent VHAP allowable); or</td>
<td>10.0</td>
</tr>
<tr>
<td>(c) As an alternative, use control device; or</td>
<td>c 0.8</td>
</tr>
<tr>
<td>(d) Use any combination of (a), (b), and (c)</td>
<td>0.8</td>
</tr>
<tr>
<td><strong>Cleaning Operations:</strong></td>
<td></td>
</tr>
<tr>
<td>Strippable spray booth material (maximum VOC content, kg VOC/kg solids [lb VOC/lb solids])</td>
<td>0.8</td>
</tr>
</tbody>
</table>
### Contact Adhesives:

<table>
<thead>
<tr>
<th>(a) Use compliant contact adhesives (maximum kg VHAP/kg solids [lb VHAP/lb solids], as applied) based on following criteria:</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. For aerosol adhesives, and for contact adhesives applied to nonporous substrates</td>
</tr>
<tr>
<td>ii. For foam adhesives used in products that meet flammability requirements</td>
</tr>
<tr>
<td>iii. For all other contact adhesives (including foam adhesives used in products that do not meet flammability requirements); or</td>
</tr>
<tr>
<td>(b) Use a control device</td>
</tr>
</tbody>
</table>

### All Finishing Operations and Contact Adhesives:

| (a) Achieve total free formaldehyde emissions across all finishing operations and contact adhesives, lb per rolling 12 month period, as applied | 400 |
| (b) Use coatings and contact adhesives only if they are low-formaldehyde coatings and contact adhesives | f 1.0 |

---

**Notes:**

- The limits refer to the VHAP content of the coating, as applied.
- Washcoats, basecoats, and enamels must comply with the limits presented in this table if they are purchased premade, that is, if they are not formulated onsite by thinning other finishing materials. If they are formulated onsite, they must be formulated using compliant finishing materials, i.e., those that meet the limits specified in this table, and thinners containing no more than 3.0 percent VHAP by weight.
- The control device must operate at an efficiency that is equivalent to no greater than 0.8 kilogram of VHAP being emitted from the affected emission source per kilogram of solids used.
- There is no limit on the VHAP content of these adhesives.
- The control device must operate at an efficiency that is equivalent to no greater than 0.2 kilogram of VHAP being emitted from the affected emission source per kilogram of solids used.
- The limits refer to the formaldehyde content by weight of the coating or contact adhesive, as specified on certified product data sheets.

b. Limit VHAP emissions from contact adhesives by achieving a VHAP limit for contact adhesives, excluding aerosol adhesives and excluding contact adhesives applied to nonporous substrates, of no greater than 0.2 kg VHAP/kg solids (0.2 lb VHAP/lb solids), as applied, using either of the compliance methods in condition 20 of this Section. [40 CFR 63.802(b)(2)]

c. Limit HAP emissions from strippable spray booth coatings by using coatings that contain no more than 0.8 kg VOC/kg solids (0.8 lb VOC/lb solids), as applied. [40 CFR 63.802(b)(3)]

d. Limit formaldehyde emissions by complying with the provisions specified in either condition 5.d.i or condition 5.d.ii, as stated below: [40 CFR 63.802(b)(4)]

i. Limit total formaldehyde (F<sub>total</sub>) use in coatings and contact adhesives to no more than 400 pounds per rolling 12 month period. [40 CFR 63.802(b)(4)(i)]

ii. Use coatings and contact adhesives only if they are low-formaldehyde coatings and adhesives, in any wood furniture manufacturing operations. [40 CFR 63.802(b)(4)(ii)]
6. At all times, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Control Officer which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.802(c)]

WORK PRACTICE STANDARDS

7. Work Practice Implementation Plan

a. The Permittee shall prepare and maintain a written work practice implementation plan that defines environmentally desirable work practices for each wood furniture operation manufacturing operation and addresses each of the work practice standards presented in conditions 7-18. The plan shall be developed no more than 60 days after compliance date in condition 4.b [40 CFR 63.803(a)(1)]

b. The written work practice implementation plan shall be available for inspection by the Administrator (or delegated State, local, or Tribal authority) upon request. If the Administrator (or delegated State, local, or Tribal authority) determines that the work practice implementation plan does not include sufficient mechanisms for ensuring that the work practice standards are being implemented, the Administrator (or delegated State, local, or Tribal authority) may require the Permittee to modify the plan. Revisions or modifications to the plan do not require a revision of this permit. [40 CFR 63.803(a)(2)]

c. The leak inspection and maintenance plan required by condition 9 and the formulation assessment plan for finishing operations required by condition 18 are also reviewable by the Administrator (or delegated State, local, or Tribal authority). [40 CFR 63.803(a)(3)]

8. Operator Training Course [40 CFR 63.803(b)]

The Permittee shall train all new and existing personnel, including contract personnel, who are involved in finishing, gluing, cleaning, and washoff operations, use of manufacturing equipment, or implementation of the requirements of this Section. All new personnel, those hired after the compliance date in this standard, shall be trained upon hiring. All existing personnel, those hired before the compliance date of the standards in this Section, shall be trained within six months of the compliance date of the standards in this Section. All personnel shall be given refresher training annually. The Permittee shall maintain a copy of the training program with the work practice implementation plan. The training program shall include, at a minimum, the following:

a. A list of all current personnel by name and job description that are required to be trained;

b. An outline of the subjects to be covered in the initial and refresher training for each position or group of personnel;

c. Lesson plans for courses to be given at the initial and the annual refresher training that include, at a minimum, appropriate application techniques, appropriate cleaning and washoff procedures, appropriate equipment setup and adjustment to minimize finishing material usage and overspray, and appropriate management of cleanup wastes; and

d. A description of the methods to be used at the completion of initial or refresher training to demonstrate and document successful completion.
9. **Leak Inspection and Maintenance Plan**  
   
   The Permittee shall prepare and maintain with the work practice implementation plan a written leak inspection and maintenance plan that specifies:
   
a. A minimum visual inspection frequency of once per month for all equipment used to transfer or apply coatings, adhesives, or organic HAP solvents;
   
b. An inspection schedule;
   
c. Methods for documenting the date and results of each inspection and any repairs that were made;
   
d. The timeframe between identifying the leak and making the repair, which adheres, at a minimum, to the following schedule:
   
i. A first attempt at repair (e.g., tightening of packing glands) shall be made no later than five calendar days after the leak is detected; and
   
ii. Final repairs shall be made within 15 calendar days after the leak is detected, unless the leaking equipment is to be replaced by a new purchase, in which case repairs shall be completed within three months.

10. **Cleaning and Washoff Solvent Accounting System**  
   
   The Permittee shall develop an organic HAP accounting form to record the following:
   
a. The quantity and type of organic HAP solvent used each month for washoff and cleaning, as defined in this Section (Reference 2 at the end of this Section);
   
b. The number of pieces washed off, and the reason for the washoff; and
   
c. The quantity of spent organic HAP solvent generated from each washoff and cleaning operation each month, and whether it is recycled onsite or disposed offsite.

11. **Chemical Composition of Cleaning and Washoff Solvents**  
   
   The Permittee shall not use cleaning or washoff solvents that contain any of the pollutants listed in Table 4 to Subpart JJ (Reference 4 at end of Section), in concentrations subject to MSDS reporting as required by OSHA.

12. **Spray Booth Cleaning**  
   
   The Permittee shall not use compounds containing more than 8.0 percent by weight of VOC for cleaning spray booth components other than conveyors, continuous coaters and their enclosures, or metal filters, or plastic filters unless the spray booth is being refurbished. If the spray booth is being refurbished, that is the spray booth coating or other protective material used to cover the booth is being replaced, the affected source shall use no more than 1.0 gallon of organic HAP solvent per booth to prepare the surface of the booth prior to applying the booth coating.

13. **Storage Requirements**  
   
   The Permittee shall use normally closed containers for storing finishing, gluing, cleaning, and washoff materials.

14. **Application equipment requirements**  
   
   The Permittee shall not use conventional air spray guns except when all emissions from the finishing application station are routed to a functioning control device.
15. **Line Cleaning**  

   [40 CFR 63.803(i)]  
   The Permittee shall pump or drain all organic HAP solvent used for line cleaning into a normally closed container.

16. **Gun Cleaning**  

   [40 CFR 63.803(j)]  
   The Permittee shall collect all organic HAP solvent used to clean spray guns into a normally closed container.

17. **Washoff operations**  

   [40 CFR 63.803(k)]  
   The Permittee shall control emissions from washoff operations by:
   
   a. Using normally closed tanks for washoff; and  
   
   b. Minimizing dripping by tilting or rotating the part to drain as much solvent as possible.

18. **Formulation Assessment Plan for Finishing Operations**  

   [40 CFR 63.803(l)]  
   The Permittee shall prepare and maintain with the work practice implementation plan a formulation assessment plan that:
   
   a. Identifies VHAP from the list presented in Table 5 to Subpart JJ (Reference 5 at the end of this Section) that are being used in finishing operations by the affected source;  
      [40 CFR 63.803(l)(1)]  
   
   b. Establishes a baseline level of usage by the affected source, for each VHAP identified in condition 18.a above. The baseline usage level shall be the highest annual usage from 1994, 1995, or 1996 (or from the compliance date in condition 4.b whichever is later), for each VHAP identified in condition 18.a above. For formaldehyde, the baseline level of usage shall be based on the amount of free formaldehyde present in the finishing material when it is applied. For styrene, the baseline level of usage shall be an estimate of unreacted styrene, which shall be calculated by multiplying the amount of styrene monomer in the finishing material, when it is applied, by a factor of 0.16. Sources using a control device to reduce emissions may adjust their usage based on the overall control efficiency of the control system, which is determined using the equation in conditions 28 or 29.  
      [40 CFR 63.803(l)(2)]  
   
   c. Tracks the annual usage of each VHAP identified in condition 18.a above by the affected source that is present in amounts subject to MSDS reporting as required by OSHA.  
      [40 CFR 63.803(l)(3)]  
   
   d. If, after November 1998, the annual usage of the VHAP identified in condition 18.a above exceeds its baseline level, then the Permittee shall provide a written notification to the permitting authority that describes the amount of the increase and explains the reasons for exceedance of the baseline level. The following explanations would relieve the owner or operator from further action, unless the affected source is not in compliance with any State regulations or requirements for that VHAP:  
      [40 CFR 63.803(l)(4)]  
   
      i. The exceedance is no more than 15.0 percent above the baseline level;  
   
      ii. Usage of the VHAP is below the de minimis level presented in Table 5 of NESHAP, Subpart JJ (Reference 5 at the end of this Section) for that VHAP (sources using a control device to reduce emissions may adjust their usage based on the overall control efficiency of the control system, which is determined using the procedures in conditions 28 or 29;  
   
      iii. The affected source is in compliance with its State's air toxic regulations or guidelines for the VHAP; or  
   
      iv. The source of the pollutant is a finishing material with a VOC content of no more than 1.0 kg VOC/kg solids (1.0 lb VOC/lb solids), as applied.
Part B: Specific Conditions

Section IX: Wood Furniture Manufacturing Operations

e. If none of the above explanations are the reason for the increase, the owner or operator shall confer with the permitting authority to discuss the reason for the increase and whether there are practical and reasonable technology-based solutions for reducing the usage. The evaluation of whether a technology is reasonable and practical shall be based on cost, quality, and marketability of the product, whether the technology is being used successfully by other wood furniture manufacturing operations, or other criteria mutually agreed upon by the permitting authority and owner or operator. If there are no practical and reasonable solutions, the facility need take no further action. If there are solutions, the owner or operator shall develop a plan to reduce usage of the pollutant to the extent feasible. The plan shall address the approach to be used to reduce emissions, a timetable for implementing the plan, and a schedule for submitting notification of progress. [40 CFR 63.803(l)(5)]

f. If, after November 1998, an affected source uses a VHAP of potential concern listed in Table 6 to Subpart JJ of 40 CFR Part 63 (Reference 6 at the end of this Section) for which a baseline level has not been previously established, then the baseline level shall be established as the de minimis level provided in that same table for that chemical. The affected source shall track the annual usage of each VHAP of potential concern identified in this paragraph that is present in amounts subject to MSDS reporting as required by OSHA. If usage of the VHAP of potential concern exceeds the de minimis level listed in Table 6 to Subpart JJ of 40 CFR Part 63 for that chemical, then the affected source shall provide an explanation to the permitting authority that documents the reason for the exceedance of the de minimis level. If the explanation is not one of those listed in condition 18.d.i through iv above the affected source shall follow the procedures in condition 18.e of this Section. [40 CFR 63.803(l)(6)]

COMPLIANCE PROCEDURES AND MONITORING REQUIREMENTS

19. New Affected Sources – Finishing Operations

For the affected source subject to 5.a of this Section, the Permittee shall comply with those provisions by using any of the following methods: [40 CFR 63.804(d)]

a. Calculate the average VHAP content across all finishing materials used at the facility using Equation 1 below, and maintain a value of E no greater than 0.8. [40 CFR 63.804(d)(1)]

\[ E = \frac{M_{c1}C_{c1} + M_{c2}C_{c2} + \ldots + M_{cn}C_{cn} + S_{1}W_{1} + S_{2}W_{2} + \ldots + S_{n}W_{n}}{(M_{c1} + M_{c2} + \ldots + M_{cn})} \]

Ref. Equation 1 (see Nomenclature in Reference 3 at the end of this Section)

b. Use compliant finishing materials according to the following criteria: [40 CFR 63.804(d)(2)]

i. Demonstrate that each sealer and topcoat has a VHAP content of no more than 0.8 kg VHAP/kg solids (0.8 lb VHAP/lb solids), as applied, each stain has a VHAP content of no more than 1.0 kg VHAP/kg solids (1.0 lb VHAP/lb solids), as applied, and each thinner contains no more than 10.0 percent VHAP by weight; [40 CFR 63.804(d)(2)(i)]

ii. Demonstrate that each washcoat, basecoat, and enamel that is purchased pre-made, that is, it is not formulated onsite by thinning another finishing material, has a VHAP content of no more than 0.8 kg VHAP/kg solids (0.8 lb VHAP/lb solids), as applied, and each thinner contains no more than 10.0 percent VHAP by weight; and [40 CFR 63.804(d)(2)(ii)]

iii. Demonstrate that each washcoat, basecoat, and enamel that is formulated onsite is formulated using a finishing material containing no more than 0.8 kg VHAP/kg solids (0.8 lb VHAP/lb solids) and a thinner containing no more than 3.0 percent HAP by weight. [40 CFR 63.804(d)(2)(iii)]
c. Use a control system with an overall control efficiency (R) such that the value of $E_{ac}$ in Equation 2 below is no greater than 0.8.  

$$R = \left[\frac{(E_{bc} - E_{ac})}{E_{bc}}\right](100)$$  

(Ref. Equation 2  

(see Nomenclature in Reference 3 at the end of this Section)

The value of $E_{bc}$ in Equation 2 above shall be calculated using Equation 1 in condition 19.a; or

d. Use any combination of an averaging approach, as described in condition 19.a of this Section, compliant finishing materials, as described in condition 19.b of this Section, and a control system, as described in condition 19.c of this Section.  

[40 CFR 63.804(d)(4)]

20. **New Affected Sources – Contact Adhesives**

For the affected source subject to condition 5.b of this Section, the Permittee shall comply with the provisions using either of the following methods:  

[40 CFR 63.804(e)]

a. Use compliant contact adhesives with a VHAP content no greater than 0.2 kg VHAP/kg solids (0.2 lb VHAP/lb solids), as applied; or  

[40 CFR 63.804(e)(1)]

b. Use a control system with an overall control efficiency (R) such that the value of $G_{ac}$ in Equation 3 below is no greater than 0.2.  

$$R = \left[\frac{(G_{bc} - G_{ac})}{G_{bc}}\right](100)$$  

(Ref. Equation 3  

(see Nomenclature in Reference 3 at the end of this Section)

21. **Initial Compliance Demonstrations**

a. For finishing operations that comply using VHAP averaging procedures established in condition 19.a of this Section, the Permittee shall submit the results of the averaging calculation (Equation 1) for the first month with the initial compliance status report required by condition 41. The first month’s calculation shall include data for the entire month in which the compliance date as provided in condition 4.b of this Section falls.  

[40 CFR 63.804(f)(1)]

b. For finishing operations that comply using compliant finishing material procedures as established in condition 19.b of this Section, the Permittee shall submit an initial compliance status report, as required by condition 41, stating that compliant stains, washcoats, sealers, topcoats, basecoats, enamels, and thinners, as applicable are being used by the affected source.  

[40 CFR 63.804(f)(2)]

c. For finishing operations that comply using a control system and procedures established in condition 19.c, the Permittee shall demonstrate initial compliance by:  

[40 CFR 63.804(f)(4)]

i. Submitting a monitoring plan that identifies each operating parameter to be monitored for the capture device and discusses why each parameter is appropriate for demonstrating continuous compliance;

ii. Conducting an initial performance test as required under §63.7 using the procedures and test methods listed in §63.7 of Subpart A and conditions 24, 27, and 28 or 29;

iii. Calculating the overall control efficiency (R) following the procedures in conditions 28 or 29; and

iv. Determining those operating conditions critical to determining compliance and establishing one or more operating parameters that will ensure compliance with the standard.  

