

**PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR PROGRAM**

33 N. Stone Ave, Suite 700 • Tucson, Arizona 85701 • Phone: (520) 243-7400

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

**ISSUED TO**

**R.E. DARLING CO., INC.  
3749 N ROMERO ROAD  
TUCSON, ARIZONA 85705**

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

THIS PERMIT ISSUED SUBJECT TO THE SPECIFIC CONDITIONS IDENTIFIED IN THIS PERMIT.

PERMIT NUMBER **1618**

PERMIT CLASS **II**

ISSUED:

EXPIRES:

SIGNATURE

TITLE

***Rupesh Patel, Air Permit Manager, PDEQ***

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## SUMMARY

The R. E. Darling Co., Inc. facility is located at 3749 North Romero Road, Tucson, Arizona. The Company supplies specialty fabricated rubber and composite products mainly to the aerospace and defense industry. The primary product lines of the Company are rocket motor insulation and exhaust components, oxygen breathing hose and related life support equipment, custom mixed rubber compounds, compression molded rubber components, and non-destructive testing services. Some of the products have structural metal rocket motor/aircraft parts incorporated into them.

The facility has fuel-fired natural gas boilers and surface coating operations where the rubber moldings and metal parts are coated with adhesives. There are two Batch solvent vapor degreasers in operation and an abrasive blasting operation where the components are blasted in preparation for adhesive bonding operations. The vapor degreaser is used to clean the miscellaneous structural metal rocket motor/aircraft parts. For the surface coating operations, the company primarily applies the adhesives by hand with brushes. On rare occasions depending on contract requirements, the company may apply adhesive coatings with spray equipment.

The potential pollution producing processes at the facility are surface coating operations, abrasive blasting, and halogenated solvent cleaning. The primary potential air pollutants emitted from the source are Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs) from the halogenated solvent cleaning operations and surface coating operations. The pollutants of concern are solvents used in the cleaning operations, as well as, adhesives, thinners and reducers from the surface coating operations. PM<sub>10</sub> is emitted from the abrasive blasting operations and spray adhesive operations. Control devices include a cooling tower for fume control, bag house, and enclosed abrasive blasting equipment.

This is a five-year permit for a Class II synthetic minor, stationary source. The source is a synthetic minor for HAPs and a true minor for all other pollutants.

R.E. Darling's annual potential to emit amounts from all operations are given in the table below. These numbers are for reference purposes only and are not intended for direct enforcement unless specified otherwise in the permit.

<b>Pollutant</b>	<b>Potential Plant Emissions (tons/yr)</b>	<b>Actual Plant Emissions (tons/yr)</b>
Individual HAPs (TCE only)	9.90	9.90
HAPs (Total)	33.88	18.74
VOC (Total)	33.93	18.83

<b>Potential Emissions from Fuel Burning Equipment (Natural Gas)</b>							
<b>PM<sub>2.5</sub></b>	<b>PM<sub>10</sub></b>	<b>PM</b>	<b>CO</b>	<b>NO<sub>x</sub></b>	<b>SO<sub>2</sub></b>	<b>VOCs</b>	<b>HAPS</b>
0.14	0.14	0.14	1.53	1.82	0.01	0.10	0.03

Affected Emission Source or Process: Class II, Synthetic Minor Source for HAPs and a True Minor Source for all other pollutants.

**All terms and conditions of this permit are Federally Enforceable by the Administrator of the United States Environmental Protection Agency (U.S.EPA) under the Clean Air Act, except as otherwise noted.**

## SPECIFIC CONDITIONS

[References are to Title 17 of the Pima County Code [PCC] unless otherwise noted]

### CATEGORY 1

#### APPLICABILITY

##### **Section I. Statutory Authority**

The Specific Conditions contained in this air quality permit apply to the operations, equipment, and sources provided in the permit application and shall not relieve the Permittee or its subcontractors from compliance with all local, county, state, and federal laws, statutes, and codes or from obtaining permits for other operations or activities when required. [PCC 17.12.010.D & PCC 17.12.165]

##### **Section II. Permitted Facility Sources**

The Specific Conditions apply to the following source categories, affected facilities, equipment, emission sources, installations, activities and operations at the facility.

###### A. National Emission Standard for Hazardous Air Pollutants (NESHAP) Subpart T – National Emission Standards for Halogenated Solvent Cleaning.

(Federally Enforceable Conditions, unless otherwise stated).

1. The provisions of this regulation apply to each individual batch vapor, in-line vapor, in-line cold, and batch cold solvent cleaning machine that uses any solvent containing methylene chloride (CAS No. 75-09-2), perchloroethylene (CAS No. 127-18-4), **trichloroethylene** (CAS No. 79-01-6), 1,1,1-trichloroethane (CAS No. 71-55-6), carbon tetrachloride (CAS No. 56-23-5) or chloroform (CAS No. 67-66-3), or any combination of these halogenated HAP solvents, in a total concentration greater than 5 percent by weight, as a cleaning and/or drying agent. Wipe cleaning activities, such as using a rag containing halogenated solvent or a spray cleaner containing halogenated solvent are not covered under the provisions of this regulation. [40 CFR 63.460(a)]
2. Except as noted in the general provisions to subpart T, the general provisions of subpart T apply to owners or operators of any solvent cleaning machine meeting the applicability criteria of I.A.1 of this Permit. [40 CFR 63.460(b)]
3. Each solvent cleaning machine subject to this regulation that commenced construction or reconstruction after November 29, 1993 shall have achieved compliance with the provisions of this regulation by December 2, 1994. [40 CFR 63.460(c)]

###### B. New and Existing Stationary Source Performance Standards for Surface Coating and Solvent Degrading Activities.

(Locally Enforceable Conditions, unless otherwise stated)

###### C. New and Existing Stationary Source Performance Standards for Fossil-Fuel Fired Industrial and Commercial Equipment (Boilers, Heaters, & Other Equipment, not subject to NSPS).

(Locally Enforceable Conditions, unless otherwise stated)

Proposed Permit

### **Section III. Permit Sections**

The Specific Conditions have been organized into the following permit sections:

Category 1 - General Applicability (This Category)

Category 2 - Facility-Wide Operations

Category 3 - Halogenated Solvent Cleaning

Category 4 - Surface Coating and Solvent Degreasing Activities

Category 5 - Fossil Fuel Fired Industrial and Commercial Equipment (Boilers, Heaters, & Other Equipment)

Category 6 - Specific Applicability Provisions

Category 7 - Fugitive "Dust Control Plan

### **Section IV. Applicability of More Than one standard**

If more than one emission limit or emission standard in this permit is applicable to the same source, the more stringent standard or emission limit shall apply.

[PCC 17.16.010.B]

**[Locally Enforceable Condition]**

**CATEGORY 2**

**FACILITY-WIDE OPERATIONS**

The provisions of this Category apply to facility-wide operations and all sources of air contaminants. All provisions in this Category are locally enforceable unless otherwise noted.