A For compliance with a thermal incinerator, minimum combustion temperature shall be the operating parameter.
(B) For compliance with a catalytic incinerator equipped with a fixed catalyst bed, the minimum gas temperature both upstream and downstream of the catalyst bed shall be the operating parameter.

(C) For compliance with a catalytic incinerator equipped with a fluidized catalyst bed, the minimum gas temperature upstream of the catalyst bed and the pressure drop across the catalyst bed shall be the operating parameters.

(D) For compliance with a carbon adsorber, the operating parameters shall be the total regeneration mass stream flow for each regeneration cycle and the carbon bed temperature after each regeneration, or the concentration level of organic compounds exiting the adsorber, unless the owner or operator requests and receives approval from the Control Officer to establish other operating parameters.

(E) For compliance with a control device not listed in this section, one or more operating parameter values shall be established using the procedures identified in condition 22.c.vi.

v. If complying with condition 21.c. above, the Permittee shall calculate each site-specific operating parameter value as the arithmetic average of the maximum or minimum operating parameter values, as appropriate, that demonstrate compliance with the standards, during the three test runs required by condition 27.a.

d. For contact adhesive operations that comply using compliant contact adhesive procedures established in condition 20.a of this Section, the Permittee shall submit an initial compliance status report, as required by condition 41, stating that compliant contact adhesives are being used by the affected source.

[40 CFR 63.804(f)(5)]

e. For contact adhesive operations complying using a control system and procedures established in condition 20.b of this Section, the Permittee shall demonstrate initial compliance by: 

[40 CFR 63.804(f)(6)]

i. Submitting a monitoring plan that identifies each operating parameter to be monitored for the capture device and discusses why each parameter is appropriate for demonstrating continuous compliance;

ii. Conducting an initial performance test as required under §63.7 using the procedures and test methods listed in §63.7 of Subpart A and conditions 24, 27, and 28 or 29;

iii. Calculating the overall control efficiency (R) following the procedures in conditions 28 or 29; and

iv. Determining those operating conditions critical to determining compliance and establishing one or more operating parameters that will ensure compliance with the standard.

(A) For compliance with a thermal incinerator, minimum combustion temperature shall be the operating parameter.

(B) For compliance with a catalytic incinerator equipped with a fixed catalyst bed, the minimum gas temperature both upstream and downstream of the catalyst shall be the operating parameter.

(C) For compliance with a catalytic incinerator equipped with a fluidized catalyst bed, the minimum gas temperature upstream of the catalyst bed and the pressure drop across the catalyst bed shall be the operating parameters.

v. If complying with condition 21.e above, the Permittee shall calculate each site-specific operating parameter value as the arithmetic average of the maximum or minimum operating values as appropriate, that demonstrate compliance with the standards, during the three test runs required by condition 27.a.
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f. For strippable spray booth coating operations subject to condition 5.c, the Permittee shall submit an initial compliance status report, as required by condition 41 of this Section, stating that compliant strippable spray booth coatings are being used by the affected source. [40 CFR 63.804(f)(7)]

g. The Permittee shall submit an initial compliance status report, as required by condition 41 of this Section, stating that the work practice implementation plan has been developed and procedures have been established for implementing provisions of the plan. [40 CFR 63.804(f)(8)]

22. Continuous Compliance Demonstrations [40 CFR 63.804(g)]

a. For finishing operations that comply using VHAP averaging procedures established in condition 19.a of this Section, the Permittee shall demonstrate continuous compliance by submitting the results of the averaging calculation (Equation 1) for each month within that semiannual period and submitting a compliance certification with the semiannual report required condition 42. [40 CFR 63.804(g)(1)]

i. The compliance certification shall state that the value of (E), as calculated by Equation 1, is no greater than 0.8. An affected source is in violation of the standard if E is greater than 0.8 for any month. A violation of the monthly average is a separate violation of the standard for each day of operation during the month, unless the affected source can demonstrate through records that the violation of the monthly average can be attributed to a particular day or days during the period.

ii. The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

b. For finishing operations that comply using compliant finishing materials procedures as established in condition 19.b of this Section, the Permittee shall demonstrate continuous compliance by using compliant coatings and thinners, maintaining records that demonstrate the coatings and thinners are compliant, and submitting a compliance certification with the semiannual report required by condition 42. [40 CFR 63.804(g)(2)]

i. The compliance certification shall state that compliant stains, washcoats, sealers, topcoats, basecoats, enamels, and thinners, as applicable, have been used each day in the semiannual reporting period or should otherwise identify the periods of noncompliance and the reasons for noncompliance. An affected source is in violation of the standard whenever a noncompliant coating, as demonstrated by records or by a sample of the coating, is used.

ii. The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

c. For finishing operations that comply using a control system and procedures established in condition 19.c, the Permittee shall demonstrate continuous compliance by installing, calibrating, maintaining, and operating the appropriate monitoring equipment according to manufacturer's specifications. The owner or operator shall also submit the excess emissions and continuous monitoring system performance report and summary report required by condition 42.b and §63.10(e) of Subpart A. [40 CFR 63.804(g)(4)]

i. Where a capture/control device is used, a device to monitor each site-specific operating parameter established in accordance with condition 21.c.i is required.

ii. Where an incinerator is used, a temperature monitoring device equipped with a continuous recorder is required.

(A) Where a thermal incinerator is used, a temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

(B) Where a catalytic incinerator equipped with a fixed catalyst bed is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.
(C) Where a catalytic incinerator equipped with a fluidized catalyst bed is used, a temperature monitoring device shall be installed in the gas stream immediately before the bed. In addition, a pressure monitoring device shall be installed to determine the pressure drop across the catalyst bed. The pressure drop shall be measured monthly at a constant flow rate.

iii. Where a carbon adsorber is used one of the following is required:

(A) An integrating stream flow monitoring device having an accuracy of ±10 percent, capable of recording the total regeneration stream mass flow for each regeneration cycle; and a carbon bed temperature monitoring device, having an accuracy of ±1 percent of the temperature being monitored or ±0.5 °C, whichever is greater, and capable of recording the carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle;

(B) An organic monitoring device, equipped with a continuous recorder, to indicate the concentration level of organic compounds exiting the carbon adsorber; or

(C) Any other monitoring device that has been approved by the Control Officer in accordance with condition 21.c.iv.(D) of this Section.

iv. The Permittee shall not operate the capture or control device at a daily average value greater than or less than (as appropriate) the operating parameter values. The daily average value shall be calculated as the average of all values for a monitored parameter recorded during the operating day.

v. If complying through the use of a catalytic incinerator equipped with a fluidized catalyst bed, the Permittee shall maintain a constant pressure drop, measured monthly, across the catalyst bed.

vi. If using a control device not listed in condition 21.c of this Section, the Permittee shall submit, for the Control Officer's approval, a description of the device, test data verifying performance, and appropriate site-specific operating parameters that will be monitored to demonstrate continuous compliance with the standard.

d. For contact adhesive operations complying using compliant contact adhesive procedures established in condition 20.a of this Section, the Permittee shall submit a compliance certification with the semiannual report required by condition 42.  

[40 CFR 63.804(g)(5)]

i. The compliance certification shall state that compliant contact and/or foam adhesives have been used each day in the semiannual reporting period, or should otherwise identify each day noncompliant contact and/or foam adhesives were used. Each day a noncompliant contact or foam adhesive is used is a single violation of the standard.

ii. The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

e. For contact adhesive operations complying using a control system and procedures established in condition 20.b of this Section, the Permittee shall demonstrate continuous compliance by installing, calibrating, maintaining, and operating the appropriate monitoring equipment according to the manufacturer's specifications. The Permittee shall also submit the excess emissions and continuous monitoring system performance report and summary report required by condition 42.b and §63.10(e) of subpart A.  

[40 CFR 63.804(g)(6)]

i. Where a capture/control device is used, a device to monitor each site-specific operating parameter established in accordance with condition 21.e.i if this Section.

ii. Where an incinerator is used, a temperature monitoring device equipped with a continuous recorder is required.
(A) Where a thermal incinerator is used, a temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

(B) Where a catalytic incinerator equipped with a fixed catalyst bed is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

(C) Where a catalytic incinerator equipped with a fluidized catalyst bed is used, a temperature monitoring device shall be installed in the gas stream immediately before the bed. In addition, a pressure monitoring device shall be installed to measure the pressure drop across the catalyst bed. The pressure drop shall be measured monthly at a constant flow rate.

iii. Where a carbon adsorber is used one of the following is required:

(A) An integrating stream flow monitoring device having an accuracy of ±10 percent, capable of recording the total regeneration stream mass flow for each regeneration cycle; and a carbon bed temperature monitoring device, having an accuracy of ±1 percent of the temperature being monitored or ±0.5 °C, whichever is greater, and capable of recording the carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle;

(B) An organic monitoring device, equipped with a continuous recorder, to indicate the concentration level of organic compounds exiting the carbon adsorber; or

(C) Any other monitoring device that has been approved by the Administrator in accordance with condition 21.c.iv.(D).

iv. The Permittee shall not operate the capture or control device at a daily average value greater than or less than (as appropriate) the operating parameter values. The daily average value shall be calculated as the average of all values for a monitored parameter recorded during the operating day.

v. For contact adhesive operations that are complying through the use of a catalytic incinerator equipped with a fluidized catalyst bed, the Permittee shall maintain a constant pressure drop, measured monthly, across the catalyst bed.

vi. If using a control device not listed in this section, the Permittee shall submit to the Administrator a description of the device, test data verifying the performance of the device, and appropriate operating parameter values that will be monitored to demonstrate continuous compliance with the standard. Compliance using this device is subject to the Administrator's approval.

f. For strippable spray booth coating operations subject to condition 5.c, the Permittee shall submit a compliance certification with the semiannual report required by §63.807(c). [40 CFR 63.804(g)(7)]

i. The compliance certification shall state that compliant strippable spray booth coatings have been used each day in the semiannual reporting period, or should otherwise identify each day noncompliant materials were used. Each day a noncompliant strippable booth coating is used is a single violation of the standard.

ii. The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

g. For an affected source subject to the work practice standards in conditions 7 through 18, the Permittee shall submit a compliance certification with the semiannual report required by condition 42. [40 CFR 63.804(g)(8)]

i. The compliance certification shall state that the work practice implementation plan is being followed, or should otherwise identify the provisions of the plan that have not been implemented and each day the provisions were not implemented. During any period of time that an owner or operator is required
to implement the provisions of the plan, each failure to implement an obligation under the plan during any particular day is a violation.

ii. The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

h. The Permittee shall comply with the total formaldehyde emissions limit as provided in condition 5.d by using either of the methods presented in conditions 22.h.i and ii below if complying with condition 5.d.i or by using the method presented in condition 22.h.iii below if complying with condition 5.d.ii.

i. Calculate total formaldehyde emissions from all finishing materials and contact adhesives used at the facility using Equation 4 below and maintain a value of $F_{\text{total}}$ no more than 400 pounds per rolling 12 month period.

$$F_{\text{total}} = (C_{f1}V_{c1} + C_{f2}V_{c2} + \ldots + C_{fn}V_{fn} + G_{f1}V_{g1} + \ldots + G_{fn} + V_{gn})$$  \text{Ref. Equation 4}  
(see Nomenclature in Reference 3 at the end of this Section)

ii. Use a control system with an overall control efficiency (R) such that the calculated value of $F_{\text{total}}$ in Equation 5 below is no more than 400 pounds per rolling 12 month period.

$$F_{\text{total}} = (C_{f1}V_{c1} + C_{f2}V_{c2} + \ldots + C_{fn}V_{fn} + G_{f1}V_{g1} + \ldots + G_{fn} + V_{gn}) \times (1-R)$$  \text{Ref. Equation 5}  
(see Nomenclature in Reference 3 at the end of this Section)

iii. Demonstrate compliance by use of coatings and contact adhesives only if they are low-formaldehyde coatings and contact adhesives maintaining a certified product data sheet for each coating and contact adhesive used, as required by condition 31.a, and submitting a compliance certification with the semiannual report required by condition 42.

(A) The compliance certification shall state that low-formaldehyde coatings and contact adhesives, as applicable, have been used each day in the semiannual reporting period or should otherwise identify the periods of noncompliance and the reasons for noncompliance. An affected source is in violation of the standard whenever a coating or contact adhesive that is not low-formaldehyde, as demonstrated by records or by a sample of the coating or contact adhesive, is used. Use of a noncompliant coating or contact adhesive is a separate violation for each day the noncompliant coating or contact adhesive is used.

(B) The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

23. \textbf{Continuous Compliance Requirements}  \text{[40 CFR 63.804(g)(9)]}

The Permittee must demonstrate continuous compliance with the emissions standards and operating limits by using the performance test methods and procedures in conditions 24 through 29 for each affected source.

a. The Permittee must monitor and collect data, and provide a site specific monitoring plan as required by conditions 19 through 23, 30 through 39, and 40 through 43.  \text{[40 CFR 63.804(g)(9)]}

b. Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), you must operate the monitoring system and collect data at all required intervals at all times the affected source is operating and periods of malfunction. Any period for which data collection is required and the operation of the CEMS is not otherwise exempt and for which the monitoring system is out-of-control and data are not available for required calculations constitutes a deviation from the monitoring requirements.
c. You may not use data recorded during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. The owner or operator must use all the data collected during all other periods in assessing the operation of the control device and associated control system.

d. The Permittee must keep the necessary parts for routine repairs of the affected CMS equipment readily available (as applicable).  

[40 CFR 63.8(c)]

TESTING REQUIREMENTS

24. General Provisions if using a Control Device

a. In accordance with §63.7(a)(4) of Subpart A, for an affected source using a control device to comply with condition 5 in accordance with conditions 19.c or 20.b, the Permittee must conduct a performance test within 180 days of the compliance date for such source in accordance with conditions 26 through 29 of this section.  

[40 CFR 63.7(a)(4)]

b. In accordance with §63.7(b), the Permittee must notify the Control Officer in writing of his or her intention to conduct a performance test of a control device at least 60 calendar days before the performance test is initially scheduled to begin to allow the Control Officer, upon request, to review and approve the site specific test plan as provided in conditions 21.c or 21.e.  

[40 CFR 63.7(b)]

c. The Permittee shall meet the following additional performance testing requirements for a control device:

i. Quality assurance program in accordance with 63.7(c)

ii. Submission of site-specific test plan in accordance with §63.7(c)(2)

iii. Performance testing facilities in accordance with §63.7(d)

d. Performance tests for a control device shall be conducted and data shall be reduced in accordance with the test methods and procedures set forth in §63.7(e)(2).  

[40 CFR 63.7(e)(2)]

e. Performance tests shall be conducted under such conditions as the Administrator specifies to the Permittee based on representative performance of the affected source for the period being tested. Upon request, the Permittee shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.  

[40 CFR 63.805(a)(2)]
25. **Formulation Data and VHAP Content**

The EPA Method 311 of appendix A of part 63 shall be used in conjunction with formulation data to determine the VHAP content of the liquid coating. Formulation data shall be used to identify VHAP present in the coating. The EPA Method 311 shall then be used to quantify those VHAP identified through formulation data. The EPA Method 311 shall not be used to quantify HAP such as styrene and formaldehyde that are emitted during the cure. The EPA Method 24 (40 CFR part 60, appendix A) shall be used to determine the solids content by weight and the density of coatings. If it is demonstrated to the satisfaction of the Administrator that a coating does not release VOC or HAP byproducts during the cure, for example, all VOC and HAP present in the coating is solvent, then batch formulation information shall be accepted. The owner or operator of an affected source may request approval from the Administrator to use an alternative method for determining the VHAP content of the coating. In the event of any inconsistency between the EPA Method 24 or Method 311 test data and a facility's formulation data, that is, if the EPA Method 24/311 value is higher, the EPA Method 24/311 test shall govern unless after consultation, a regulated source could demonstrate to the satisfaction of the enforcement agency that the formulation data were correct. Sampling procedures shall follow the guidelines presented in “Standard Procedures for Collection of Coating and Ink Samples for VOC Content Analysis by Reference Method 24 and Reference Method 24A,” EPA-340/1-91-010. (Docket No. A-93-10, Item No. IV-A-1).

26. When demonstrating compliance in accordance with conditions 21.c or e. and 22.c or e, or complying with any of the other emission limits of condition 5 by operating a capture or control device, the Permittee shall determine the overall control efficiency of the control system (R) as the product of the capture and control device efficiency, using the test methods cited in condition 27 below and the procedures in conditions 28 or 29.

27. When an initial compliance demonstration is required by conditions 21.c or e the following procedures shall be used in determining initial compliance with the provisions of this Section.

   a. The EPA Method 18 (40 CFR part 60, appendix A) shall be used to determine the HAP concentration of gaseous air streams. The test shall consist of three separate runs, each lasting a minimum of 30 minutes.
   
   b. The EPA Method 1 or 1A (40 CFR part 60, appendix A) shall be used for sample and velocity traverses.
   
   c. The EPA Method 2, 2A, 2C, or 2D (40 CFR part 60, appendix A) shall be used to measure velocity and volumetric flow rates.
   
   d. The EPA Method 3 (40 CFR part 60, appendix A) shall be used to analyze the exhaust gases.
   
   e. The EPA Method 4 (40 CFR part 60, appendix A) shall be used to measure the moisture in the stack gas.
   
   f. The EPA Methods 2, 2A, 2C, 2D, 3, and 4 shall be performed, as applicable, at least twice during each test period.

28. When demonstrating compliance in accordance with conditions 21.c or e, the Permittee shall perform a gaseous emission test using the following procedures:

   a. Construct the overall HAP emission reduction system so that all volumetric flow rates and total HAP emissions can be accurately determined by the applicable test methods specified in condition 27.a through f.
   
   b. Determine capture efficiency from the affected emission point(s) by capturing, venting, and measuring all HAP emissions from the affected emission point(s). During a performance test, the owner or operator shall isolate affected emission point(s) located in an area with other nonaffected gaseous emission sources from all other gaseous emission point(s) by any of the following methods:
   
      i. Build a temporary total enclosure (see § Reference 2 at the end of this Section) around the affected emission point(s); or
ii. Use the building that houses the process as the enclosure (see Reference 2 at the end of this Section);

iii. Use any alternative protocol and test method provided they meet either the requirements of the data quality objective (DQO) approach or the lower confidence level (LCL) approach (see Reference 2 at the end of this Section);

iv. Shut down all nonaffected HAP emission point(s) and continue to exhaust fugitive emissions from the affected emission point(s) through any building ventilation system and other room exhausts such as drying ovens. All exhaust air must be vented through stacks suitable for testing; or

v. Use another methodology approved by the Administrator provided it complies with the EPA criteria for acceptance under part 63, appendix A, Method 301.

c. Operate the control device with all affected emission points that will subsequently be delivered to the control device connected and operating at maximum production rate;

d. Determine the efficiency (F) of the control device using the following equation:

\[
F = \frac{\sum_{i=1}^{n} Q_{bi} C_{bi} - \sum_{j=1}^{p} Q_{aj} C_{aj}}{\sum_{i=1}^{n} Q_{bi} C_{bi}}
\]

Ref. Equation 6

(see Nomenclature in Reference 3 at the end of this Section)

e. Determine the efficiency (N) of the capture system using the following equation:

\[
N = \frac{\sum_{i=1}^{n} Q_{di} C_{di}}{\sum_{i=1}^{n} Q_{di} C_{di} + \sum_{k=1}^{p} Q_{fk} C_{fk}}
\]

Ref. Equation 7

(see Nomenclature in Reference 3 at the end of this Section)

f. When complying with condition 5.a in accordance with condition 19.c, compliance is demonstrated if the product of \((F \times N)(100)\) yields a value \((R)\) such that the value of \(E_{ac}\) in Equation 2 is no greater than 0.8.

g. When complying with condition 5.b in accordance with condition 20.b, compliance is demonstrated if the product of \((F \times N)(100)\) yields a value \((R)\) such that the value of \(G_{ac}\) in Equation 3 is no greater than 0.2.

29. An alternative method to the compliance method in condition 28 above is the installation of a permanent total enclosure around the affected emission point(s). A permanent total enclosure presents prima facia evidence that all HAP emissions from the affected emission point(s) are directed to the control device. Each affected source that complies using a permanent total enclosure shall:

\[
[40 \text{ CFR 63.805(e)}]
\]

a. Demonstrate that the total enclosure meets the requirements in condition 29.a below. 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 emission point(s) are contained and vented to the control device. The requirements for automatic approval are as follows:

\[
[40 \text{ CFR 63.805(e)(1)}]
\]

i. The total area of all natural draft openings shall not exceed 5 percent of the total surface area of the total enclosure's walls, floor, and ceiling;

ii. All sources of emissions within the enclosure shall be a minimum of four equivalent diameters away from each natural draft opening;

iii. 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:

(A) 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 specified in condition 28.b and c.
Volumetric flow rates shall be calculated without the adjustment normally made for moisture content; and

(B) Determine FV by the following equation:

\[
FV = \frac{\sum_{i=1}^{n} Q_{\text{out}i} - \sum_{i=1}^{p} Q_{\text{in}i}}{\sum_{k=1}^{q} A_k}
\]

Ref. Equation 8
(see Nomenclature in Reference 3 at the end of this Section)

iv. All access doors and windows whose areas are not included as natural draft openings and are not included in the calculation of FV shall be closed during routine operation of the process.

b. Determine the control device efficiency using Equation 6, and the test methods and procedures specified in condition 27.a through f.

c. For each new affected source complying with condition 5.a in accordance with condition 19.c, compliance is demonstrated if:

i. The installation of a permanent total enclosure is demonstrated (N = 1);

ii. The value of F is determined from Equation 6; and

iii. The product of \((F \times N)(100)\) yields a value (R) such that the value of \(E_{ac}\) in Equation 2 is no greater than 0.8.

d. For each new affected source complying with condition 5.b in accordance with condition 20.b, compliance is demonstrated if:

i. The installation of a permanent total enclosure is demonstrated (N = 1);

ii. The value of F is determined from Equation (5); and

iii. The product of \((F \times N)(100)\) yields a value (R) such that the value of \(G_{ac}\) in Equation 3 is no greater than 0.2.

**RECORDKEEPING REQUIREMENTS**

*30. General Provisions*

For an affected source subject to conditions 5 through 44 of this Section, the Permittee shall fulfill all recordkeeping requirements of 40 CFR 63.10, according to the applicability criteria in condition 2.

*31. Product Data & Emissions Records*

For an affected source subject to the emission limits in condition 5 of this Section, the Permittee shall maintain records of the following:

a. A certified product data sheet for each finishing material, thinner, contact adhesive, and strippable spray booth coating subject to the emission limits in condition 5; and

b. The VHAP content, in kg VHAP/kg solids (lb VHAP/lb solids), as applied, of each finishing material and contact adhesive subject to the emission limits in condition 5; and

c. The VOC content, in kg VOC/kg solids (lb VOC/lb solids), as applied, of each strippable booth coating subject to the emission limits in condition 5.c.
32. **Averaging Calculation Compliance Data**

For an affected source following the compliance method in condition 21.a, the Permittee shall maintain copies of the averaging calculation for each month following the compliance date as provided in condition 4.b as well as the data on the quantity of coatings and thinners used that is necessary to support the calculation of E in Equation 1 provided in condition 19.a.

[40 CFR 63.806(c)]

33. **Work Practice Implementation Plan Records**

For an affected source subject to the work practice standards in conditions 7 through 18, the Permittee shall maintain onsite the work practice implementation plan and all records associated with fulfilling the requirements of that plan, including, but not limited to:

a. Records demonstrating that the operator training program required by condition 8 is in place;

b. Records collected in accordance with the inspection and maintenance plan required by condition 9;

c. Records associated with the cleaning solvent accounting system required by condition 10;

d. Records associated with the formulation assessment plan required by condition 18; and

e. Copies of documentation such as logs developed to demonstrate that the other provisions of the work practice implementation plan are followed.

[40 CFR 63.806(e)]

34. **Finishing Operations - Control System Records**

For finishing operations following the compliance method of conditions 21.c or 22.c, the Permittee shall maintain copies of the calculations demonstrating that the overall control efficiency (R) of the control system results in the value of $E_{ac}$ required by Equation 2 provided in condition 19.c, records of the operating parameter values, and copies of the semiannual compliance reports required by Condition 42.

[40 CFR 63.806(f)]

35. **Contact Adhesive Operations – Control System Records**

For contact adhesive operations following the compliance method of conditions 21.e or 22.e, the Permittee shall maintain copies of the calculations demonstrating that the overall control efficiency (R) of the control system results in the applicable value of $G_{ac}$ calculated using Equation 3 provided in condition 20.b, records of the operating parameter values, and copies of the semiannual compliance reports required by Condition 42.

[40 CFR 63.806(g)]

36. **Compliance Certification Records**

For the affected source subject to condition 5, and following the compliance provisions of condition 21.a, b, d, f, and g and condition 22.a, b, d, f, and g, the Permittee shall maintain records of compliance certifications submitted in accordance with condition 42 for each semiannual period following the compliance date as provided in condition 4.b.

[40 CFR 63.806(h)]

37. **Additional Information**

The Permittee shall maintain records of all other information submitted with the compliance status report required by §63.9(h) of Subpart A and condition 41 and the semiannual reports required by condition 42

38. **Record Retention**

The Permittee shall maintain all records in accordance with the requirements of Subpart A, §63.10(b)(1).
39. **Malfunction Records**

The Permittee shall maintain records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control equipment and monitoring equipment (if applicable). The owner or operator shall maintain records of actions taken during periods of malfunction to minimize emissions in accordance with condition 6, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

**REPORTING REQUIREMENTS**

[40 CFR 63.807]

40. **General Provisions**

For an affected source, the Permittee shall fulfill all reporting requirements of 40 CFR 63.7 through 63.10 of Subpart A (General Provisions) according to the applicability criteria in condition 2. [40 CFR 63.807(a)]

41. **Initial Compliance Status Report**

To demonstrate compliance with conditions 21.a, b, d, f, and g, the Permittee shall submit the initial compliance status report required by §63.9(h) of subpart A (General Provisions) no later than 60 days after the compliance date in condition 4.b. The report shall include the information required by conditions 21.a, b, d, f, and g. [40 CFR 63.807(b)]

42. **Semiannual Reports**

a. To demonstrate compliance with conditions 22.a, b, d, f, g, h,i, and h.iii, The Permittee shall submit a report covering the previous 6 months of wood furniture manufacturing operations. [40 CFR 63.807(c)]

   i. The first report shall be submitted 30 calendar days after the end of the first 6-month period following the compliance date in condition 4.b.

   ii. Subsequent reports shall be submitted 30 calendar days after the end of each 6-month period following the first report.

   iii. The semiannual reports shall include the information required by conditions 22.a, b, d, f, g, h,i, and h.iii, a statement of whether the affected source was in compliance or noncompliance, and, if the affected source was in noncompliance, the measures taken to bring the affected source into compliance. If there was a malfunction during the reporting period, the report shall also include the number, duration and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with condition 6, including actions taken to correct a malfunction.

   iv. The frequency of the reports required by condition 42.a shall not be reduced from semiannually regardless of the history of the owner's or operator's compliance status.

b. When demonstrating compliance using control systems in accordance with conditions 22.c, e, and h.ii, the Permittee shall submit the excess emissions and continuous monitoring system performance report and summary report required by §63.10(e) of Subpart A. The report shall include the monitored operating parameter values required by condition 22.c and e. If the source experiences excess emissions, the report shall be submitted quarterly for at least 1 year after the excess emissions occur and until a request to reduce reporting frequency is approved, as indicated in §63.10(e)(3)(ii) of Subpart A. If no excess emissions occur, the report shall be submitted semiannually. [40 CFR 63.807(d)]
43. **Required Notification Following Annual Periods When Usage Increases Above Baseline**

If the Permittee is required to provide a written notification under condition 18.d, the Permittee shall include in the notification one or more statements that explains the reasons for the usage increase. The notification shall be submitted no later than 30 calendar days after the end of the annual period in which the usage increase occurred.

**IMPLEMENTATION AND ENFORCEMENT**

44. **Authorities Retained by the Administrator of U.S. EPA**

In delegating implementation and enforcement authority of this Section to a State, local, or Tribal agency under Subpart E, the following authorities are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

The authorities that cannot be delegated to the Control Officer are the following:

a. Approval of alternatives to the requirements in the following:
   - §63.800, [conditions 1 through 4];
   - §63.802, [conditions 5 through 6];
   - §63.803(a)(1) [condition 7.a];
   - §63.803(b) [condition 8];
   - §63.803(c) introductory text [condition 9]; and
   - §§63.803 (d) through (l) [conditions 10 through 18].

b. Approval of alternatives to the monitoring and compliance requirements in in the following:
   - §63.804(f)(4)(iv)(D) and (E) [conditions 21.c.iv(D) and (E)];
   - §63.804(g)(4)(iii)(C) [condition 22.c.iii(C)];
   - §63.804(g)(4)(vi) [condition 22.c.iv]; and
   - §63.804(g)(6)(vi) [condition 22.e.vi]

c. Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in Subpart JJ, as well as approval of any alternatives to the specific test methods under §§63.805(a) [condition 25], 63.805(d)(2)(v)(condition 28.b.v), and 63.805(e)(1)[condition 29.a].

d. Approval of major alternatives to monitoring under §63.8(f), as defined in §63.90, and as required in this Subpart JJ and this Section.

e. Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in Subpart JJ and this Section.
### REFERENCE INFORMATION

#### Reference 1

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

<table>
<thead>
<tr>
<th>Reference</th>
<th>Applies to subpart JJ</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>63.1(a)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>63.1(b)(1)</td>
<td>No</td>
<td>Subpart JJ specifies applicability.</td>
</tr>
<tr>
<td>63.1(b)(2)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>63.1(b)(3)</td>
<td>Yes</td>
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<tr>
<td>63.1(c)(1)</td>
<td>No</td>
<td>Subpart JJ specifies applicability.</td>
</tr>
<tr>
<td>63.1(c)(2)</td>
<td>No</td>
<td>Area sources are not subject to subpart JJ.</td>
</tr>
<tr>
<td>63.1(c)(4)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>63.1(c)(5)</td>
<td>Yes</td>
<td></td>
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<tr>
<td>63.1(e)</td>
<td>Yes</td>
<td></td>
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<tr>
<td>63.2</td>
<td>Yes</td>
<td>Additional terms are defined in 63.801(a) of subpart JJ. When overlap between subparts A and JJ occurs, subpart JJ takes precedence.</td>
</tr>
<tr>
<td>63.3</td>
<td>Yes</td>
<td>Other units used in subpart JJ are defined in 63.801(b).</td>
</tr>
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<td>63.4</td>
<td>Yes</td>
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<td>63.5</td>
<td>Yes</td>
<td></td>
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<tr>
<td>63.6(a)</td>
<td>Yes</td>
<td></td>
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<tr>
<td>63.6(b)(1)</td>
<td>Yes</td>
<td></td>
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<td>63.6(b)(2)</td>
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<td>63.6(b)(3)</td>
<td>Yes</td>
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<tr>
<td>63.6(b)(4)</td>
<td>No</td>
<td>May apply when standards are proposed under Section 112(f) of the CAA.</td>
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<td>63.6(b)(5)</td>
<td>Yes</td>
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<td>63.6(b)(7)</td>
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<td>63.6(c)(1)</td>
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<td>63.6(c)(5)</td>
<td>Yes</td>
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<tr>
<td>63.6(e)(1)(i)</td>
<td>No</td>
<td>See §63.802(c) for general duty requirement.</td>
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<tr>
<td>63.6(e)(1)(ii)</td>
<td>No.</td>
<td></td>
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<tr>
<td>63.6(e)(1)(iii)</td>
<td>Yes.</td>
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<td>63.6(e)(2)</td>
<td>No</td>
<td>Section reserved.</td>
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<td>63.6(e)(3)</td>
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<td>63.6(f)(1)</td>
<td>No</td>
<td>Affected sources complying through the procedures specified in 63.804 (a)(1), (a)(2), (b), (c)(1), (d)(1), (d)(2), (e)(1), and (e)(2) are subject to the emission standards at all times, including periods of startup, shutdown, and malfunction.</td>
</tr>
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<td>63.6(f)(2)</td>
<td>Yes</td>
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<td>63.6(f)(3)</td>
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<td>63.6(g)</td>
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<td>Applies to subpart JJ</td>
<td>Comment</td>
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<td>63.6(h)</td>
<td>No</td>
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<td>63.6(i)(1)-(i)(3)</td>
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<td>63.6(i)(4)(i)</td>
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<td>63.6(i)(4)(ii)</td>
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<td>63.6 (i)(5)-(i)(14)</td>
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<td>63.6(i)(16)</td>
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<td>63.6(j)</td>
<td>Yes</td>
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<tr>
<td>63.7(a)-(d)</td>
<td>Yes</td>
<td>Applies only to affected sources using a control device to comply with the rule.</td>
</tr>
<tr>
<td>63.7(c)(1)</td>
<td>No</td>
<td>See §63.805(a)(1).</td>
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<td>63.7(c)(2)-(c)(4)</td>
<td>Yes</td>
<td>Applies only to affected sources using a control device to comply with the rule.</td>
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<td>63.8(a)-(b)</td>
<td>Yes</td>
<td>Applies only to affected sources using a control device to comply with the rule.</td>
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<td>63.8(c)(1)(i)</td>
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<td>63.8(c)(1)(ii)</td>
<td>Yes</td>
<td>Applies only to affected sources using a control device to comply with the rule.</td>
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<tr>
<td>63.8(c)(1)(iii)</td>
<td>No</td>
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<td>63.8(c)(2)-(d)(2)</td>
<td>Yes</td>
<td>Applies only to affected sources using a control device to comply with the rule.</td>
</tr>
<tr>
<td>63.8(d)(3)</td>
<td>Yes, except for last sentence</td>
<td>Applies only to affected sources using a control device to comply with the rule.</td>
</tr>
<tr>
<td>63.8(e)-(g)</td>
<td>Yes</td>
<td>Applies only to affected sources using a control device to comply with the rule.</td>
</tr>
<tr>
<td>63.9(a)</td>
<td>Yes</td>
<td></td>
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<tr>
<td>63.9(b)</td>
<td>Yes</td>
<td>Existing sources are required to submit initial notification report within 270 days of the effective date.</td>
</tr>
<tr>
<td>63.9(c)</td>
<td>Yes</td>
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<tr>
<td>63.9(d)</td>
<td>Yes</td>
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<tr>
<td>63.9(e)</td>
<td>Yes</td>
<td>Applies only to affected sources using a control device to comply with the rule.</td>
</tr>
<tr>
<td>63.9(f)</td>
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<tr>
<td>63.9(g)</td>
<td>Yes</td>
<td>Applies only to affected sources using a control device to comply with the rule.</td>
</tr>
<tr>
<td>63.9(h)</td>
<td>Yes</td>
<td>63.9(h)(2(ii) applies only to affected sources using a control device to comply with the rule.</td>
</tr>
<tr>
<td>63.9(i)</td>
<td>Yes</td>
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<tr>
<td>63.9(j)</td>
<td>Yes</td>
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<tr>
<td>63.10(a)</td>
<td>Yes</td>
<td></td>
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<td>63.10(b)(1)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>63.10(b)(2)(i)</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>63.10(b)(2)(ii)</td>
<td>No</td>
<td>See §63.806(k) for recordkeeping of occurrence and duration of malfunctions and recordkeeping of actions taken during malfunctions.</td>
</tr>
<tr>
<td>63.10(b)(2)(iii)</td>
<td>Yes</td>
<td>Applies only to affected sources using a control device to comply with the rule.</td>
</tr>
<tr>
<td>63.10(b)(2)(iv)-(b)(2)(v)</td>
<td>No</td>
<td></td>
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<tr>
<td>63.10(b)(2)(vi)-(b)(2)(xv)</td>
<td>Yes</td>
<td>Applies only to affected sources using a control device to comply with the rule.</td>
</tr>
<tr>
<td>63.10(b)(3)</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>
### Reference 2 - Definitions