[PCC 17.16.010.B]

**Section I. EMISSION LIMITS AND STANDARDS**

**A. Operating Restrictions**

The Permittee shall comply with the limitations in Category 3, Category 4 and Category 5 of this permit.

[PCC 17.12.350.A.3.a]

**B. General Control Standards**

1. The Permittee shall not cause or permit the planning, construction, installation, erection, modification, use or operation of an emission source which will cause or contribute to a violation of a performance standard in Title 17 of the Pima County Code. [PCC 17.12.020 & PCC 17.16.020.A]
2. The Permittee shall keep complete records of the materials used as fuel for any stationary or portable source of air pollution which burns any material except natural gas. [PCC 17.16.010.C]
3. The Permittee is prohibited from firing high sulfur oil in any stationary or portable source without submitting a revision, as provided in V. of this Category, demonstrating to the satisfaction of the Control Officer, both that sufficient quantities of low sulfur oil are not available for use by the Permittee, and that the Permittee has adequate facilities and contingency plans to ensure that the sulfur dioxide ambient air quality standards will not be violated. For purposes of this paragraph "high sulfur oil" means oil containing 0.90 percent or more by weight of sulfur. Notwithstanding the prohibition to use high sulfur oil, the Specific Conditions contained in this permit may prescribe lower fuel sulfur limits for specific stationary or portable sources.  
[PCC 17.12.185.A.2 & PCC 17.12.190.B]  
**[Federally Enforceable Condition]**
4. Where a stack, vent or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution are discharged to adjoining property, the Control Officer may require the installation of abatement equipment or the alteration of such stack, vent or other outlet by the Permittee thereof to a degree that will adequately reduce or eliminate the discharge of air pollution to adjoining property. [PCC 17.16.020.B]

**C. Materials Handling Standards**

1. The Permittee shall not transport or store VOC's without taking necessary and feasible measures to control evaporation, leakage, or other discharge into the atmosphere. [PCC 17.16.400.A]
2. Materials including solvents or other volatile compounds, paints, acids, alkalies, pesticides, fertilizers and manure shall be processed, stored, used and transported in such a manner and by such means that they will not evaporate, leak, escape or be otherwise discharged into the ambient air so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage or discharge, the installation and use of such control methods, devices, or equipment shall be mandatory. [PCC 17.16.430.F]

#### D. Odor Limiting Standard

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]

#### E. Opacity Standards

Except as otherwise specified in the Specific Conditions of this permit and the Table in Attachment 4, the opacity of all plumes and effluents from all point, non-point, or fugitive emission sources shall not exceed 20% as determined by EPA Reference Method 9, Appendix A, 40 CFR Part 60.

[PCC 17.12.140.C.3, PCC 17.16.040, PCC 17.16.050.B, & PCC 17.16.130.B.1]

***[This condition is Federally Enforceable when opacity is above 40%]***

1. 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]
2. A violation of an opacity standard shall be determined by measuring and recording a set of consecutive, instantaneous opacities, and calculating the arithmetic average of the measurements within the set unless otherwise noted in this permit. 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 as specified in Attachment 4. Sets need not be consecutive in time, and in no case shall two sets overlap. If the average opacity of the set of instantaneous measurements exceeds the maximum allowed by any rule, this shall constitute a violation. [PCC 17.16.040.A.2]
3. 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]
4. When the presence of uncombined water is the only reason for failure of a source to otherwise meet the requirements of sections I.E and I.F of this Category shall not apply. [PCC 17.16.040.B]

#### F. Visibility Limiting Standard

[PCC 17.16.050]

1. 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 in accordance with the fugitive dust control plan in Section 5 of this permit.
2. 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 in accordance with the fugitive dust control plan in Section 5 of this Permit. 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.
  - a. Section I.F.2 of this Category 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.
  - b. Section I.F.2 of this Category shall not apply to the generation of airborne particulate matter from undisturbed land.

### **G. Asbestos Requirements for Demolition and Renovation Activities**

The Permittee shall not allow or commence demolition or renovation of any NESHAP facility, as defined in 40 CFR Part 61, Subpart M, National Emission Standards for Hazardous Air Pollutants – Asbestos, without first obtaining an activity permit from the Control Officer. Should this stationary source, pursuant to 40 CFR Part 61, Subpart M, become subject to asbestos regulations when conducting any renovation or demolition at this premises, then the Permittee or operator shall submit proper notification as described in 40 CFR Part 61, 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.

[PCC 17.12.475.A & 40 CFR 61, Subpart M]

## **Section II. MONITORING REQUIREMENTS**

[PCC 17.12.185.A.3]

### **A. Visible Emissions (VE)**

If at any time, or while conducting an opacity check required by the Specific Conditions of this permit, the Permittee sees any plume or effluent from a facility source, that on an instantaneous basis, appears to exceed the opacity limit, or diffuse beyond the property boundary line, the Permittee shall investigate the source of the emissions and take corrective action, if required. If the plume persists or the activity or operation which is causing or contributing to the emissions cannot be corrected or halted, the Permittee shall, when practicable, make a visual determination of the opacity in accordance with section I.E of this Category. If the VE determination exceeds the applicable opacity limit, or the emissions diffuse beyond the property boundary line, the Permittee shall report this as an excess emission in accordance with section IV.A of this Category.

[PCC 17.16.040]

### **B. Additional Monitoring Requirement**

Except as otherwise contained in the Specific Conditions of this permit, additional monitoring for compliance with the facility-wide standards in sections I.A through G of this Category shall not be necessary. The Control Officer may require the Permittee to conduct additional monitoring if the Control Officer has reasonable cause to believe a violation of the standards has been committed.

## **Section III. RECORDKEEPING REQUIREMENTS**

### **A. Monitoring Records**

The Permittee shall maintain records of required monitoring information. Records shall include at a minimum:

[PCC 17.12.184.A.4.a]

1. The date, time, and the place defined in the permit requiring the measurement, sampling, inspection, or observation;
2. The name of the person conducting the measurement, sampling, inspection or observation;
3. The particular piece of equipment, process, or area being measured, sampled, inspected or observed including a description of the operating conditions and monitoring techniques or methods used as applicable; and,
4. The results of the measurement, sampling, inspection or observation including any discrepancy or excess emissions. If there are any monitoring discrepancies or excess emissions, the record shall include the corrective action taken.

**B. Record Retention**

[PCC 17.12.185.4.b]

The Permittee shall retain records of all required monitoring and support information for at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, and copies of all reports required by the permit.

**C. Recordkeeping for Compliance Determinations**

The Permittee shall retain a copy of the permit onsite including all required monitoring records and support information for review by the Control Officer. In addition, all equipment identified in the permit equipment list shall be marked with a unique, clearly visible, and accessible ID to identify the piece of equipment. The Permittee shall be considered in compliance by demonstrating that sufficient information on the equipment and facility operations is periodically collected, recorded, and maintained to assure that the compliance status of any specific condition of this permit can be readily ascertained at any time.