**Adhesive** means any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means. Under this subpart, adhesives shall not be considered coatings or finishing materials. Products used on humans and animals, adhesive tape, contact paper, or any other product with an adhesive incorporated onto or in an inert substrate shall not be considered adhesives under this subpart.

**Administrator** means the Administrator of the United States Environmental Protection Agency or his or her authorized representative.

**Aerosol adhesive** means an adhesive that is dispensed from a pressurized container as a suspension of fine solid or liquid particles in gas.

**Affected source** means a wood furniture manufacturing facility that is engaged, either in part or in whole, in the manufacture of wood furniture or wood furniture components and that is located at a plant site that is a major source as defined in 40 CFR part 63.2, excluding sources that meet the criteria established in §63.800(a), (b) and (c) of this subpart.

**Affirmative defense** means, in the context of an enforcement proceeding, a response or defense put forward by a defendant, regarding which the defendant has the burden of proof and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding.

**Alternative method** means any method of sampling and analyzing for an air pollutant that is not a reference or equivalent method but has been demonstrated to the Administrator's satisfaction to, in specific cases, produce results adequate for a determination of compliance.

**As applied** means the HAP and solids content of the coating or contact adhesive that is actually used for coating or gluing the substrate. It includes the contribution of materials used for in-house dilution of the coating or contact adhesive.

**Basecoat** means a coat of colored material, usually opaque, that is applied before graining inks, glazing coats, or other opaque finishing materials, and is usually topcoated for protection.

**Baseline conditions** means the conditions that exist prior to an affected source implementing controls, such as a control system.

**Building enclosure** means a building housing a process that meets the requirements of a temporary total enclosure. The EPA Method 204E is used to identify all emission points from the building enclosure and to determine which emission points must be tested. For additional information see Guidelines for Determining Capture Efficiency, January 1994. Docket No. A-93-10, Item No. IV-B-1.

**Capture device** means a hood, enclosed room, floor sweep, or other means of collecting solvent emissions or other pollutants into a duct so that the pollutant can be directed to a pollution control device such as an incinerator or carbon adsorber.

**Capture efficiency** means the fraction of all organic vapors generated by a process that are directed to a control device.

**Certified product data sheet (CPDS)** means documentation furnished by coating or adhesive suppliers or an outside laboratory that provides:

1. The VHAP content of a finishing material, contact adhesive, or solvent, by percent weight, measured using the EPA Method 311 (as promulgated in this subpart), or an equivalent or alternative method (or formulation data if the coating meets the criteria specified in §63.805(a));

2. The solids content of a finishing material or contact adhesive by percent weight, determined using data from the EPA Method 24, or an alternative or equivalent method (or formulation data if the coating meets the criteria specified in §63.805(a)); and

<table>
<thead>
<tr>
<th>Reference</th>
<th>Applies to subpart JJ</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>63.10(c)(1)-(9)</td>
<td>Yes.</td>
<td></td>
</tr>
</tbody>
</table>
Cleaning operations means operations in which organic HAP solvent is used to remove coating materials or adhesives from equipment used in wood furniture manufacturing operations.

Coating means a protective, decorative, or functional film applied in a thin layer to a surface. Such materials include, but are not limited to, paints, topcoats, varnishes, sealers, stains, washcoats, basecoats, enamels, inks, and temporary protective coatings. Aerosol spray paints used for touch-up and repair are not considered coatings under this subpart.

Coating application station means the part of a coating operation where the coating is applied, e.g., a spray booth.

Coating operation means those activities in which a coating is applied to a substrate and is subsequently air-dried, cured in an oven, or cured by radiation.

Coating solids (or solids) means the part of the coating which remains after the coating is dried or cured; solids content is determined using data from the EPA Method 24, or an equivalent or alternative method.

Compliant coating/contact adhesive means a finishing material, contact adhesive, or strippable booth coating that meets the emission limits specified in Table 3 of this subpart.

Contact adhesive means an adhesive that is applied to two substrates, dried, and mated under only enough pressure to result in good contact. The bond is immediate and sufficiently strong to hold pieces together without further clamping, pressure, or airing.

Continuous coater means a finishing system that continuously applies finishing materials onto furniture parts moving along a conveyor. Several types of application methods can be used with a continuous coater including spraying, curtain coating, roll coating, dip coating, and flow coating.

Continuous compliance means that the affected source is meeting the emission limitations and other requirements of the rule at all times and is fulfilling all monitoring and recordkeeping provisions of the rule in order to demonstrate compliance.

Control device means any equipment that reduces the quantity of a pollutant that is emitted to the air. The device may destroy or secure the pollutant for subsequent recovery. Includes, but is not limited to, incinerators, carbon adsorbers, and condensers.

Control device efficiency means the ratio of the pollutant released by a control device and the pollutant introduced to the control device.

Control system means the combination of capture and control devices used to reduce emissions to the atmosphere.

Conventional air spray means a spray coating method in which the coating is atomized by mixing it with compressed air and applied at an air pressure greater than 10 pounds per square inch (gauge) at the point of atomization. Airless and air assisted airless spray technologies are not conventional air spray because the coating is not atomized by mixing it with compressed air. Electrostatic spray technology is also not considered conventional air spray because an electrostatic charge is employed to attract the coating to the workpiece.

Data quality objective (DQO) approach means a set of approval criteria that must be met so that data from an alternative test method can be used in determining the capture efficiency of a control system. For additional information, see Guidelines for Determining Capture Efficiency, January 1994. (Docket No. A-93-10, Item No. IV-B-1).

Day means a period of 24 consecutive hours beginning at midnight local time, or beginning at a time consistent with a facility's operating schedule.

Disposed offsite means sending used organic HAP solvent or coatings outside of the facility boundaries for disposal.

Emission means the release or discharge, whether directly or indirectly, of HAP into the ambient air.

Enamel means a coat of colored material, usually opaque, that is applied as a protective topcoat over a basecoat, primer, or previously applied enamel coats. In some cases, another finishing material may be applied as a topcoat over the enamel.

Equipment leak means emissions of VHAP from pumps, valves, flanges, or other equipment used to transfer or apply coatings, adhesives, or organic HAP solvents.

Equivalent method means any method of sampling and analyzing for an air pollutant that has been demonstrated to the Administrator's satisfaction to have a consistent and quantitatively known relationship to the reference method, under specific conditions.

Finishing material means a coating used in the wood furniture industry. Such materials include, but are not limited to, stains, basecoats, washcoats, enamels, sealers, and topcoats.

Finishing operation means those operations in which a finishing material is applied to a substrate and is subsequently air-dried, cured in an oven, or cured by radiation.
Foam adhesive means a contact adhesive used for gluing foam to fabric, foam to foam, and fabric to wood.

Gluing operation means those operations in which adhesives are used to join components, for example, to apply a laminate to a wood substrate or foam to fabric.

Incidental wood furniture manufacturer means a major source that is primarily engaged in the manufacture of products other than wood furniture or wood furniture components and that uses no more than 100 gallons per month of finishing material or adhesives in the manufacture of wood furniture or wood furniture components.

Incinerator means, for the purposes of this industry, an enclosed combustion device that thermally oxidizes volatile organic compounds to CO and CO2. This term does not include devices that burn municipal or hazardous waste material.

Janitorial maintenance means the upkeep of equipment or building structures that is not directly related to the manufacturing process, for example, cleaning of restroom facilities.

Low-formaldehyde means, in the context of a coating or contact adhesive, a product concentration of less than or equal to 1.0 percent formaldehyde by weight, as described in a certified product data sheet for the material.

Lower confidence limit (LCL) approach means a set of approval criteria that must be met so that data from an alternative test method can be used in determining the capture efficiency of a control system. For additional information, see Guidelines for Determining Capture Efficiency, January 1994. (Docket No. A-93-10, Item No. IV-B-1).

Material safety data sheet (MSDS) means the documentation required for hazardous chemicals by the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR part 1910) for a solvent, cleaning material, contact adhesive, coating, or other material that identifies select reportable hazardous ingredients of the material, safety and health considerations, and handling procedures.

Noncompliant coating/contact adhesive means a finishing material, contact adhesive, or strippable booth coating that has a VHAP content (VOC content for the strippable booth coating) greater than the emission limitation presented in Table 3 of this subpart.

Nonporous substrate means a surface that is impermeable to liquids. Examples include metal, rigid plastic, flexible vinyl, and rubber.

Normally closed container means a container that is closed unless an operator is actively engaged in activities such as emptying or filling the container.

Operating parameter value means a minimum or maximum value established for a control device or process parameter that, 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 limit.

Organic HAP solvent means a HAP that is a volatile organic liquid used for dissolving or dispersing constituents in a coating or contact adhesive, adjusting the viscosity of a coating or contact adhesive, or cleaning equipment. When used in a coating or contact adhesive, the organic HAP solvent evaporates during drying and does not become a part of the dried film.

Overall control efficiency means the efficiency of a control system, calculated as the product of the capture and control device efficiencies, expressed as a percentage.

Permanent total enclosure means a permanently installed enclosure that completely surrounds a source of emissions such that all emissions are captured and contained for discharge through a control device. For additional information, see Guidelines for Determining Capture Efficiency, January 1994. (Docket No. A-93-10, Item No. IV-B-1).

Recycled onsite means the reuse of an organic HAP solvent in a process other than cleaning or washoff.

Reference method means any method of sampling and analyzing for an air pollutant that is published in appendix A of 40 CFR part 60.

Research or laboratory facility means any stationary source whose primary purpose is to conduct research and development to develop new processes and products where such source is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for commercial sale in commerce, except in a de minimis manner.

Responsible official has the meaning given to it in 40 CFR part 70, State Operating Permit Programs (Title V permits).

Sealer means a finishing material used to seal the pores of a wood substrate before additional coats of finishing material are applied. Special purpose finishing materials that are used in some finishing systems to optimize aesthetics are not sealers.

Solvent means a liquid used in a coating or contact adhesive to dissolve or disperse constituents and/or to adjust viscosity. It evaporates during drying and does not become a part of the dried film.

Stain means any color coat having a solids content by weight of no more than 8.0 percent that is applied in single or multiple coats directly to the substrate. It includes, but is not limited to, nongrain raising stains, equalizer stains, pre-stains, sap stains, body stains, no-wipe stains, penetrating stains, and toners.

Storage containers means vessels or tanks, including mix equipment, used to hold finishing, gluing, cleaning, or washoff materials.

Strippable spray booth material means a coating that:

1. Is applied to a spray booth wall to provide a protective film to receive over spray during finishing operations;
2. That is subsequently peeled off and disposed; and
3. By achieving (1) and (2) of this definition reduces or eliminates the need to use organic HAP solvents to clean spray booth walls.

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Substrate means the surface onto which a coating or contact adhesive is applied (or into which a coating or contact adhesive is impregnated).

Temporary total enclosure means an enclosure that meets the requirements of §63.805(e)(1)(i) through (iv) and is not permanent, but constructed only to measure the capture efficiency of pollutants emitted from a given source. Additionally, any exhaust point from the enclosure shall be at least four equivalent duct or hood diameters from each natural draft opening. For additional information, see Guidelines for Determining Capture Efficiency, January 1994. (Docket No. A-93-10, Item No. IV-B-1).

Thinner means a volatile liquid that is used to dilute coatings or contact adhesives (to reduce viscosity, color strength, and solids, or to modify drying conditions).

Topcoat means the last film-building finishing material that is applied in a finishing system.

Touchup and repair means the application of finishing materials to cover minor finishing imperfections.

VHAP means any volatile hazardous air pollutant listed in Table 2 to Subpart JJ.

VHAP of potential concern means any VHAP from the list in table 6 of this subpart.

Volatile organic compound (VOC) means any organic compound which participates in atmospheric photochemical reactions, that is, any organic compound other than those which the Administrator designates as having negligible photochemical reactivity. A VOC may be measured by a reference method, an equivalent method, an alternative method, or by procedures specified under any rule. A reference method, an equivalent method, or an alternative method, however, may also measure nonreactive organic compounds. In such cases, the owner or operator may exclude the nonreactive organic compounds when determining compliance with a standard. For a list of compounds that the Administrator has designated as having negligible photochemical reactivity, refer to 40 CFR part 51.10.

Washcoat means a transparent special purpose finishing material having a solids content by weight of 12.0 percent by weight or less. Washcoats are applied over initial stains to protect, to control color, and to stiffen the wood fibers in order to aid sanding.

Washoff operations means those operations in which organic HAP solvent is used to remove coating from wood furniture or a wood furniture component.

Wood furniture means any product made of wood, a wood product such as rattan or wicker, or an engineered wood product such as particleboard that is manufactured at any facility that is engaged, either in part or in whole, in the manufacture of wood furniture or wood furniture components, including, but not limited to, facilities under any of the following standard industrial classification codes: 2434, 2511, 2512, 2517, 2519, 2521, 2531, 2541, 2599, or 5712.

Wood furniture component means any part that is used in the manufacture of wood furniture. Examples include, but are not limited to, drawer sides, cabinet doors, seat cushions, and laminated tops. However, foam seat cushions manufactured and fabricated at a facility that does not engage in any other wood furniture or wood furniture component manufacturing operation are excluded from this definition.

Wood furniture manufacturing operations means the finishing, gluing, cleaning, and washoff operations associated with the production of wood furniture or wood furniture components.

Reference 3 - Nomenclature

1. \(A_k\) = the area of each natural draft opening (k) in a total enclosure, in square meters.
2. \(C_c\) = the VHAP content of a finishing material (c), in kilograms of volatile hazardous air pollutants per kilogram of coating solids (kg VHAP/kg solids), as supplied. Also given in pounds of volatile hazardous air pollutants per pound of coating solids (lb VHAP/lb solids).
3. \(C_{aj}\) = the concentration of VHAP in gas stream (j) exiting the control device, in parts per million by volume.
4. \(C_{bi}\) = the concentration of VHAP in gas stream (i) entering the control device, in parts per million by volume.
5. \(C_{di}\) = the concentration of VHAP in gas stream (i) entering the control device from the affected source, in parts per million by volume.
6. \(C_{fk}\) = the concentration of VHAP in uncontrolled gas stream (k) emitted directly to the atmosphere from the affected source, in parts per million by volume.
7. \(E\) = the emission limit achieved by an emission point or a set of emission points, in kg VHAP/kg solids (lb VHAP/lb solids).
8. \(F\) = the control device efficiency, expressed as a fraction.
9. \(FV\) = the average inward face velocity across all natural draft openings in a total enclosure, in meters per hour.
10. \(G\) = the VHAP content of a contact adhesive, in kg VHAP/kg solids (lb VHAP/lb solids), as applied.
11. \(M\) = the mass of solids in finishing material used monthly, kg solids/month (lb solids/month).
12. \(N\) = the capture efficiency, expressed as a fraction.
13. \(Q_{aj}\) = the volumetric flow rate of gas stream (j) exiting the control device, in dry standard cubic meters per hour.
14. \(Q_{si}\) = the volumetric flow rate of gas stream (i) entering the control device, in dry standard cubic meters per hour.
15. \( Q_{di} \) = the volumetric flow rate of gas stream \( (i) \) entering the control device from the emission point, in dry standard cubic meters per hour.

16. \( Q_{fk} \) = the volumetric flow rate of uncontrolled gas stream \( (k) \) emitted directly to the atmosphere from the emission point, in dry standard cubic meters per hour.

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

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

19. \( R \) = the overall efficiency of the control system, expressed as a percentage.

20. \( S \) = the VHAP content of a solvent, expressed as a weight fraction, added to finishing materials.

21. \( W \) = the amount of solvent, in kilograms (pounds), added to finishing materials during the monthly averaging period.

22. \( ac \) = after the control system is installed and operated.

23. \( bc \) = before control.

24. \( C_{f} \) = the formaldehyde content of a finishing material \( (c) \), in pounds of formaldehyde per gallon of coating (lb/gal).

25. \( F_{total} \) = total formaldehyde emissions in each rolling 12 month period.

26. \( G_{f} \) = the formaldehyde content of a contact adhesive \( (g) \), in pounds of formaldehyde per gallon of contact adhesive (lb/gal).

27. \( V_{c} \) = the volume of formaldehyde-containing finishing material \( (c) \), in gal.

28. \( V_{g} \) = the volume of formaldehyde-containing contact adhesive \( (g) \), in gal.

Reference 4 – Pollutants Excluded from use in Cleaning and Washoff Solvents

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<thead>
<tr>
<th>Chemical name</th>
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<td>1,2:7,8-Dibenzopyrene</td>
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</tbody>
</table>

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### Reference 5 – List of VHAP of Potential Concern Identified by Industry

#### Table 5 to Subpart JJ of Part 63—List of VHAP of Potential Concern Identified by Industry

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Chemical name</th>
<th>EPA de minimis, tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>68122</td>
<td>Dimethyl formamide</td>
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<td>50000</td>
<td>Formaldehyde</td>
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<td>75092</td>
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[63 FR 71382, Dec. 28, 1998]

### Reference 6 – VHAP of Potential Concern

#### Table 6 to Subpart JJ of Part 63—VHAP of Potential Concern

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<th>CAS No.</th>
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<td>Styrene oxide</td>
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<td>o-Anisidine</td>
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<td>Bis(chloromethyl) ether</td>
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<td>Vinyl bromide (bromoethene)</td>
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<td>67663</td>
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<td>51796</td>
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<tr>
<td>107062</td>
<td>Ethylene dichloride (1,2-Dichloroethane)</td>
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<tr>
<td>78875</td>
<td>Propylene dichloride (1,2-Dichloropropane)</td>
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<td>56235</td>
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<td>Aniline</td>
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<td>CAS No.</td>
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<td>EPA de minimis, tons/yr</td>
</tr>
<tr>
<td>---------</td>
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<td>88062</td>
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<td>95534</td>
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<td>Propoxur</td>
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<td>133062</td>
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<td>Indeno(1,2,3-cd)pyrene</td>
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<td>1,2,7,8-Dibenzopyrene</td>
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<td>79345</td>
<td>1,1,2,2-Tetrachloroethane</td>
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<td>91225</td>
<td>Quinoline</td>
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<td>Vinylidene chloride (1,1-Dichloroethylene)</td>
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<tr>
<td>87683</td>
<td>Hexachlorobutadiene</td>
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<tr>
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<td>Pentachloronitrobenzene (Quintobenzene)</td>
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<td>1582098</td>
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<td>Cresols/Cresylic acid (isomers and mixture)</td>
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<td>Methyl iodide (Iodomethane)</td>
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<tr>
<td>CAS No.</td>
<td>Chemical name</td>
<td>EPA de minimis, tons/yr</td>
</tr>
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<td>108054</td>
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<td>56382</td>
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<td>Chloromethyl methyl ether</td>
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<td>beta-Propiolactone</td>
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<td>100447</td>
<td>Benzyl chloride</td>
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<td>62207765</td>
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<td>10210681</td>
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<td>79118</td>
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<td>534521</td>
<td>4,6-Dinitro-o-cresol, and salts</td>
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<tr>
<td>101688</td>
<td>Methylene diphenyl disiocyanate</td>
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<td>Phenol</td>
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<tr>
<td>62384</td>
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<tr>
<td>98862</td>
<td>Acetophenone</td>
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<tr>
<td>108316</td>
<td>Maleic anhydride</td>
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<td>51285</td>
<td>2,4-Dinitrophenol</td>
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<tr>
<td>109864</td>
<td>2-Methoxy ethanol</td>
<td>10.0</td>
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</tbody>
</table>
Part B: Specific Conditions  
Section IX: Wood Furniture Manufacturing Operations

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Chemical name</th>
<th>EPA de minimis, tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>98953</td>
<td>Nitrobenzene</td>
<td>1.0</td>
</tr>
<tr>
<td>74839</td>
<td>Methyl bromide (Bromomethane)</td>
<td>10.0</td>
</tr>
<tr>
<td>75150</td>
<td>Carbon disulfide</td>
<td>1.0</td>
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<tr>
<td>121697</td>
<td>N,N-Dimethylaniline</td>
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</tr>
<tr>
<td>106514</td>
<td>Quinone</td>
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</tr>
<tr>
<td>123386</td>
<td>Propionaldehyde</td>
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</tr>
<tr>
<td>120809</td>
<td>Catechol</td>
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</tr>
<tr>
<td>85449</td>
<td>Phthalic anhydride</td>
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<tr>
<td>463581</td>
<td>Carbonyl sulfide</td>
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<td>132649</td>
<td>Dibenzofurans</td>
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<td>100027</td>
<td>4-Nitrophenol</td>
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<td>540841</td>
<td>2,2,4-Trimethylpentane</td>
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<td>111422</td>
<td>Diethanolamine</td>
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<td>822060</td>
<td>Hexamethylene-1,6-diisocyanate</td>
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</tr>
<tr>
<td></td>
<td>Glycol ethers(^a)</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>Polycyclic organic matter(^b)</td>
<td>0.01</td>
</tr>
</tbody>
</table>

* These values are based on the de minimis levels provided in the proposed rulemaking pursuant to section 112(g) of the Act using a 70-year lifetime exposure duration for all VHAP. Default assumptions and the de minimis values based on inhalation reference doses (RfC) are not changed by this adjustment.

\(^a\) Except for ethylene glycol butyl ether, ethylene glycol ethyl ether (2-ethoxy ethanol), ethylene glycol hexyl ether, ethylene glycol methyl ether (2-methoxyethanol), ethylene glycol phenyl ether, ethylene glycol propyl ether, ethylene glycol mono-2-ethylhexyl ether, diethylene glycol butyl ether, diethylene glycol ethyl ether, diethylene glycol ethyl ether, ethylene glycol methyl ether, diethylene glycol hexyl ether, diethylene glycol phenyl ether, diethylene glycol propyl ether, triethylene glycol butyl ether, triethylene glycol ethyl ether, triethylene glycol methyl ether, triethylene glycol propyl ether, ethylene glycol butyl ether acetate, ethylene glycol ethyl ether acetate, and diethylene glycol ethyl ether acetate.

\(^b\) Except for benzo(b)fluoranthene, benzo(a)anthracene, benzo(a)pyrene, 7,12-dimethylbenz(a)anthracene, benz(c)acridine, chrysene, dibenz(ah)anthracene, 1,2,7,8-dibenzopyrene, indeno(1,2,3-cd)pyrene, but including dioxins and furans.

[63 FR 71383, Dec. 28, 1998]

**END SECTION IX**
PART B: SPECIFIC CONDITIONS

SECTION X: NESHAP: INDUSTRIAL, COMMERCIAL, AND INSTITUTIONAL BOILERS AND PROCESS HEATERS

XA  A. APPLICABILITY

Except as provided in A.6 below, this section applies to new, reconstructed and existing affected sources (industrial, commercial, or institutional boiler and process heaters) as defined in 40 CFR 63.7575 and identified in the equipment list, Attachment II of this permit. [40 CFR 63.7490(a)]

1. A boiler or process heater is new if you commence construction of the boiler or process heater after June 4, 2010, and you meet the applicability criteria at the time you commence construction. [40 CFR 63.7490(b)]

2. A boiler or process heater is reconstructed if you meet the reconstruction criteria as defined in §63.2, you commence reconstruction after June 4, 2010, and you meet the applicability criteria at the time you commence reconstruction. [40 CFR 63.7490(c)]

3. A boiler or process heater is existing if it is not new or reconstructed. [40 CFR 63.7490(d)]

4. If you have a new or reconstructed boiler or process heater, you must comply with this section by April 1, 2013, or upon startup of your boiler, whichever is later. [40 CFR 63.7495(a)]

5. If you have an existing boiler or process heater, you must comply with this section no later than January 31, 2016. [40 CFR 63.7495(b)]

6. This section does not apply to the following boilers or process heaters:

   a. Water heaters that are no greater than 120 gallons in capacity or hot water boilers with a heat input capacity of less than 1.6 MMBtu/hr. The 120 US Gallon threshold to be considered a hot water heater is independent of the 1.6 MMBtu/hr heat input capacity threshold for hot water boilers. Hot water heater also means a tankless unit that provides on demand hot water.

   b. Process heaters used for comfort heat or space heat, food preparation for on-site consumption, or autoclaves.

   c. Temporary boilers and process heaters.

   d. Waste heat boilers and process heaters. [40 CFR 63.7485, 63.7491 & 40 CFR 63.7575]

XB  B. EMISSION LIMITATIONS AND WORK PRACTICE STANDARDS

1. The Permittee must meet the following requirements except as provided in B.1.c of this section at all times the affected unit is operating: [40 CFR 63.7500(a)]

   a. The permittee must meet each work practice standard in Table 3 of this section that applies to the Permittee’s boiler or process heater, for each boiler or process heater at the source. [40 CFR 63.7500(a)(1)]
b. At all times, the Permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.  

\[40 \text{ CFR 63.7500(a)(3)}\]

c. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory (i.e. natural gas and refinery gas, or other gas 1 fuel) with a heat input capacity of less than or equal to 5 million Btu per hour must complete a tune-up every 5 years as specified in D.1.a-e. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity greater than 5 million Btu per hour and less than 10 million Btu per hour must complete a tune-up every 2 years. as specified in D.1.a-e.  

\[40 \text{ CFR 63.7500(e)}\]

d. These standards apply at all times the affected unit is operating

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### TABLE 3 of NESHAP, Subpart DDDDD - WORK PRACTICE STANDARDS, EMISSION REDUCTION MEASURES AND MANAGEMENT PRACTICES

<table>
<thead>
<tr>
<th>If the Permittee’s boiler is …</th>
<th>The Permittee must meet the following …</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A new or existing boiler or process heater with a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid, or a limited use boiler or process heater</td>
<td>Conduct a tune-up of the boiler or process heater every 5 years as specified in D.1.a-e of this section.</td>
</tr>
<tr>
<td>2. A new or existing boiler or process heater with heat input capacity of less than 10 million Btu per hour, but greater than 5 million Btu per hour, in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid</td>
<td>Conduct a tune-up of the boiler or process heater biennially as specified in D.1.a-e of this section.</td>
</tr>
<tr>
<td>3. A new or existing boiler or process heater without a continuous oxygen trim system and with heat input capacity of 10 million Btu per hour or greater</td>
<td>Conduct a tune-up of the boiler or process heater annually as specified in D.1.a-e of this section. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions under NSPS Subpart DDDDD.</td>
</tr>
<tr>
<td>If the Permittee’s boiler is …</td>
<td>The Permittee must meet the following …</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>4. An existing boiler or process heater located at a major source facility, not including limited use units</td>
<td>Must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table, satisfies the energy assessment requirement. A facility that operated under an energy management program developed according to the ENERGY STAR guidelines for energy management or compatible with ISO 50001 for at least one year between January 1, 2008 and the compliance date that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in §63.7575 under the definition of energy assessment: (continued on next page)</td>
</tr>
<tr>
<td></td>
<td>a. A visual inspection of the boiler or process heater system</td>
</tr>
<tr>
<td></td>
<td>b. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints.</td>
</tr>
<tr>
<td></td>
<td>c. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator.</td>
</tr>
<tr>
<td></td>
<td>d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage.</td>
</tr>
<tr>
<td></td>
<td>e. A review of the facility's energy management program and provide recommendations for improvements consistent with the definition of energy management program, if identified.</td>
</tr>
<tr>
<td></td>
<td>f. A list of cost-effective energy conservation measures that are within the facility's control.</td>
</tr>
<tr>
<td></td>
<td>g. A list of the energy savings potential of the energy conservation measures identified.</td>
</tr>
<tr>
<td></td>
<td>h. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.</td>
</tr>
</tbody>
</table>
C. COMPLIANCE DETERMINATION

1. Initial Compliance Requirements

   a. The Permittee must complete an initial tune-up by following the procedures described in D.1.a-e of this section no later than the compliance date, except as specified in C.1.c of this section. You must complete the one-time energy assessment specified in Table 3 to this section no later than the compliance date.

   b. For new or reconstructed affected sources, you must demonstrate initial compliance with the applicable work practice standards in Table 3 to this section within the applicable annual, biennial, or 5-year schedule as specified in C.2 of this section following the initial compliance date. Thereafter, you are required to complete the applicable annual, biennial, or 5-year tune-up as specified in C.2 of this section.

   c. For existing affected sources that have not operated between the effective date of the rule and the compliance date, you must complete an initial tune-up by following the procedures described in D.1.a-e. of this section no later than 30 days after the re-start of the affected source and, if applicable, complete the one-time energy assessment specified in Table 3 to this section, no later than the compliance date.

2. Subsequent Tune-up Schedules

   The Permittee must conduct annual, biennial, or 5-year performance tune-up according to D.1-3, respectively. Each annual tune-up specified in D.1 of this section must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in D.2 of this section must be conducted no more than 25 months after the previous tune-up. Each 5-year tune-up specified in D.3 of this section must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed affected source (as defined in A.1 and 2 of this section), the first annual, biennial, or 5-year tune-up must be no later than 13 months, 25 months, or 61 months, respectively, after April 1, 2013 or the initial startup of the new or reconstructed affected source, whichever is later.

D. MONITORING REQUIREMENTS

1. Tune Up Procedures

   a. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment; [40 CFR 63.7540(a)(10)(i)]

   b. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available; [40 CFR 63.7540(a)(10)(ii)]

   c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection; [40 CFR 63.7540(a)(10)(iii)]

   d. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOX requirement to which the unit is subject; [40 CFR 63.7540(a)(10)(iv)]
e. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and \[40 \text{ CFR 63.7540(a)(10)(vi)}\]

2. \textbf{If Heat Input Capacity \(\geq 10\) MMBtu – Conduct Annual Tune-ups}

If the boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, the Permittee must conduct an annual tune-up of the boiler or process heater as specified in paragraphs D.1.a-e of this section to demonstrate continuous compliance. You must conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up. This frequency does not apply to units with continuous oxygen trim systems that maintain an optimum air to fuel ratio. \[40 \text{ CFR 63.7540(a)(10)}\]

3. \textbf{If Heat Input Capacity \(\geq 5\) MMBtu and < 10 MMBtu – Conduct Biennial Tune-ups}

If the boiler or process heater has a heat input capacity of less than 10 million Btu per hour, the Permittee must conduct a biennial tune-up of the boiler or process heater as specified in paragraphs D.1.a-e of this section to demonstrate continuous compliance. \[40 \text{ CFR 63.7540(a)(11)}\]

4. \textbf{If HI \(\leq 5\) MMBu or using an Oxygen Trim System – Conduct Tune-up every 5 years}

If the boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour and the unit is in the units designed to burn gas 1; units designed to burn gas 2 (other); or units designed to burn light liquid subcategories, or meets the definition of limited-use boiler or process heater in §63.7575, the permittee must conduct a tune-up of the boiler or process heater every 5 years as specified in paragraphs D.1.a-e of this section to demonstrate continuous compliance. The Permittee may delay the burner inspection specified in paragraph D.1.a of this section until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up. \[40 \text{ CFR 63.7540(a)(12)}\]

5. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. \[40 \text{ CFR 63.7540(a)(13)}\]

\textbf{X.E \hspace{1em} RECORDKEEPING REQUIREMENTS}

1. Maintain on-site and submit, if requested by the Control Officer, a report containing the information in paragraphs E.1.a-b of this section, \[40 \text{ CFR 63.7540(a)(10)(vi)}\]

a. The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater; \[40 \text{ CFR 63.7540(a)(10)(vi)(A)}\]

b. A description of any corrective actions taken as a part of the tune-up. \[40 \text{ CFR 63.7540(a)(10)(vi)(B)}\]
**X.F  F. REPORTING REQUIREMENTS**

For all boilers and process heaters subject to this section, the Permittee shall submit the following information.