[PCC 17.12.080, &amp; PCC 17.24.020.A]

**Section IV. REPORTING REQUIREMENTS**

[PCC 17.12.185.A.5]

**A. Excess Emissions Reporting**

The Permittee shall report to the Control Officer any emissions in excess of the limits established by this permit in accordance with section I.B of the General Conditions.

[PCC 17.12.040]

**B. Emissions Inventory Reporting:**

[PCC 17.12.320]

When requested by the Control Officer, the Permittee shall complete and submit an annual emissions inventory questionnaire. The questionnaire is due by March 31 or ninety days after the Control Officer makes request and inventory form available, whichever occurs later, and shall include emission information for the previous calendar year. The questionnaire shall be on a form provided by or approved by the Control Officer and shall include the information required by PCC 17.12.320.

**C. Certification of Truth Accuracy and Completeness**

[PCC 17.12.165.H]

All reports required by this permit shall contain certification by a responsible official of truth, accuracy and completeness. The certification shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

**Section V. FACILITY CHANGES****A. Permit Revision Application**

Before installing additional emission sources, modifying existing emission sources, switching fuels, or changing the method of operation at the facility such that the changes increase actual emissions more than 10% of the major source threshold for any conventional pollutant, the Permittee shall, if applicable, apply for the appropriate revision in accordance with PCC 17.12.235, PCC 17.12.255, or PCC 17.12.260.

[PCC 17.12.240.C.3, PCC 17.12.235, PCC 17.12.255, PCC 17.12.260]

**B. Notification**

For facility changes that do not require revision, the Permittee may make the changes if written notice is provided to the Control Officer in advance of the changes in accordance with PCC 17.12.240.C

[PCC 17.12.240.C]

### C. Recordkeeping Log

The Permittee shall maintain a log of other facility changes that do not require revision or notice in accordance with PCC 17.12.240.B. [PCC17.12.240.B]

## Section VI. TESTING REQUIREMENTS

[PCC 17.12.045, PCC 17.12.050 & PCC 17.20.010]

For purposes of demonstrating compliance, these test methods shall be used, provided that for the purpose of establishing whether or not the facility has violated or is in violation of any provision of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable federal requirements if the appropriate performance or compliance procedures or methods had been performed. Unless otherwise noted, the following test methods and standards are from 40 CFR Part 60, Appendix A or incorporated by reference in 40 CFR §60.17.

- A. When required, EPA Test Method 9 shall be used to monitor compliance with the opacity standards identified in this Permit. [PCC 17.12.045.B]
- B. When required, the Permittee may submit an alternate and equivalent test method(s) that is listed in 40 CFR Subpart 60, Appendix A, to the Control Officer in a test plan, for approval by the Control Officer.
- C. Documentation, such as invoices or statements from the fuel supplier, showing that the fuel sulfur content is below the applicable standards shall be an acceptable means to demonstrate compliance with fuel sulfur limitations identified in this Permit. If otherwise required or when requested by the Control Officer, the fuel sulfur content of fuels shall be determined using ASTM D-129-91 or an equivalent for liquid fuels, and ASTM D0172-90 or an equivalent for gaseous fuels.
- D. Except as provided in this Category, should the Permittee desire to test or be required to test to demonstrate compliance with the standards contained in this permit, the Permittee shall contact the Control Officer for test methods and guidelines.

## CATEGORY 3

### National Emission Standard for Hazardous Air Pollutants (NESHAP) Subpart T – National Emission Standards for Halogenated Solvent Cleaning

<http://www3.epa.gov/ttn/atw/degrea/halopg.html>

#### **Section I. Designation of Source**

The halogenated solvent cleaner NESHAP rule applies to the solvent cleaning machine listed in Table 1, Attachment 2 of this Permit.

#### **Section II. Definitions**

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

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

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

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

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

**Batch cleaning machine** means a solvent cleaning machine in which individual parts or a set of parts move through the entire cleaning cycle before new parts are introduced into the solvent cleaning machine. An open-top vapor cleaning machine is a type of batch cleaning machine. A solvent cleaning machine, such as a ferris wheel or a cross-rod degreaser, that clean multiple batch loads simultaneously and are manually loaded are batch cleaning machines.

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

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

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

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

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

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

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

**Cover** means a lid, top, or portal cover that shields the solvent cleaning machine openings from air disturbances when in place and is designed to be easily opened and closed without disturbing the vapor zone. Air disturbances include, but are not limited to, lip exhausts, ventilation fans, and general room drafts. Types of covers include, but are not limited to, sliding, biparting, and rolltop covers.

**Cross-rod solvent cleaning machine** means a batch solvent cleaning machine in which parts baskets are suspended from “cross-rods” as they are moved through the machine. In a cross-rod cleaning machine, parts are loaded semi-continuously, and enter and exit the machine from a single portal.

**Downtime mode** means the time period when a solvent cleaning machine is not cleaning parts and the sump heating coils, if present, are turned off.

**Dwell** means the technique of holding parts within the freeboard area but above the vapor zone of the solvent cleaning machine. Dwell occurs after cleaning to allow solvent to drain from the parts or parts baskets back into the solvent cleaning machine.

**Dwell time** means the required minimum length of time that a part must dwell, as determined by §63.465(d).

**Emissions** means halogenated hazardous air pollutant solvent consumed (i.e., halogenated hazardous air pollutant solvent added to the machine) minus the liquid halogenated hazardous air pollutant solvent removed from the machine and the halogenated hazardous air pollutant solvent removed from the machine in the solid waste.

**Existing** means any solvent cleaning machine the construction or reconstruction of which was commenced on or before November 29, 1993. A machine, the construction or reconstruction of which was commenced on or before November 29, 1993, but that did not meet the definition of a solvent cleaning machine on December 2, 1994, because it did not use halogenated HAP solvent liquid or vapor covered under this subpart to remove soils, becomes an existing source when it commences to use such liquid or vapor. A solvent cleaning machine moved within a contiguous facility or to another facility under the same ownership, constitutes an existing machine.

**Freeboard area** means; for a batch cleaning machine, the area within the solvent cleaning machine that extends from the solvent/air interface to the top of the solvent cleaning machine; for an in-line cleaning machine, it is the area within the solvent cleaning machine that extends from the solvent/air interface to the bottom of the entrance or exit opening, whichever is lower.

**Freeboard height** means; for a batch cleaning machine, the distance from the solvent/air interface, as measured during the idling mode, to the top of the cleaning machine; for an in-line cleaning machine, it is the distance from the solvent/air interface to the bottom of the entrance or exit opening, whichever is lower, as measured during the idling mode.

**Freeboard ratio** means the ratio of the solvent cleaning machine freeboard height to the smaller interior dimension (length, width, or diameter) of the solvent cleaning machine.

**Freeboard refrigeration device (also called a chiller)** means a set of secondary coils mounted in the freeboard area that carries a refrigerant or other chilled substance to provide a chilled air blanket above the solvent vapor. A primary condenser capable of meeting the requirements of §63.463(e)(2)(i) is defined as both a freeboard refrigeration device and a primary condenser for the purposes of these standards.