[40 CFR 63.7550(a)(5)]

1. **Semiannual, Annual, Biennial, or 5-Year Reports**

Semiannual compliance reports occurring every 6 months from the date of the notification of compliance status that identify:

[40 CFR 63.7550(b)]

a. Process unit information.

b. The date of the most recent tune-up. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled shutdown.

For units that are subject only to a requirement to conduct subsequent annual, biennial, or 5-year tune-up according to paragraphs D.2-4, and not subject to emission limits or Table 4 operating limits contained in 40 CFR Part 63, Subpart DDDDD, the Permittee may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs F.1.a-b, instead of a semi-annual compliance report.

The Permittee must submit all reports required by this section electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) You must use the appropriate electronic report in CEDRI for this section. Instead of using the electronic report in CEDRI for this section, the permittee may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (http://www.epa.gov/ttn/chief/cedri/index.html), once the XML schema is available. If the reporting form specific to this section is not available in CEDRI at the time that the report is due, the permittee must submit the report to the Administrator at the appropriate address listed in §63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.

**X.G  G. TESTING REQUIREMENTS**

None Required.

**END SECTION X**
PART B: SPECIFIC CONDITIONS

SECTION XI: NESHAP RICE REQUIREMENTS

XI. NESHAP RICE Requirements

XI.A APPLICABILITY

This Section applies to all existing diesel emergency generators (RICE) below and above 500 HP located at a major source and constructed, manufactured before June 12, 2006. RICE with a HP rating above 500 HP are subject only to XI.D of this Section. No other parts of Section XI are subject to RICE above 500 HP.

XI.B WORK PRACTICE STANDARDS

1. The Permittee shall minimize the engine's time spent at idle during startup and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.

   [40 CFR 63.6603, Table 2d & 40 CFR 63.6625(h)]

2. The Permittee shall change the oil and filter every 500 hours of operation or annually, whichever comes first.

   [40 CFR 63.6603 & 40 CFR 63 Subpart ZZZZ, Table 2c]

3. The Permittee shall inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first.

   [40 CFR 63.6603 & 40 CFR 63 Subpart ZZZZ, Table 2c]

4. The Permittee shall inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

   [40 CFR 63.6603 & 40 CFR 63 Subpart ZZZZ, Table 2c]

5. Exemptions

   If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in XI.B.1 – 4 of this Section, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

   [40 CFR 63.6602 & 40 CFR 63 Subpart ZZZZ, Table 2c, footnote 1]

XI.C OPERATIONAL LIMITATIONS FOR RICE LESS THAN 500 HP

1. The Permittee must operate the emergency stationary RICE according to XI.C.1.a – c of this Section. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in XI.C.1.a – c of this Section, is prohibited. If the Permittee does not operate the engine according to the requirements in XI.C.1.a – c of this Section, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.

   [40 CFR 63.6640(f)(1)]

   a. There is no time limit on the use of emergency stationary RICE in emergency situations.

   [40 CFR 63.6640(f)(1)(i)]
b. The Permittee may operate the emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year. \[40 \text{CFR 63.6640}(f)(1)(ii)\]

c. The Permittee may operate the emergency stationary RICE up to 50 hours each per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that the Permittee may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this paragraph XI.C.1.c, as long as the power provided by the financial arrangement is limited to emergency power. \[40 \text{CFR 63.6640}(f)(1)(iii)\]

**XI.D. OPERATIONAL LIMITATIONS FOR RICE MORE THAN 500 HP**

1. The Permittee must operate all engines installed prior to June 12, 2006 according to the conditions described in XI.D.1.a - c. If the Permittee does not operate the engine according to the requirements in paragraphs XI.D.1.a - c of this Section, the engine will not be considered an emergency engine under 40 CFR 63 Subpart ZZZZ and will need to meet all requirements for non-emergency engines. \[40 \text{CFR 63.6640}(f)(2)\]

a. There is no time limit on the use of emergency stationary RICE in emergency situations. \[40 \text{CFR 63.6640}(f)(2)(i)\]

i. The subject emergency RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The Permittee may petition the Control Officer for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency CI RICE beyond 100 hours per calendar year. \[40 \text{CFR 63.6640}(f)(2)(i)\]

ii. Emergency RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3. \[40 \text{CFR 63.6640}(f)(2)(iii)\]

[Vacated by U.S. Court of Appeals for the District of Columbia in Delaware vs EPA, May 4, 2016]
Part B: Specific Conditions

Section XI: NESHAP RICE Requirements

iii. Emergency RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

[Vacated by U.S. Court of Appeals for the District of Columbia in Delaware vs EPA, May 4, 2016]

XI.E  COMPLIANCE DETERMINATION

1. The Permittee must be in compliance with the emission limitations and operating limitations in this Section at all times. [40 CFR 63.6605(a)]

2. The Permittee must operate and maintain the stationary RICE according to the manufacturer's emission-related written instructions or the Permittee’s own developed maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine at all times in a manner consistent with safety and good air pollution control practices for minimizing emissions. [40 CFR 63.6605(b), 63.6625(e) & (e)(2)]

3. The general duty to minimize emissions does not require the Permittee to make any further efforts to reduce emissions if levels required by the standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Control Officer which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.6605(b)]

4. The Permittee must demonstrate continuous compliance with each operating limitation in XI.B.1-4 of this Section according to X.E.2 & X.F of this Section. [40 CFR 63.6640(a)]

XI.F  MONITORING REQUIREMENTS

The Permittee must install a non-resettable hour meter if one is not already installed [40 CFR 63.6625(f)]

XI.G  RECORDKEEPING REQUIREMENTS

1. The Permittee must keep the records described below: [40 CFR 63.6655(a)]
   a. records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(2)]
   b. records of all required maintenance performed on the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(4)]
   c. records of actions taken during periods of malfunction to minimize emissions in accordance with X.E.2 of this Section, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [40 CFR 63.6655(a)(5)]

2. The Permittee must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that the stationary RICE was operated and maintained and after-treatment control device (if any) according to your own maintenance plan [40 CFR 63.6655(e)]

3. If the Permittee owns or operates existing emergency generators that do not meet the standards applicable to non-emergency engines, the Permittee must keep records of the hours of operation of the engine(s) that is recorded through the non-resettable hour meter. The Permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. [40 CFR 63.6655(f)]
XI.H  REPORTING REQUIREMENTS

The Permittee must report each instance in which the operating limitation in XI.B 1 - 4 of this Section is not met. These instances are deviations from the operating limitations in this Section. These deviations must be reported according to the requirements in 40 CFR 63.6650. [40 CFR 63.6640(b)]

XI.I  TESTING REQUIREMENTS

None Required.

END SECTION XI
PART B: SPECIFIC CONDITIONS

SECTION XII: STATIONARY ROTATING MACHINERY

XII. Stationary Rotating Machinery

XII.A  APPLICABILITY

1. The provisions of this section are applicable to the following affected facilities: all stationary gas turbines, oil-fired turbines, or internal combustion engines. This section also applies to an installation operated for the purpose of producing electric or mechanical power with a resulting discharge of sulfur dioxide in the installation's effluent gases. The pieces of equipment to which this section applies are listed in Attachment II (Equipment List.) [PCC 17.16.340.A]

XII.B  EMISSION LIMITS AND STANDARDS

1. For purposes of this section, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. [PCC 17.16.340.B]

2. Particulate Matter - Emissions Standard

   a. No person shall cause, allow or permit the emission of particulate matter, caused by combustion of fuel, from any stationary rotating machinery in excess of the amounts calculated by one of the following equations: [PCC 17.16.340.C]

      i. For equipment having a heat input rate of 4200 million BTU per hour or less, the maximum allowable emissions shall be determined by the following equation: [PCC 17.16.340.C.1]

         \[ E = 1.02Q^{0.769} \]

         where:

         \( E \) = the maximum allowable particulate emissions rate in pounds-mass per hour.

         \( Q \) = the heat input in million BTU per hour.

   b. The actual values shall be calculated from the applicable equations and rounded off to two decimal places. [PCC 17.16.340.D]

   c. The total heat input of all operating fuel-burning units on a plant or premises shall be used for determining the maximum allowable amount of particulate matter which may be emitted. [PCC 17.16.340.B]

3  Opacity Emissions Standards

   a. General Operating Opacity Limit

      No person shall cause, allow or permit to be emitted into the atmosphere from any stationary rotating machinery, smoke for any period greater than ten consecutive seconds which exceeds 40 percent opacity. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes. [PCC 17.16.340.E]
b. **Cold Diesel Engine Starting Opacity Limit**

   No person shall cause or permit the effluent from any cold diesel engine to have an average optical density equal to or greater than 60 percent when the engine is started. This requirement applies only to the first 10 consecutive minutes after the cold engine is started. [PCC 17.16.040.A]

XII.B.3.c. **Diesel Engine Accelerated Under Load Opacity Limit**

   No person shall cause or permit the effluent from any diesel engine being accelerated under load to have an average optical density equal to or greater than 60 percent. [PCC 17.16.040.A]

4. **Sulfur Dioxide Emissions Standard**

   When low sulfur oil is fired, stationary rotating machinery installations shall burn fuel which limits the emission of sulfur dioxide to 1.0 pound per million BTU heat input. [PCC 17.16.340.F]

5. **Fuel Restriction**

   For each piece of equipment to which this section applies, the Permittee shall combust only the allowed fuels specified for each piece of equipment in Attachment II (Equipment List) of this permit. [PCC 17.12.040.A.2]

6. **Operational Hours Limitation**

   The Permittee shall not operate any equipment to which this section applies for more than the number of hours per year specified for each piece of equipment in Attachment II (Equipment List) of this permit. The total hours per year shall be calculated as a rolling twelve (12) month total. [PCC 17.12.040.A.2]

**XII.C  COMPLIANCE DETERMINATION**

None Required.

**XII.D  MONITORING REQUIREMENTS**

1. **Particulate Matter Emissions Standard**

   None Required.

2. **Opacity Emissions Standards**

   The Permittee shall conduct a visible emissions check on the exhaust stack of each piece of equipment to which this section applies at least quarterly while the equipment is operating. For the purposes of this permit, a visible emissions check is verification that abnormal emissions are not present at the stack. The Permittee shall maintain a record of the visible emissions checks pursuant to recordkeeping requirements of E.2 of this section (recordkeeping for Opacity Emissions Standard.) [PCC 17.12.040.A.3.c]

3. **Sulfur Dioxide Emissions Standard**

   Recordkeeping will serve as monitoring.

4. **Fuel Restriction**

   Recordkeeping will serve as monitoring.
5. **Operational Hours Limitation**

   Recordkeeping will serve as monitoring.

**XII.E**  
**RECORDKEEPING REQUIREMENTS**

1. **Particulate Matter Emissions Standard**

   None Required.

2. **Opacity Emissions Standards**

   For each opacity check conducted pursuant to D.2 of this section (monitoring for Opacity Emissions Standards), the Permittee shall record the date and time of the check, the name of the person conducting the check, the results of the check, and the type of corrective action taken (if required). All records shall be maintained for five years.  

   [PCC 17.12.040.A.3.c]

3. **Fuel Restriction & Sulfur Dioxide Emissions Standard**

   The Permittee shall maintain a record of all fuel combusted in all equipment to which this section applies. The record must contain information showing the sulfur content of the fuel as delivered. Such records may include, but are not limited to, fuel delivery records.  


4. **Operational Hours Limitation**

   For each piece of equipment identified as having an operational hours limitation in Attachment II (Equipment List) of this permit, the Permittee shall record the monthly operating hours at the close of each month and recalculate a rolling twelve month total. Recalculation and recording of operating hours shall be completed within 20 business days of the close of each month. All records shall be kept for 5 years.  

   [PCC 17.12.040.A.3.c]

**XII.F**  
**REPORTING REQUIREMENTS**

None Required.

**XII.G**  
**TESTING REQUIREMENTS**

None required.

**END SECTION XII**
PART B: SPECIFIC CONDITIONS

SECTION XIII: FOSSIL-FUEL FIRED INDUSTRIAL AND COMMERCIAL EQUIPMENT

XIII. Fossil-Fuel Fired Industrial and Commercial Equipment

XIII.A  A. APPLICABILITY

1. This section applies to industrial and commercial installations which are less than seventy-three megawatts capacity (two hundred fifty million British thermal units per hour); but in the aggregate on any premises are rated at greater than five hundred thousand British thermal units per hour (0.146 megawatts); and in which fuel is burned for the primary purpose of producing steam, hot water, hot air or other liquids, gases or solids and in the course of doing so the products of combustion do not come into direct contact with process materials. When any products or by-products of a manufacturing process are burned for the same purpose or in conjunction with any fuel, the same maximum emission limitations shall apply. The pieces of equipment to which this section applies are listed in Attachment II (Equipment List.) [PCC 17.16.165.A]

XIII.B  B. EMISSION LIMITS AND STANDARDS

1. For purposes of this section, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. The heat content of solid fuel shall be determined in accordance with PCC 17.11.160. [PCC 17.16.165.B]

2. Particulate Matter Emissions Standard

a. No person shall cause, allow or permit the emission of particulate matter, caused by combustion of fuel, from any fuel-burning operation in excess of the amounts calculated by one of the following equations: [PCC 17.16.165.C]

i. For equipment having a heat input rate of four thousand two hundred million BTU per hour or less, the maximum allowable emissions shall be determined by the following equation: [PCC 17.16.165.C.1]

\[ E = 1.02Q^{0.769} \]

where:

\[ E = \text{the maximum allowable particulate emissions rate in pounds-mass per hour.} \]
\[ Q = \text{the heat input in million BTU per hour.} \]

b. The actual values shall be calculated from the applicable equations and rounded off to two decimal places. [PCC 17.16.165.D]

c. The total heat input of all fuel-burning units on a plant or premises shall be used for determining the maximum allowable amount of particulate matter that may be emitted. [PCC 17.16.165.B]

3. Fuel Restriction

The Permittee shall combust only pipeline quality natural gas in all equipment to which this section applies. [PCC 17.12.040.A.2]
XIII.C  C. COMPLIANCE DETERMINATION
    None Required.

XIII.D  D. MONITORING REQUIREMENTS
    None Required.

XIII.E  E. RECORDKEEPING REQUIREMENTS
    None Required.

XIII.F  F. REPORTING REQUIREMENTS
    None Required.

XIII.G  G. TESTING REQUIREMENTS
    None Required.

END SECTION XIII
PART B: SPECIFIC CONDITIONS

SECTION XIV: PETROLEUM LIQUID STORAGE TANKS (CAPACITY < 40,000 GAL)

XIV.A A. APPLICABILITY

This section applies to all petroleum liquid storage tanks with a storage capacity less than 40,000 gallons. All units at source which this section applies to are listed in the equipment list, Attachment II of this permit.

XIV.B B. EMISSION LIMITS AND STANDARDS

Requirement for Installation of Submerged Fill Pipe

Any petroleum liquid storage tank to which this section applies shall be equipped with a submerged filing device, or acceptable equivalent, for the control of hydrocarbon emissions.

XIV.C C. COMPLIANCE DETERMINATION

None Required.

XIV.D D. MONITORING REQUIREMENTS

1. The Permittee shall annually inspect the gasoline storage tanks’ submerged fill devices. The inspections shall be used to determine whether all of the submerged fill devices are in good working order, according to good modern practices and any available industry practices or recommendations.

   [Locally Enforceable & Material Permit Condition]

2. The Permittee shall annually inspect the vapor control recovery system(s), all pumps compressors, pipes, hoses mechanical seals or other equipment storing, handling, conveying or controlling VOCs and HAPs. The inspections shall be used to determine whether all equipment is in good working order according to good modern industry practices and any available manufacturer’s recommendations.

   [Locally Enforceable & Material Permit Condition]

XIV.E E. RECORDKEEPING REQUIREMENTS

1. The Permittee shall maintain documents of the inspections required by conditions D.1 and D.2 of this section with the following information:

   i. ID of the device inspected;
   
   ii. Date of the inspection;
   
   iii. Results of the inspection; and
   
   iv. Any corrective actions taken.

2. The Permittee shall repair defective air pollution control equipment promptly and keep complete records of the maintenance and repairs performed.
XIV. F. REPORTING REQUIREMENTS

None required.

XIV. G. TESTING REQUIREMENTS

None required.

END SECTION XIV
PART B: SPECIFIC CONDITIONS

SECTION XV: SURFACE COATING OF MISCELLANEOUS METAL PARTS

XV. Surface Coating of Miscellaneous Metal Parts

XVA. APPLICABILITY

1. This section applies only to surface coating of miscellaneous metal parts operations engaged in the employment or application of organic solvents. [PCC 17.16.400.C]

2. For the purpose of these provisions, surface coatings include but are not limited to paints, adhesives, and sealants. A VOC containing surface coating or solvent shall be considered to contain VOC if it contains more than 2%, by weight VOC. A HAP containing surface coating or solvent shall be considered to contain HAP if it contains any individual HAP that is an Occupational Safety and Health Administration (OSHA)-defined carcinogen as specified in 29 CFR 1910.1200(d)(4) at a concentration greater than 0.1 percent by mass, or greater than 1.0 percent by mass for any other individual HAP compound [PCC 17.04.340.A.219 & 40 CFR 63.11180]

XVB. EMISSION LIMITS AND STANDARDS

1. Organic Solvents and Surface Coating Operations

   a. The Permittee shall not conduct any spray coating or spray paint operation without minimizing organic solvent emissions. Such operations, other than architectural coating and spot painting, shall be conducted in an enclosed area equipped with controls containing no less than ninety-six percent of the overspray. [PCC 17.16.400.C.1]

   b. The Permittee is prohibited from using halogenated solvents in solvent degreasing/cleaning units (if used) in a total concentration that is greater than 5 percent by weight HAP, without submitting an Initial Notification in accordance with 40 CFR 63, Subpart T to the Control Officer and complying with the applicable requirements. [PCC 17.11.120.A.3.a, NESHAP Subpart T Applicability] [Material Permit Condition]

2. VOC Emissions Limits

   No owner or operator of a facility engaged in the surface coating of miscellaneous metal parts and products may operate a coating application system subject to this section that emits volatile organic compounds in excess of any of the following: [PCC 17.16.400.C.5]

   a. 4.3 pounds per gallon (0.52 kilograms per liter) of coating, excluding water, delivered to a coating applicator that applies clear coatings. [PCC 17.16.400.C.5.a]

   b. 3.5 pounds per gallon (0.42 kilograms per liter) of coating, excluding water delivered to a coating applicator in a coating application system that is air dried or forced warm air dried at temperatures up to one hundred ninety-four degrees Fahrenheit (ninety degrees centigrade). [PCC 17.16.400.C.5.b]

   c. 3.5 pounds per gallon (0.42 kilograms per liter) of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings. [PCC 17.16.400.C.5.c]

   d. 3.0 pounds per gallon (0.36 kilograms per liter) of coating, excluding water, delivered to a coating applicator for all other coatings and coating application systems. [PCC 17.16.400.C.5.d]
3. **Application of Least Stringent Emission Limitation**

   If more than one emission limitation in XV.B.2 of this section (above) applies to a specific coating, then the least stringent emission limitation shall be applied.  
   
   [PCC 17.16.400.C.6]

4. **Inclusion of Emissions from Solvent Washings in Emissions Limitations**

   All VOC emissions from solvent washings shall be considered in the emission limitations in XV.B.2 of this section (above), unless the solvent is directed into containers that prevent evaporation into the atmosphere.  
   
   [PCC 17.16.400.C.7]

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**XV.C**  
**C. COMPLIANCE DETERMINATION**

None Required.

**XV.D**  
**D. MONITORING REQUIREMENTS**

None Required.

**XV.E**  
**E. RECORDKEEPING REQUIREMENTS**

None Required.

**XV.F**  
**F. REPORTING REQUIREMENTS**

None Required.

**XV.G**  
**G. TESTING REQUIREMENTS**

None Required.

**END SECTION XV**
PART B: SPECIFIC CONDITIONS

SECTION XVI: ARCHITECTURAL COATINGS

XVI. Architectural Coatings

XVI.A APPLICABILITY

1. This section applies only to persons engaged in the employment or application of organic solvents for the purposes of architectural coatings. [PCC 17.16.400.C]

XVI.B EMISSION LIMITS AND STANDARDS

1. Housekeeping

No person shall transport or store VOCs without taking necessary and feasible measures to control evaporation, leakage or other discharge into the atmosphere. [PCC 17.16.400.A]

2. Architectural Coatings

No person shall either: [PCC 17.16.400.C.2]

a. Employ, apply, evaporate or dry any architectural coating containing photochemically reactive solvents for industrial or commercial purposes; or [PCC 17.16.400.C.2.a]

b. Thin or dilute any architectural coating with a photochemically reactive solvent. [PCC 17.16.400.C.2.b]

3. Definition of Photochemically Reactive Solvent

For purposes of this subsection, a photochemically reactive solvent shall be any solvent with an aggregate of more than twenty percent of its total volume composed of the chemical compounds classified in subparagraphs a through c of this paragraph, or which exceeds any of the following percentage composition limitations, referred to the total volume of solvent: [PCC 17.16.400.C.3]

a. A combination of the following types of compounds having an olefinic or cyclo-olefinic type of unsaturation - hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones: five percent. [PCC 17.16.400.C.3.a]

b. A combination of aromatic compounds with eight or more carbon atoms to the molecule, except ethylbenzene: eight percent. [PCC 17.16.400.C.3.b]

c. A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: twenty percent. [PCC 17.16.400.C.3.c]

4. Requirement to Apply Least Allowable Solvent Content Limit [PCC 17.16.400.C.4]

Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the groups of organic compounds described in subparagraphs (3)(a) through (3)(c) of this section, it shall be considered to be a member of the group having the least allowable percent of the total volume of solvents.
XVI.C  C. COMPLIANCE DETERMINATION
None Required.

XVI.D  D. MONITORING REQUIREMENTS
None Required.

XVI.E  E. RECORDKEEPING REQUIREMENTS
None Required.

XVI.F  F. REPORTING REQUIREMENTS
None Required.

XVI.G  G. TESTING REQUIREMENTS
None Required.

END SECTION XVI
PART B: SPECIFIC CONDITIONS

SECTION XVII: SPRAY PAINTING

XVII. Spray Painting

A. APPLICABILITY

XVII.A This section applies only to spray painting operations engaged in the employment or application of organic solvents. [PCC 17.16.400.C]

B. EMISSION LIMITS AND STANDARDS

XVII.B.1 1. Housekeeping

No person shall transport or store VOCs without taking necessary and feasible measures to control evaporation, leakage or other discharge into the atmosphere. [PCC 17.16.400.A]

2. Requirement to Minimize Organic Solvent Emissions

No person shall conduct any spray paint operation without minimizing organic solvent emissions. [PCC 17.16.400.C.1]

3. Requirement to Control Overspray

Spray painting operations, other than architectural coating and spot painting, shall be conducted in an enclosed area equipped with controls containing no less than ninety-six percent of the overspray. [PCC 17.16.400.C.1]

C. COMPLIANCE DETERMINATION

None Required.

D. MONITORING REQUIREMENTS

None Required.

E. RECORDKEEPING REQUIREMENTS

None Required.

F. REPORTING REQUIREMENTS

None Required.

G. TESTING REQUIREMENTS

None Required.

END SECTION XVII
PART B: SPECIFIC CONDITIONS

SECTION XVIII: ABRASIVE BLASTING

XVIII. Abrasive Blasting

A. APPLICABILITY

XVIII.B This section applies to all abrasive blasting operations at the facility. All units at the source to which this section applies are listed in the equipment list, Attachment II of this permit. [PCC 17.16.100.D]

B. EMISSION LIMITS AND STANDARDS

Requirement to Control Emissions

Emissions from a sandblasting or other abrasive blasting operation shall be effectively controlled by applying water to suppress visible emissions (wet blasting), enclosing the operation, or use of other equivalently effective controls. [PCC 17.16.100.D]

C. COMPLIANCE DETERMINATION

None Required.

D. MONITORING REQUIREMENTS

None Required.

E. RECORDKEEPING REQUIREMENTS

None Required.

F. REPORTING REQUIREMENTS

None Required.

G. TESTING REQUIREMENTS

None Required.

END SECTION XVIII
PART B: SPECIFIC CONDITIONS
SECTION XIX: VISIBLE EMISSION, COMPILATION OF MASS RATES AND CONCENTRATIONS, AND ODOR LIMITING STANDARDS (FACILITY WIDE)

XIX. Visible Emissions Standards (Facility Wide)

XIX.A APPLICABILITY

1. This section applies to all operations at the facility including the dust collectors listed in Table 6 of the Equipment list in Attachment 2 [PCC 17.16.040]

2. Uncombined Water Exemption

When the presence of uncombined water is the only reason for failure of a source to otherwise meet the requirements of this section, this section shall not apply. [PCC 17.16.040.B]

3. Permitted Open Burning Exemption

Open fires permitted according to PCC 17.12.480 are exempt from the requirements of subsections B.2, B.3 and B.4 (below) of this section. [PCC 17.16.050.C]

XIX.B EMISSION LIMITS AND STANDARDS


No existing source shall cause or permit the emission of pollutants at rates greater than the following:

a. For particulate matter discharged into the atmosphere in any one hour from any unclassified process source in total quantities in excess of the amounts calculated by one of the following equations:

i. For process sources having a process weight rate of sixty thousand pounds per hour (thirty tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

\[ E = 3.59P^{0.62} \]

where:

- \( E \) = the maximum allowable particulate emissions rate in pounds-mass per hour.
- \( P \) = the process weight in tons-mass per hour.

ii. For process weight rate greater than sixty thousand pounds per hour (thirty tons per hour), the maximum allowable emissions shall be determined by the following equation:

\[ E = 17.31P^{0.16} \]

where "E" and "P" are defined as indicated in paragraph a of this subsection.
2. **Point Source and Fugitive Emissions Opacity Standards**

   The Permittee shall not cause or permit the effluent from a single emission point, multiple emission point, or fugitive emissions source to have an average optical density equal to or greater than 20%, or as otherwise specified in this title, subject to the following provisions: [PCC 17.16.040.A]

   a. The use of air or other gaseous diluents solely for the purpose of achieving compliance with an opacity standard is prohibited. [PCC 17.16.040.A.3]

3. **Nonpoint Source Opacity Standards**

   Opacity of an emission from any nonpoint source, as measured in accordance with the Arizona Testing Manual, Reference Method 9, shall not exceed 20%. [PCC 17.16.050.B & PCC 17.16.050.B.1]

4. **Prohibition of Visible Emissions Crossing Property Boundaries**

   The Permittee shall not cause, suffer, allow, or permit diffusion of visible emissions, including fugitive dust, beyond the property boundary line within which the emissions become airborne, without taking reasonably necessary and feasible precautions to control generation of airborne particulate matter. Sources may be required to cease temporarily the activity or operation which is causing or contributing to the emissions until reasonably necessary and feasible precautions are taken. [PCC 17.16.050.D]

   a. This subsection (B.4 of this section) shall not apply when wind speeds exceed twenty-five (25) miles per hour (using the Beaufort scale of Wind-Speed Equivalents, or as recorded by the National Weather Service). This exception does not apply if control measures have not been taken or were not commensurate with the size or scope of the emission source. [PCC 17.16.050.D.2]

   b. This subsection (B.4 of this section) shall not apply to the generation of airborne particulate matter from undisturbed land. [PCC 17.16.050.D.3]

5. **Requirement to Prevent Excessive Dust**

   The Permittee shall not cause, suffer, allow or permit operations or activities likely to result in excessive amounts of airborne dust without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne. [PCC 17.16.050.A]

6. **Gaseous or Odorous Emissions**

   The Permittee shall not emit gaseous or odorous materials from equipment, operations or premises under his control in such quantities or concentrations as to cause air pollution. [PCC 17.16.030, SIP Rule 344]

**C. COMPLIANCE DETERMINATION**

1. **Opacity Standards (Point Source, Nonpoint Source, and Fugitive Emissions)**

   A violation of an opacity standard shall be determined by Method 9 following the Testing Requirements and procedures below (subsection G of this section.) If the average opacity as measured in accordance with subsection G exceeds the maximum allowed by any rule, this shall constitute a violation. [PCC 17.16.040.A.2]
2. **Prohibition of Visible Emissions Crossing Property Boundaries**
   None Required.

3. **Requirement to Prevent Excessive Dust**
   None Required.

4. **Gaseous or Odorous Emissions**
   None Required

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**D. MONITORING REQUIREMENTS**

None Required.

**E. RECORDKEEPING REQUIREMENTS**

1. **Opacity Standards (Point Source, Nonpoint Source, and Fugitive Emissions)**
   The Permittee shall record all data and results of all Method 9 observations carried out following the Testing Requirements and procedures below (subsection G of this section.) 
   [PCC 17.16.040.A.2]

2. **Prohibition of Visible Emissions Crossing Property Boundaries**
   None Required.

3. **Requirement to Prevent Excessive Dust**
   None Required.

4. **Gaseous or Odorous Emissions**
   None Required

**F. REPORTING REQUIREMENTS**

None Required.
G. TESTING REQUIREMENTS

1. Opacity Standards (Point Source, Nonpoint Source, and Fugitive Emissions)
   a. Opacities (optical densities), as measured in accordance with Method 9, of an effluent shall be measured by a certified visible emissions evaluator with his natural eyes, approximately following the procedures which were used during his certification, or by an approved and precisely calibrated in-stack monitoring instrument. [PCC 17.16.040.A.1]
   b. Opacities (optical densities), shall be determined by measuring and recording a set of consecutive, instantaneous opacities, and calculating the arithmetic average of the measurements within the set. The measurements shall be made at approximately fifteen-second intervals for a period of at least six minutes, and the number of required measurements shall be 25 per set. Sets need not be consecutive in time, and in no case shall two sets overlap. [PCC 17.16.040.A.2]

2. Prohibition of Visible Emissions Crossing Property Boundaries
   None Required.

3. Requirement to Prevent Excessive Dust
   None Required.

4. Gaseous or Odorous Emissions
   None Required

END SECTION XIX
PART C: ALTERNATIVE OPERATING SCENARIO

AVERAGED UNCONTROLLED PRIMER AND TOPCOAT APPLICATIONS

I. Averaged Uncontrolled Primer and Topcoat Applications (Organic HAPs and VOC)

I.A  A. APPLICABILITY

This alternative operating scenario (AOS I) applies to those primer and topcoat application operations meeting the applicability criteria of VI.A, Part B, Specific Conditions of this permit which employ primers and topcoats that do not meet the individual coating limits (non-compliant coatings) of VI.B.1, Part B, Specific Conditions of this permit. This AOS outlines the procedure by which these non-compliant coatings may be averaged with compliant coatings so that the primer and topcoat operations may be considered compliant with applicable regulations.

I.B  B. EMISSION LIMITS AND STANDARDS

1. Uncontrolled Primer and Topcoat Application Operations—Organic HAP and VOC (Noncompliant Coatings Averaging Alternative)

Instead of complying with the individual coating limits in VI.B.1, Part B, Specific Conditions of this permit, a facility may choose to comply with the averaging provisions specified in 1.a through 1.d of this AOS (AOS I), below: [40 CFR 63.743(d)]

a. Each owner or operator of a new or existing source shall use any combination of primers or topcoats (including self-priming topcoats) such that the monthly volume-weighted average organic HAP and VOC contents of the combination of primers or topcoats as determined in accordance with the applicable procedures set forth in subsection G of this AOS (AOS I) complies with the specified content limits in VI.B.1, Part B, Specific Conditions of this permit, unless the permitting agency specifies a shorter averaging period as part of an ambient ozone control program. [40 CFR 63.743(d)(1)]

b. Averaging is allowed only for uncontrolled primers and topcoats (including self-priming topcoats). [40 CFR 63.743(d)(2)]

c. Averaging is not allowed between primers and topcoats (including self-priming topcoats). [40 CFR 63.743(d)(3)]

d. Each averaging scheme shall be approved in advance by the permitting agency and adopted as part of the facility's Title V permit. [40 CFR 63.743(d)(6)]

I.C  C. COMPLIANCE DETERMINATION

1. Uncontrolled Primer Application Operations (Noncompliant Coatings Averaging Alternative)

The primer application operation is considered in compliance when the conditions specified in paragraphs C.1.a and C.1.b of this AOS (AOS I), as applicable, are met. Failure to meet any one of the conditions identified in these paragraphs shall constitute noncompliance. [40 CFR 63.749(d)(3)]
a. **Primer Organic HAP and VOC Averaged Emission Limits**

For all averaged uncontrolled primers, all values of Ha (as determined using the procedures specified in G.1) 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 Ga (as determined using the procedures specified in G.2) 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.  

[40 CFR 63.749(d)(3)(i)]

b. **Application Equipment—Required Application Techniques (Averaged Primers)**

1.C.1.b(i)

Uses an application technique specified in VI.B.2.a.(i) through VI.B.2.a.(viii), Part B, Specific Conditions of this permit.  

[40 CFR 63.749(d)(3)(ii)(A)]

c. **Requirement to Use Most Stringent Procedure (Averaged Primers)**

Operates all application techniques in accordance with the manufacturer's specifications or locally prepared operating procedures, whichever is more stringent.  