**Halogenated hazardous air pollutant solvent or halogenated HAP solvent** means methylene chloride (CAS No. 75-09-2), perchloroethylene (CAS No. 127-18-4), **trichloroethylene** (CAS No. 79-01-6), 1,1,1-trichloroethane (CAS No. 71-55-6), carbon tetrachloride (CAS No. 56-23-5), and chloroform (CAS No. 67-66-3).

**Hoist** means a mechanical device that carries the parts basket and the parts to be cleaned from the loading area into the solvent cleaning machine and to the unloading area at a controlled speed. A hoist may be operated by controls or may be programmed to cycle parts through the cleaning cycle automatically.

**Idling mode** means the time period when a solvent cleaning machine is not actively cleaning parts and the sump heating coils, if present, are turned on.

**Idling-mode cover** means any cover or solvent cleaning machine design that allows the cover to shield the cleaning machine openings during the idling mode. A cover that meets this definition can also be used as a working-mode cover if that definition is also met.

**Immersion cold cleaning machine** means a cold cleaning machine in which the parts are immersed in the solvent when being cleaned. A remote reservoir cold cleaning machine that is also an immersion cold cleaning machine is considered an immersion cold cleaning machine for purposes of this subpart.

**In-line cleaning machine or continuous cleaning machine** means a solvent cleaning machine that uses an automated parts handling system, typically a conveyor, to automatically provide a continuous supply of parts to be cleaned. These units are fully enclosed except for the conveyor inlet and exit portals. In-line cleaning machines can be either cold or vapor cleaning machines.

**Leak-proof coupling** means a threaded or other type of coupling that prevents solvents from leaking while filling or draining solvent to and from the solvent cleaning machine.

**Lip exhaust** means a device installed at the top of the opening of a solvent cleaning machine that draws in air and solvent vapor from the freeboard area and ducts the air and vapor away from the solvent cleaning area.

**Monthly reporting period** means any calendar month in which the Permittee of a solvent cleaning machine is required to calculate and report the solvent emissions from each solvent cleaning machine.

**New** means any solvent cleaning machine the construction or reconstruction of which is commenced after November 29, 1993.

**Open-top vapor cleaning machine** means a batch solvent cleaning machine that has its upper surface open to the air and boils solvent to create solvent vapor used to clean and/or dry parts.

**Part** means any object that is cleaned in a solvent cleaning machine. Parts include, but are not limited to, discrete parts, assemblies, sets of parts, and parts cleaned in a continuous web cleaning machine (i.e., continuous sheets of metal, film).

**Primary condenser** means a series of circumferential cooling coils on a vapor cleaning machine through which a chilled substance is circulated or recirculated to provide continuous condensation of rising solvent vapors and, thereby, create a concentrated solvent vapor zone.

**Reduced room draft** means decreasing the flow or movement of air across the top of the freeboard area of the solvent cleaning machine to meet the specifications of §63.463(e)(2)(ii). Methods of achieving a reduced room draft include, but are not limited to, redirecting fans and/or air vents to not blow across the cleaning machine, moving the cleaning machine to a corner where there is less room draft, and constructing a partial or complete enclosure around the cleaning machine.

**Remote reservoir cold cleaning machine** means any device in which liquid solvent is pumped to a sink-like work area that drains solvent back into an enclosed container while parts are being cleaned, allowing no solvent to pool in the work area.

**Remote reservoir continuous web cleaning machine** means a continuous web cleaning machine in which there is no exposed solvent sump. In these units, the solvent is pumped from an enclosed chamber and is typically applied to the continuous web part through a nozzle or series of nozzles. The solvent then drains from the part and is collected and recycled through the machine, allowing no solvent to pool in the work or cleaning area.

**Soils** means contaminants that are removed from the parts being cleaned. Soils include, but are not limited to, grease, oils, waxes, metal chips, carbon deposits, fluxes, and tars.

**Solvent/air interface** means, for a vapor cleaning machine, the location of contact between the concentrated solvent vapor layer and the air. This location of contact is defined as the mid-line height of the primary condenser coils. For a cold cleaning machine, it is the location of contact between the liquid solvent and the air.

**Solvent/air interface area** means; for a vapor cleaning machine, the surface area of the solvent vapor zone that is exposed to the air; for an in-line cleaning machine, it is the total surface area of all the sumps; for a cold cleaning machine, it is the surface area of the liquid solvent that is exposed to the air.

**Solvent cleaning machine** means any device or piece of equipment that uses halogenated HAP solvent liquid or vapor to remove soils from the surfaces of materials. Types of solvent cleaning machines include, but are not limited to, batch vapor, in-line vapor, in-line cold, and batch cold solvent cleaning machines. Buckets, pails, and beakers with capacities of 7.6 liters (2 gallons) or less are not considered solvent cleaning machines.

**Solvent vapor zone** means; for a vapor cleaning machine, the area that extends from the liquid solvent surface to the level that solvent vapor is condensed. This condensation level is defined as the midline height of the primary condenser coils.

**Squeegee system** means a system that uses a series of pliable surfaces to remove the solvent film from the surfaces of the continuous web part. These pliable surfaces, called squeegees, are typically made of rubber or plastic media, and need to be periodically replaced to ensure continued proper function.

**Sump** means the part of a solvent cleaning machine where the liquid solvent is located.

**Sump heater coils** means the heating system on a cleaning machine that uses steam, electricity, or hot water to heat or boil the liquid solvent.

**Superheated part technology** means a system that is part of the continuous web process that heats the continuous web part either directly or indirectly to a temperature above the boiling point of the cleaning solvent. This could include a process step, such as a tooling die that heats the part as it is processed, as long as the part remains superheated through the cleaning machine.

**Superheated vapor system** means a system that heats the solvent vapor, either passively or actively, to a temperature above the solvent's boiling point. Parts are held in the superheated vapor before exiting the machine to evaporate the liquid solvent on them. Hot vapor recycle is an example of a superheated vapor system.

**Vapor cleaning machine** means a batch or in-line solvent cleaning machine that boils liquid solvent generating solvent vapor that is used as a part of the cleaning or drying cycle.

**Water layer** means a layer of water that floats above the denser solvent and provides control of solvent emissions. In many cases, the solvent used in batch cold cleaning machines is sold containing the appropriate amount of water to create a water cover.

**Working mode** means the time period when the solvent cleaning machine is actively cleaning parts.

**Working-mode cover** means any cover or solvent cleaning machine design that allows the cover to shield the cleaning machine openings from outside air disturbances while parts are being cleaned in the cleaning machine. A cover that is used during the working mode is opened only during parts entry and removal. A cover that meets this definition can also be used as an idling-mode cover if that definition is also met.

### Section III. Synthetic Minor Limitation

The Permittee shall not use more than 19,800 (lbs) per year (1636 gals) of Trichloroethylene (TCE) in the solvent vapor degreaser and parts cleaning process combined per 12-month period. [PCC 17.12.190.B]

[Voluntarily Accepted Condition and Material Permit Condition]

### Section IV. Batch Vapor Cleaning Machine Standards

[40 CFR 63.463]

A. Except as provided in section V ([Alternate Standards](#)) of this category for all cleaning machines, the Permittee of a solvent cleaning machine subject to the provisions of this Section shall ensure that each existing or new batch vapor or in-line solvent cleaning machine subject to the provisions of this Category conforms to the **design requirements** specified in paragraphs sections A.1 through 7 of this Category. [40 CFR 63.463(a)]

1. Each cleaning machine shall be designed or operated to meet the **control equipment or technique requirements** in paragraph A.1(i) or A.1.(ii) of this Section.
  - (i) An idling and downtime mode cover, as described in section [IV.C.\(1\)\(i\)](#) of this category, that may be readily opened or closed, that completely covers the cleaning machine openings when in place, and is free of cracks, holes, and other defects.
  - (ii) A reduced room draft as described in section [IV.D.\(2\)\(ii\)](#) of this Category.
2. Each cleaning machine shall have a freeboard ratio of 0.75 or greater.
3. Each cleaning machine shall have an automated parts handling system capable of moving parts or parts baskets at a speed of 3.4 meters per minute (11 feet per minute) or less from the initial loading of parts through removal of cleaned parts.
4. Each vapor cleaning machine shall be equipped with a device that shuts off the sump heat if the sump liquid solvent level drops to the sump heater coils. This requirement does not apply to a vapor cleaning machine that uses steam to heat the solvent.

5. Each vapor cleaning machine shall be equipped with a vapor level control device that shuts off sump heat if the vapor level in the vapor cleaning machine rises above the height of the primary condenser.
  6. Each vapor cleaning machine shall have a primary condenser.
  7. Each cleaning machine that uses a lip exhaust shall be designed and operated to route all collected solvent vapors through a properly operated and maintained carbon adsorber that meets the requirements of paragraph [IV.D.2.\(vii\)](#) of this Category.
- B. Except as provided in section V ([Alternate Standards](#)) of this category, the Permittee of an existing or new batch vapor cleaning machine shall comply with either paragraph IV.B.1 or IV.B.2 of this Section. [40 CFR 63.463(b)]
1. Each owner or operator of a batch vapor cleaning machine with a solvent/air interface area of 1.21 square meters (13 square feet) or less shall comply with the requirements specified in either paragraph B.1.(i) or B.1.(ii) of this Section. [40 CFR 63.463(b)(1)]
    - (i) Employ one of the control combinations listed in table 1 of this subpart or other equivalent methods of control as determined using the procedure in [section X](#) of this Category (Equivalent Methods of Control). [40 CFR 63.463(b)(1)(i)]

**TABLE 1**

**Control Combinations for Batch Vapor Solvent Cleaning Machines with a Solvent/Air Interface Area of 1.21 square meters (13 square feet) or less**

Option	Control combinations
1	Working-mode cover, freeboard ratio of 1.0, superheated vapor.
2	Freeboard refrigeration device, superheated vapor
3	Working-mode cover, freeboard refrigeration device
4	Reduced room draft, freeboard ratio of 1.0, superheated vapor
5	Freeboard refrigeration device, reduced room draft
6	Freeboard refrigeration device, freeboard ratio of 1.0
7	Freeboard refrigeration device, dwell
8	Reduced room draft, dwell, freeboard ratio of 1.0
9	Freeboard refrigeration device, carbon adsorber
10	Freeboard ratio of 1.0, superheated vapor, carbon adsorber

- (ii) Demonstrate that their solvent cleaning machine can achieve and maintain an idling emission limit of 0.22 kilograms per hour per square meter (0.045 pounds per hour per square foot) of solvent/air interface area as determined using the procedures in [section VI](#) (Test Methods) and Appendix A to this part. [40 CFR 63.463(b)(1)(ii)]

2. Each Permittee of a batch vapor cleaning machine with a solvent/air interface area greater than 1.21 square meters (13 square feet) shall comply with the requirements specified in either paragraph B.2.(i) or B.2.(ii) of this Section. [40 CFR 63.463(b)(2)]
  - (i). Employ one of the control combinations listed in Table 2 of this subpart or other equivalent methods of control as determined using the procedure in [section X](#) of this Category (Equivalent Methods of Control). [40 CFR 63.463(b)(2)(i)]

**TABLE 2**

**Control Combinations for Batch Vapor Solvent Cleaning Machines with a Solvent/Air Interface Area Greater Than 1.21 square meters (13 square feet)**

Option	Control combinations
1	Freeboard refrigeration device, freeboard ratio of 1.0, superheated vapor
2	Dwell, freeboard refrigeration device, reduced room draft
3	Working-mode cover, freeboard refrigeration device, superheated vapor.
4	Freeboard ratio of 1.0, reduced room draft, superheated vapor.
5	Freeboard refrigeration device, reduced room draft, superheated vapor.
6	Freeboard refrigeration device, reduced room draft, freeboard ratio of 1.0.
7	Freeboard refrigeration device, superheated vapor, carbon adsorber.

- (ii) Demonstrate that their solvent cleaning machine can achieve and maintain an idling emission limit of 0.22 kilograms per hour per square meter (0.045 pounds per hour per square foot) of solvent/air interface area as determined using the procedures in 40 CFR §63.465(a) and Appendix A of this part. [40 CFR 63.463(b)(2)(ii)]
- C. Except as provided in [section V](#) (Alternate Standards) of this category for all cleaning machines, the Permittee of an existing or new batch vapor solvent cleaning machine shall meet all of the following required **work and operational practices** specified in paragraphs C.1 through 12 of this Section as applicable. [40 CFR 63.463(d)]
1. Control air disturbances across the cleaning machine opening(s) by incorporating the control equipment or techniques in paragraph C.1.(i) or C.1.(ii) of this Section. [40 CFR 63.463(d)(1)]
    - (i) Cover(s) to each solvent cleaning machine shall be in place during the idling mode, and during the downtime mode unless either the solvent has been removed from the machine or maintenance or monitoring is being performed that requires the cover(s) to not be in place.
    - (ii) A reduced room draft as described in section [IV.D.\(2\)\(ii\)](#) of this Category.
  2. The parts baskets or the parts being cleaned in an open-top batch vapor cleaning machine shall not occupy more than 50 percent of the solvent/air interface area unless the parts baskets or parts are introduced at a speed of 0.9 meters per minute (3 feet per minute) or less. [40 CFR 63.463(d)(2)]
  3. Any spraying operations shall be done within the vapor zone or within a section of the solvent cleaning machine that is not directly exposed to the ambient air (i.e., a baffled or enclosed area of the solvent cleaning machine). [40 CFR 63.463(d)(3)]