[40 CFR 63.749(d)(3)(iv)]

1.C.2

2. **Uncontrolled Topcoat Application Operations (Noncompliant Coatings Averaging Alternative)**

The topcoat application operation is considered in compliance when the conditions specified in paragraphs C.2.a through C.2.c of this section, as applicable, are met. Failure to meet any of the conditions identified in these paragraphs shall constitute noncompliance.  

[40 CFR 63.749(d)(4)]

a. **Topcoat Organic HAP and VOC Averaged Emission Limits**

For all averaged uncontrolled topcoats, all values of Ha (as determined using the procedures specified in G.1 of this section) 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 Ga (as determined using the procedures specified in G.2 of this section) 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.  

[40 CFR 63.749(d)(4)(i)]

b. **Application Equipment - Required Application Techniques (Averaged Topcoats)**

(i) Uses an application technique specified in VI.B.2.a.(i) through VI.B.2.a.(viii), Part B, Specific Conditions of this permit; or  

[40 CFR 63.749(d)(4)(ii)(A)]

c. **Requirement to Use Most Stringent Procedure (Averaged Topcoats)**

Operates all application techniques in accordance with the manufacturer's specifications or locally prepared operating procedures.  

[40 CFR 63.749(d)(4)(iv)]

1.D **D. MONITORING REQUIREMENTS**

1. **Uncontrolled Primers and Topcoats—Organic HAP and VOC (Noncompliant Coatings Averaging Alternative)**

Recordkeeping will serve as monitoring.

2. **Application Equipment—Required Application Techniques (Averaged Primers and Topcoats)**

None Required.

3. **Requirement to Use Most Stringent Procedure (Averaged Primers and Topcoats)**

None Required.
E. RECORDKEEPING REQUIREMENTS

1. Uncontrolled Primer and Topcoat Application Operations—Organic HAP and VOC (Noncompliant Coatings Averaging Alternative)

Each owner or operator required to comply with the organic HAP and VOC content limits specified in VI.B.1, Part B, Specific Conditions of this permit, shall record the information specified in paragraphs E.1.a and E.1.b (below) of this section, as appropriate. [40 CFR 63.752(c)]

a. Record of Coating Composition, Use and Emissions

For uncontrolled primers and topcoats complying with the organic HAP or VOC content level by averaging: [40 CFR 63.752(c)(4)]

(i) The name and VOC content as received and as applied of each primer and topcoat used at the facility. [40 CFR 63.752(c)(1)]

(ii) The monthly volume-weighted average masses of organic HAP emitted per unit volume of coating as applied (less water) (Hₐ) and of VOC emitted per unit volume of coating as applied (less water and exempt solvents) (Gₐ) for all coatings (as determined by the procedures specified in G.1 and G.2 of this section (below), of this AOS); and

[40 CFR 63.752(c)(4)(i)]

(iii) All data, calculations, and test results (including EPA Method 24 results) used to determine the values of Hₐ and Gₐ. [40 CFR 63.752(c)(4)(ii)]

b. Operating Scenario Log

The Permittee shall record in a log the operating scenario the Permittee is working under including each transition date between the normal and alternate operating scenarios. [PCC 17.12.040.A.11.a]

2. Application Equipment—Required Application Techniques (Averaged Primers and Topcoats)

None Required.

3. Requirement to Use Most Stringent Procedure (Averaged Primers and Topcoats)

None Required.

F. REPORTING REQUIREMENTS

1. Uncontrolled Primer and Topcoat Application Operations—Organic HAP and VOC (Noncompliant Coatings Averaging Alternative)

Each owner or operator of a primer or topcoat application operation subject to this subpart shall submit the following information: [40 CFR 63.753(c)]

a. Semiannual Reports

Semiannual reports occurring every 6 months from the date of the notification of compliance status that identify: [40 CFR 63.753(c)(1)]
(i). 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 E.1.a.(ii) of this section, that exceeds the applicable organic HAP or VOC content limit specified in VI.B.1, Part B, Specific Conditions of this permit; [40 CFR 6.753(c)(1)(ii)]

(ii). If the operations have been in compliance for the semiannual period, a statement that the operations have been in compliance with the applicable standards. [40 CFR 6.753(c)(1)(vii)]

2. **Application Equipment - Required Application Techniques (Averaged Primers and Topcoats)**

   None Required.

3. **Requirement to Use Most Stringent Procedure (Averaged Primers and Topcoats)**

   None Required.

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**G. TESTING REQUIREMENTS**


   a. 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 VI.B.1, Part B, Specific Conditions of this permit, 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 [40 CFR 6.750(d)]

   (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. [40 CFR 6.750(d)(1)(i)]

   (ii) Determine the total organic HAP weight fraction of each coating as applied each month. [40 CFR 6.750(d)(1)(ii)]

      (1) 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. [40 CFR 6.750(d)(1)(ii)(A)]

      (2) 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 predetermined. [40 CFR 6.750(d)(1)(ii)(B)]

   (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. [40 CFR 6.750(d)(1)(iii)]
b. (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.  

\[40 \text{ CFR 63.750(d)(2)(i)}\]

(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.  

\[40 \text{ CFR 63.750(d)(2)(ii)}\]

(iii) The volume applied may be determined from company records.  

\[40 \text{ CFR 63.750(d)(2)(iii)}\]

c. (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.  

\[40 \text{ CFR 63.750(d)(3)(i)}\]

(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.  

\[40 \text{ CFR 63.750(d)(3)(ii)}\]

(1) 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.  

\[40 \text{ CFR 63.750(d)(3)(ii)(A)}\]

(2) 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.  

\[40 \text{ CFR 63.750(d)(3)(ii)(B)}\]

(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.  

\[40 \text{ CFR 63.750(d)(3)(iii)}\]

d. 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 G.1.b of this AOS (AOS I).  

\[40 \text{ CFR 63.750(d)(4)}\]

e. 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:  

\[40 \text{ CFR 63.750(d)(5)}\]

\[
H_a = \frac{\sum_{i=1}^{n} W_{hi} D_{ai} V_i}{C_{hi} C_{hi}}
\]

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} = \text{density (lb of coating per gal of coating) of coating i as applied that is being averaged during each 30-day period.}

V_{ci} = \text{volume (gal) of coating i as applied that is being averaged during the 30-day period.}

C_{lw} = \text{total volume (gal) of all coatings (less water) as applied that are being averaged during each 30-day period.}


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 VI.B.1, Part B, Specific Conditions of this permit, 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. \[40 \text{ CFR 63.750(f)}\]

1.G.2.a a. (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. \[40 \text{ CFR 63.750(f)(1)(i)}\]

(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. \[40 \text{ CFR 63.750(f)(1)(ii)}\]

(1) 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. \[40 \text{ CFR 63.750(f)(1)(ii)(A)}\]

(2) 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. \[40 \text{ CFR 63.750(f)(1)(ii)(B)}\]

(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. \[40 \text{ CFR 63.750(f)(1)(iii)}\]

1.G.2.b b. (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. \[40 \text{ CFR 63.750(f)(2)(i)}\]

(ii) Determine the volume of each coating (less water and exempt solvents) as applied each day. \[40 \text{ CFR 63.750(f)(2)(ii)}\]

(iii) The volume applied may be determined from company records. \[40 \text{ CFR 63.750(f)(2)(iii)}\]

1.G.2.c c. 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 G.1.b of this section. \[40 \text{ CFR 63.750(f)(3)}\]
d. 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:

\[
G_a = \frac{\sum_{i=1}^{n} (VOC)_{ci} V_{ci}}{C_{\text{twes}}} \\
\text{Eq. 8}
\]

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.

\( C_{\text{twes}} \) = total volume (gal) of all coatings (less water and exempt solvents) as applied during each 30-day period for those coatings being averaged.

e. (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. [40 CFR 63.750(f)(5)(i)]

(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. [40 CFR 63.750(f)(5)(ii)]

(iii) The recalculated value of \( G_a \) under either paragraph G.2.e.(i) or G.2.e.(ii) of this section shall be used to determine compliance. [40 CFR 63.750(f)(5)(iii)]

3. **Application Equipment—Required Application Techniques (Averaged Primers and Topcoats)**

   None Required.

4. **Requirement to Use Most Stringent Procedure (Averaged Primers and Topcoats)**

   None Required.

**END OF ALTERNATE OPERATING SCENARIOS**
ATTACHMENT I: APPLICABLE REGULATIONS

Requirements Specifically Identified as Applicable:


Subpart M National Emission Standard for Asbestos


Subpart GG National Emission Standards for Aerospace Manufacturing and Rework Facilities.
Subpart DDDDD NESHAPS for Industrial, Commercial, and Institutional Boilers and Process Heaters.

*Code of Federal Regulations Title 40, Part 82: Protection of Stratospheric Ozone (40 CFR 82)*

Subpart F Recycling and Emissions Reduction

*Pima County State Implementation Plan (SIP)*

Rule 314 Petroleum Liquids
Rule 316 Particulate Materials
Rule 332 Compilation of Mass Rates and Concentrations
Rule 343 Visibility Limiting Standards
Rule 344 Odor Limiting Standards

*Pima County Code (PCC) Title 17, Chapter 17.16*

17.16.030 Odor Limiting Standards
17.16.040 Standards and Applicability
17.16.050 Visibility Limiting Standards
17.16.100 Particulate Materials
17.16.165 Standards of Performance for Fossil-Fuel Fired Industrial and Commercial Equipment
17.16.230 Standards of Performance for Storage Vessels for Petroleum Liquids
17.16.340 Standards of Performance for Stationary Rotating Machinery
17.16.400 Organic Solvents and Other Organic Materials
17.16.430 Standards of Performance for Unclassified Sources
### ATTACHMENT 2: EQUIPMENT LIST

#### TABLE 1: Stationary Rotating Machinery (Part B, Section II)

<table>
<thead>
<tr>
<th>Type of Equipment</th>
<th>Location</th>
<th>Equipment ID</th>
<th>Manufacturer</th>
<th>Model</th>
<th>Serial Number</th>
<th>Maximum Rated Capacity (hp)</th>
<th>Model year/Applicability Date</th>
<th>Approved Fuel(s)</th>
<th>Voluntary Operating Hours Limit (hrs/yr)</th>
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<td>Hobart</td>
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### TABLE 2: Fossil Fuel Fired Industrial and Commercial Equipment > 1 MMBtu/hr (Part B, Section XIII)

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<th>Location</th>
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<th>Manufacturer</th>
<th>Model</th>
<th>Serial Number</th>
<th>Maximum Rated Capacity (MMBtu/hr)</th>
<th>Model year/Applicability Date</th>
<th>Approved Fuel(s)</th>
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### TABLE 2: Fossil Fuel Fired Industrial and Commercial Equipment > 1 MMBtu/hr (Part B, Section XIII), Continued

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<th>Location</th>
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<th>Manufacturer</th>
<th>Model</th>
<th>Serial Number</th>
<th>Maximum Rated Capacity (MMBtu/hr)</th>
<th>Model year/Applicability Date</th>
<th>Approved Fuel(s)</th>
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### TABLE 3: Fossil Fuel Fired Industrial and Commercial Equipment < 1 MMBtu/hr (Part B, Section XIII)

<table>
<thead>
<tr>
<th>Type of Equipment</th>
<th>Location</th>
<th>Equipment ID</th>
<th>Manufacturer</th>
<th>Model</th>
<th>Serial Number</th>
<th>Maximum Rated Capacity (MMBtu/hr)</th>
<th>Model year/Applicability Date</th>
<th>Approved Fuel(s)</th>
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### TABLE 3: Fossil Fuel Fired Industrial and Commercial Equipment < 1 MMBtu/hr (Part B, Section XIII) Continued

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<th>Type of Equipment</th>
<th>Location</th>
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<th>Model</th>
<th>Serial Number</th>
<th>Maximum Rated Capacity (MMBtu/hr)</th>
<th>Model year/Applicability Date</th>
<th>Approved Fuel(s)</th>
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<tbody>
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<td>Daiken</td>
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<td>Location</td>
<td>Equipment ID</td>
<td>Manufacturer</td>
<td>Model</td>
<td>Serial Number</td>
<td>Maximum Rated Capacity (gal)</td>
<td>Model year/ Applicability Date</td>
<td>Approved Fuel(s)</td>
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<td>Unleaded Gasoline</td>
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<td>Bldg S (Outside)</td>
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<td>Diesel</td>
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<td>Waste Oil</td>
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TABLE 5: Abrasive Blasting Equipment (Part B, Section XVIII)

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<th>Type of Equipment</th>
<th>Location</th>
<th>Equipment ID</th>
<th>Manufacturer</th>
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<tbody>
<tr>
<td>Abrasive Blaster (Enclosed System)</td>
<td>Bldg B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abrasive Blaster (Enclosed System)</td>
<td>Bldg LB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abrasive Blaster (Enclosed System)</td>
<td>Bldg J</td>
<td></td>
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</tr>
<tr>
<td>Abrasive Blaster (Enclosed System)</td>
<td>Bldg J</td>
<td></td>
<td></td>
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<tr>
<td>Abrasive Blaster (Enclosed System)</td>
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<td>Econoline</td>
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<td>Abrasive Blaster (Enclosed System)</td>
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<td>Abrasive Blaster</td>
<td>Bldg Y</td>
<td>Sand Blaster</td>
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<td>Abrasive Blaster</td>
<td>Bldg D</td>
<td>Detail Paint</td>
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<td>Cyclo Blasting</td>
<td>Storage</td>
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<tr>
<td>Cyclo Blasting</td>
<td>Storage</td>
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<tr>
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<td>Storage</td>
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### TABLE 6: Dust Collectors (Part B, Section XIX)

<table>
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<tr>
<th>Type of Equipment</th>
<th>Location</th>
<th>Equipment ID</th>
<th>Manufacturer</th>
<th>Maximum Rated Capacity (scfm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust Collector</td>
<td>Bldg H</td>
<td>DC 01</td>
<td>Oneida</td>
<td>3800</td>
</tr>
<tr>
<td>Dust Collector</td>
<td>Bldg H</td>
<td>DC 02</td>
<td>Oneida</td>
<td>3800</td>
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<tr>
<td>Dust Collector</td>
<td>Bldg H</td>
<td>DC 03</td>
<td>Oneida</td>
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<tr>
<td>Dust Collector</td>
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<td>DC 04</td>
<td>Oneida</td>
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<td>Dust Collector</td>
<td>Bldg H</td>
<td>DC 05</td>
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### TABLE 7: Insignificant Activities

<table>
<thead>
<tr>
<th>Type of Activity</th>
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<tbody>
<tr>
<td>Hand Sanding Dust Collector</td>
<td>Bldg B</td>
</tr>
<tr>
<td>Paint Mixing Rooms</td>
<td>Bldg E</td>
</tr>
<tr>
<td>6 Hand Sanding Tables</td>
<td>Bldg H</td>
</tr>
<tr>
<td>Glue Booths</td>
<td>Bldg H</td>
</tr>
<tr>
<td>Cabinet Shop, Woodworking</td>
<td>Bldg H</td>
</tr>
<tr>
<td>Burn Test Lab (Propane)</td>
<td>Bldg H</td>
</tr>
<tr>
<td>Paint Booth (Aerosol Cans)</td>
<td>Bldg J</td>
</tr>
<tr>
<td>3 Parts Cleaners (60 gal)</td>
<td>Bldg J</td>
</tr>
<tr>
<td>Hand Sanding Table</td>
<td>Bldg J</td>
</tr>
<tr>
<td>Paint Booths</td>
<td>Bldg J</td>
</tr>
<tr>
<td>Composite Exhaust Tables</td>
<td>Bldg J</td>
</tr>
<tr>
<td>Carpentry Shop</td>
<td>Bldg LB</td>
</tr>
<tr>
<td>Parts Cleaner (30 gal)</td>
<td>Bldg LB</td>
</tr>
<tr>
<td>Parts Cleaner (30 gal)</td>
<td>Bldg S</td>
</tr>
<tr>
<td>2 Hand Sanding Tables</td>
<td>Bldg X</td>
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<tr>
<td>Paint Mixing Room</td>
<td>Bldg Y</td>
</tr>
<tr>
<td>Silk Screening Exhaust Tables</td>
<td>Bldg Y</td>
</tr>
<tr>
<td>Machine Shop</td>
<td>Bldg 3</td>
</tr>
<tr>
<td>3 Parts Cleaner (30 gal)</td>
<td>Bldg 3</td>
</tr>
<tr>
<td>3 Gun Cleaners</td>
<td>Storage</td>
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<td>4 Landa Steam Cleaners (Propane)</td>
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<td>Aerosol Spray Cans</td>
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<tr>
<td>Hand Sanding Operations</td>
<td>Site</td>
</tr>
<tr>
<td>2 Street Sweepers</td>
<td>Site</td>
</tr>
<tr>
<td>Touch Up Spray (Aerosol)</td>
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</tr>
<tr>
<td>Welding &amp; Soldering Operations</td>
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</table>