4. Parts shall be oriented so that the solvent drains from them freely. Parts having cavities or blind holes shall be tipped or rotated before being removed from any solvent cleaning machine unless an equally effective approach has been approved by the Control Officer. [40 CFR 63.463(d)(4)]
  5. Parts baskets or parts shall not be removed from any solvent cleaning machine until dripping has stopped. [40 CFR 63.463(d)(5)]
  6. During startup of each vapor cleaning machine, the primary condenser shall be turned on before the sump heater. [40 CFR 63.463(d)(6)]
  7. During shutdown of each vapor cleaning machine, the sump heater shall be turned off and the solvent vapor layer allowed to collapse before the primary condenser is turned off. [40 CFR 63.463(d)(7)]
  8. When solvent is added or drained from any solvent cleaning machine, the solvent shall be transferred using threaded or other leak-proof couplings and the end of the pipe in the solvent sump shall be located beneath the liquid solvent surface. [40 CFR 63.463(d)(8)]
  9. Each solvent cleaning machine and associated controls shall be maintained as recommended by the manufacturers of the equipment or using alternative maintenance practices that have been demonstrated to the Administrator's satisfaction to achieve the same or better results as those recommended by the manufacturer. [40 CFR 63.463(d)(9)]
  10. Each operator of a solvent cleaning machine shall complete and pass the applicable sections of the test of **solvent cleaning procedures** in Appendix A of 40 CFR 63 if requested during an inspection by the Control Officer.
  11. Waste solvent, still bottoms, and sump bottoms shall be collected and stored in closed containers. The closed containers may contain a device that would allow pressure relief, but would not allow liquid solvent to drain from the container.
  12. Sponges, fabric, wood, and paper products shall not be cleaned.
- D. Each owner or operator of a solvent cleaning machine complying with [section IV.B](#) of this Category shall comply with the requirements specified in paragraphs D.1 through 4 of this Section. [40 CFR 63.463(e)]
1. Conduct monitoring of each control device used to comply with [section IV](#) of this Category as provided in [section VII](#) (Monitoring Procedures) of this Category.
  2. Determine during each monitoring period whether each control device used to comply with these standards meets the requirements specified in paragraphs D.2.(i) through (xi) of this Section.
    - (i) If a freeboard refrigeration device is used to comply with these standards, the Permittee shall ensure that the chilled air blanket temperature (in °F), measured at the center of the air blanket, is no greater than 30 percent of the solvent's boiling point.
    - (ii) If a reduced room draft is used to comply with these standards, the Permittee shall comply with the requirements specified in paragraphs D.2.(ii)(A) and D.2.(ii)(B) of this Section. [40 CFR 63.463(e)(2)(ii)]
      - (A) Ensure that the flow or movement of air across the top of the freeboard area of the solvent cleaning machine or within the solvent cleaning machine enclosure does not exceed 15.2 meters per minute (50 feet per minute) at any time as measured using the procedures in [section VII.D](#) (Monitoring Procedures).

- (B) Establish and maintain the operating conditions under which the wind speed was demonstrated to be 15.2 meters per minute (50 feet per minute) or less as described in [section VII.D](#) (Monitoring Procedures).
- (iii) If a working-mode cover is used to comply with these standards, the Permittee shall comply with the requirements specified in paragraphs [IV.D.2.\(iii\)\(A\)](#) and [IV.D.2.\(iii\)\(B\)](#) of this Category. [40 CFR 63.463(e)(2)(iii)]
  - (A) Ensure that the cover opens only for part entrance and removal and completely covers the cleaning machine openings when closed.
  - (B) Ensure that the working-mode cover is maintained free of cracks, holes, and other defects.
- (iv) If an idling-mode cover is used to comply with these standards, the Permittee shall comply with the requirements specified in paragraphs [IV.D.2.\(iv\)\(A\)](#) and [IV.D.2.\(iv\)\(B\)](#) of this Category.
  - (A) Ensure that the cover is in place whenever parts are not in the solvent cleaning machine and completely covers the cleaning machine openings when in place.
  - (B) Ensure that the idling-mode cover is maintained free of cracks, holes, and other defects.
- (v) If a dwell is used to comply with these standards, the Permittee shall comply with the requirements specified in paragraphs [IV.D.2.\(v\)\(A\)](#) and [IV.D.2.\(v\)\(B\)](#) of this Category.
  - (A) Determine the appropriate dwell time for each type of part or parts basket, or determine the maximum dwell time using the most complex part type or parts basket, as described in [section VI.D](#) of this Category.
  - (B) Ensure that, after cleaning, each part is held in the solvent cleaning machine freeboard area above the vapor zone for the dwell time determined for that particular part or parts basket, or for the maximum dwell time determined using the most complex part type or parts basket.
- (vi) If a superheated vapor system is used to comply with these standards, the Permittee shall comply with the requirements specified in paragraphs D.2.(vi)(A) through D.2.(vi)(C) of this Section (below).
  - (A) Ensure that the temperature of the solvent vapor at the center of the superheated vapor zone is at least 10 °F above the solvent's boiling point.
  - (B) Ensure that the manufacturer's specifications for determining the minimum proper dwell time within the superheated vapor system is followed.
  - (C) Ensure that parts remain within the superheated vapor for at least the minimum proper dwell time.

- (vii) If a carbon adsorber in conjunction with a lip exhaust or other exhaust internal to the cleaning machine is used to comply with these standards, the Permittee shall comply with the following requirements:
    - (A) Ensure that the concentration of organic solvent in the exhaust from this device does not exceed 100 parts per million of any halogenated HAP compound as measured using the procedure in [section VII.E](#) of this Category. If the halogenated HAP solvent concentration in the carbon adsorber exhaust exceeds 100 parts per million, the Permittee shall adjust the desorption schedule or replace the disposable canister, if not a regenerative system, so that the exhaust concentration of halogenated HAP solvent is brought below 100 parts per million.
    - (B) Ensure that the carbon adsorber bed is not bypassed during desorption.
    - (C) Ensure that the lip exhaust is located above the solvent cleaning machine cover so that the cover closes below the lip exhaust level.
  - 3. If any of the requirements of [section IV.D.2.](#) of this Category are not met, determine whether an exceedance has occurred using the criteria in [section IV.D.3.\(i\) and IV.D.3.\(ii\)](#) of this Category.
    - (i) An exceedance has occurred if the requirements of section [IV.D.2.\(ii\)\(B\)](#), [IV.D.2.\(iii\)\(A\)](#), [IV.D.2.\(iv\)\(A\)](#), [IV.D.2.\(v\)](#), [IV.D.2.\(vi\)\(B\)](#), [IV.D.2.\(vi\)\(C\)](#), [IV.D.2.\(vii\)\(B\)](#), or [IV.D.2.\(vii\)\(C\)](#) of this Category have not been met.
    - (ii) An exceedance has occurred if the requirements of section [IV.D.2.\(i\)](#), [IV.D.2.\(ii\)\(A\)](#), [IV.D.2.\(iii\)\(B\)](#), [IV.D.2.\(iv\)\(B\)](#), [IV.D.2.\(vi\)\(A\)](#), or [IV.D.2.\(vii\)\(A\)](#) of this Category have not been met and are not corrected within 15 days of detection. Adjustments or repairs shall be made to the solvent cleaning system or control device to reestablish required levels. The parameter must be reassured immediately upon adjustment or repair and demonstrated to be within required limits.
  - 4. The owner or operator shall report all exceedances and all corrections and adjustments made to avoid an exceedance as specified in section [IV.H](#) (Reporting Requirements) of this Category.
- E. Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the idling emission limit standards in section [IV.B.1.\(ii\)](#), [IV.B.2.\(ii\)](#) of this Category shall comply with the requirements specified in paragraphs IV.E.1 through IV.E.5 of this Category (below). [40 CFR 63.463(f)]
- 1. Conduct an initial performance test to comply with the requirements specified in paragraphs IV.E.1.(i) and IV.E.1.(ii) of this Category (below).
    - (i) Demonstrate compliance with the applicable idling emission limit.
    - (ii) Establish parameters that will be monitored to demonstrate compliance. If a control device is used that is listed in section [IV.D.2](#) of this Category, then the requirements for that control device as listed in section [IV.D.2](#) of this Category shall be used unless the owner or operator can demonstrate to the Control Officers satisfaction that an alternative strategy is equally effective.
  - 2. Conduct the periodic monitoring of the parameters used to demonstrate compliance as described in section [VII.F](#) of this Category.
  - 3. Operate the solvent cleaning machine within parameters identified in the initial performance test.

4. If any of the requirements in section [IV.E.1](#) through [IV.E.3](#) of this Category are not met, determine whether an exceedance has occurred using the criteria in paragraphs [IV.E.4.\(i\)](#) and [IV.E.4.\(ii\)](#) of this Category (over page).
  - (i) If using a control listed in paragraph [IV.D](#) of this Category, the owner or operator shall comply with the appropriate parameter values in paragraph [IV.D.2](#) and the exceedance delineations in paragraphs D.3(i) and D.3(ii) of this Category.
  - (ii) If using a control not listed in paragraph [IV.D](#) of this Category, the Permittee shall indicate whether the exceedance of the parameters that are monitored to determine the proper functioning of this control would be classified as an immediate exceedance or whether a 15 day repair period would be allowed. This information must be submitted to the Control Officer for approval.
5. The Permittee shall report all exceedances and all corrections and adjustments made to avoid an exceedance as specified in section [IX.H](#) (Reporting Requirements) of this Category.

**Section V. Alternative Standards.**

- A. As an alternative to meeting the requirements in [section IV](#) (Batch Vapor Cleaning Machine Standards), the Permittee of a batch vapor solvent cleaning machine can elect to comply with the requirements of this Section V. A Permittee of a solvent cleaning machine who elects to comply with this Section shall comply with the requirements specified in either paragraph A.1 or A.2 of this Section.

[40 CFR 63.464(a)]

1. If the cleaning machine has a solvent/air interface, as defined in [section II](#) (Definitions) of this Category, the owner or operator shall comply with the requirements specified in paragraphs (a)(1)(i) and (a)(1)(ii) of this Section.
  - (i) Maintain a log of solvent additions and deletions for each solvent cleaning machine.
  - (ii) Ensure that the emissions from each solvent cleaning machine are equal to or less than the applicable emission limit presented in Table 5 of this Category as determined using the procedures in section [VI.B.](#) and [IV.C.](#) of this Category.

**TABLE 5**  
**EMISSION LIMITS FOR BATCH VAPOR SOLVENT CLEANING MACHINES**  
**WITH A SOLVENT/AIR INTERFACE**

Solvent cleaning machine	3-month rolling average monthly emission limit (kilograms/square meters/month)
Batch vapor solvent cleaning machines	150
Existing in-line solvent cleaning machines	153
New in-line solvent cleaning machines	99

2. If the cleaning machine is a batch vapor cleaning machine and does not have a solvent/air interface, the owner or operator shall comply with the requirements specified in paragraphs V.A.2(i) and V.A.2.(ii) of this Category.
  - (i) Maintain a log of solvent additions and deletions for each solvent cleaning machine.
  - (ii) Ensure that the emissions from each solvent cleaning machine are equal to or less than the appropriate limits as described in paragraphs V.A.2.(ii)(A) and V.A.2.(ii)(B) of this Section (over page).
    - (A) For cleaning machines with a cleaning capacity, as reported in section [IX.D of this Category](#), that is less than or equal to 2.95 cubic meters, the emission limit shall be determined using Table 6 or Equation 1 of this Category. If using Table 6, and the cleaning capacity of the cleaning machine falls between two cleaning capacity sizes, then the lower of the two emission limits applies.
    - (B) For cleaning machines with a cleaning capacity as reported in section [IX.D of this Category](#), that is greater than 2.95 cubic meters, the emission limit shall be determined using Equation 1.

$$EL = 330 \times (\text{Vol}) \quad (\text{Equation 1})$$

where:

EL = the 3-month rolling average monthly emission limit (kilograms/month).

- B. Each owner or operator of a batch vapor solvent cleaning machine complying with [section V](#) (Alternative Standards) of this Category shall demonstrate compliance with the applicable 3-month rolling average monthly emission limit on a monthly basis as described in section [VI.B.](#) and [VI.C](#) (Test Methods) of this Category.
- C. If the applicable 3-month rolling average emission limit is not met, an exceedance has occurred. All exceedances shall be reported as required in [section IX.H.](#) (Reporting Requirements) of this Category.

**TABLE 6**

**EMISSION LIMITS FOR CLEANING MACHINES WITHOUT A SOLVENT/AIR INTERFACE**

Cleaning capacity (cubic meters)	3-month rolling average monthly emission limit (kilograms/month)	Cleaning capacity (cubic meters)	3-month rolling average monthly emission limit (kilograms/month)
0.00	0	1.50	421
0.05	55	1.55	429
0.10	83	1.60	438
0.15	106	1.65	446
0.20	126	1.70	454
0.25	144	1.75	462
0.30	160	1.80	470
0.35	176	1.85	477
0.40	190	1.90	485
0.45	204	1.95	493
0.50	218	2.00	500
0.55	231	2.05	508
0.60	243	2.10	515
0.65	255	2.15	522
0.70	266	2.20	530
0.75	278	2.25	537
0.80	289	2.30	544
0.85	299	2.35	551
0.90	310	2.40	558
0.95	320	2.45	565
1.00	330	2.50	572
1.05	340	2.55	579
1.10	349	2.60	585
1.15	359	2.65	592
1.20	368	2.70	599
1.25	377	2.75	605
1.30	386	2.80	612
1.35	395	2.85	619
1.40	404	2.90	625
1.45	412	2.95	632

**Vol = the cleaning capacity of the solvent cleaning machine (cubic meters).**

**Section VI. Test Methods**

- A. Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with an idling emission limit standard in section [IV.B.1.\(ii\)](#) or section [IV.B.\(2\)\(ii\)](#) shall determine the idling emission rate of the solvent cleaning machine using Reference Method 307 in Appendix A of this part. [40 CFR 63.465(a)]
- B. Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with [section V](#) (Alternative Standards) of this Category shall, on the first operating day of every month ensure that the solvent cleaning machine system contains only clean liquid solvent. This includes, but is not limited to, fresh unused solvent, recycled solvent, and used solvent that has been cleaned of soils. A fill line must be indicated during the first month the measurements are made. The solvent level within the machine must be returned to the same fill-line each month, immediately prior to calculating monthly emissions as specified in paragraph C of this Section. The solvent cleaning machine does not have to be emptied and filled with fresh unused solvent prior to the calculations. [40 CFR 63.465(b)]
- C. Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with [section V](#) (Alternative Standards) shall, on the first operating day of the month, comply with the requirements specified in paragraphs 1 through 3 of this Section. [40 CFR 63.465(c)]
- Using the records of all solvent additions and deletions for the previous monthly reporting period required under [section V.A](#) (Alternative Standards), determine solvent emissions ( $E_i$ ) using Equation 2 for cleaning machines with a solvent/air interface and Equation 3 for cleaning machines without a solvent/air interface:

$$E_i = \frac{SA_i - LSR_i - SSR_i}{AREA_i} \quad (\text{Equation 2})$$

$$E_n = SA_i - LSR_i - SSR_i \quad (\text{Equation 3})$$

where:

$E_i$  = the total halogenated HAP solvent emissions from the solvent cleaning machine during the most recent monthly reporting period  $i$ , (kilograms of solvent per square meter of solvent/air interface area per month).

$E_n$  = the total halogenated HAP solvent emissions from the solvent cleaning machine during the most recent monthly reporting period  $i$ , (kilograms of solvent per month).

$SA_i$  = the total amount of halogenated HAP liquid solvent added to the solvent cleaning machine during the most recent monthly reporting period  $i$ , (kilograms of solvent per month).

$LSR_i$  = the total amount of halogenated HAP liquid solvent removed from the solvent cleaning machine during the most recent monthly reporting period  $i$ , (kilograms of solvent per month).

$SSR_i$  = the total amount of halogenated HAP solvent removed from the solvent cleaning machine in solid waste, obtained as described in paragraph C.(2) of this Section, during the most recent monthly reporting period  $i$ , (kilograms of solvent per month).

$AREA_i$  = the solvent/air interface area of the solvent cleaning machine (square meters).

2. Determine  $SSR_i$  using the method specified in paragraph C.2.(i) or C.2.(ii) of this Section.
  - (i) From tests conducted using EPA reference method 25d.
  - (ii) By engineering calculations included in the compliance report.
3. Determine the monthly rolling average, EA, for the 3-month period ending with the most recent reporting period using Equation 4 for cleaning machines with a solvent/air interface or Equation 5 for cleaning machines without a solvent/air interface:

$$EA_i = \frac{\sum_{j=1}^3 E_i}{3} \quad \text{(Equation 4)}$$

$$EA_n = \frac{\sum_{j=1}^3 E_n}{3} \quad \text{(Equation 5)}$$

Where:

$EA_i$  = the average halogenated HAP solvent emissions over the preceding 3 monthly reporting periods, (kilograms of solvent per square meter of solvent/air interface area per month).

$EA_n$  = the average halogenated HAP solvent emissions over the preceding 3 monthly reporting periods (kilograms of solvent per month).

$E_i$  = halogenated HAP solvent emissions for each month (j) for the most recent 3 monthly reporting periods (kilograms of solvent per square meter of solvent/air interface area).

$E_n$  = halogenated HAP solvent emissions for each month (j) for the most recent 3 monthly reporting periods (kilograms of solvent per month).

$j = 1$  = the most recent monthly reporting period.

$j = 2$  = the monthly reporting period immediately prior to  $j = 1$ .

$j = 3$  = the monthly reporting period immediately prior to  $j = 2$ .

- D. Each owner or operator of a batch vapor or in-line solvent cleaning machine using a dwell to comply with §63.463 shall determine the appropriate dwell time for each part or parts basket using the procedure specified in paragraphs D.1 and D.2 of this Section.
  1. Determine the amount of time for the part or parts basket to cease dripping once placed in the vapor zone. The part or parts basket used for this determination must be at room temperature before being placed in the vapor zone.
  2. The proper dwell time for parts to remain in the freeboard area above the vapor zone is no less than 35 percent of the time determined in paragraph VI.D.1 of this Section.
- E. An owner or operator of a source shall determine their potential to emit from all solvent cleaning operations, using the procedures described in paragraphs E(1) through E(3) of this Section. A facility's total potential to emit is the sum of the HAP emissions from all solvent cleaning operations, plus all HAP emissions from other sources within the facility.

1. Determine the potential to emit for each individual solvent cleaning using Equation 6.

$$PTE_i = H_i \times W_i \times SAI_i \quad \text{Equation 6}$$

Where:

- $PTE_i$  = the potential to emit for solvent cleaning machine i (kilograms of solvent per year).
- $H_i$  = hours of operation for solvent cleaning machine i (hours per year).  
= 8760 hours per year, unless otherwise restricted by a Federally Enforceable Requirement.
- $W_i$  = the working mode uncontrolled emission rate (kilograms per square meter per hour).  
= 1.95 kilograms per square meter per hour for batch vapor and cold cleaning machines.
- $SAI_i$  = solvent/air interface area of solvent cleaning machine i (square meters). [Section II](#) of this Category (Definitions) defines the solvent/air interface area for those machines that have a solvent/air interface. Cleaning machines that do not have a solvent/air interface shall calculate a solvent/air interface area using the procedure in paragraph E.2 of this Section.

2. Cleaning machines that do not have a solvent/air interface shall calculate a solvent/air interface area using Equation 7.

$$SAI = 2.20 \times (Vol) \quad \text{Equation 7}$$

Where:

$SAI$  = the solvent/air interface area (square meters).

$Vol$  = the cleaning capacity of the solvent cleaning machine (cubic meters).

3. Sum the  $PTE_i$  for all solvent cleaning operations to obtain the total potential to emit for solvent cleaning operations at the facility.

## Section VII. Monitoring Procedures

[40 CFR 63.466]

- A. Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the equipment standards in section [IV.B.1\(i\)](#) or [IV.B.2\(i\)](#) of this Category, shall conduct monitoring and record the results on a weekly basis for the control devices, as appropriate, specified in paragraphs (a)(1) through (2) of this Section.
  1. If a freeboard refrigeration device is used to comply with these standards, the owner or operator shall use a thermometer or thermocouple to measure the temperature at the center of the air blanket during the idling mode.
  2. If a superheated vapor system is used to comply with these standards, the owner or operator shall use a thermometer or thermocouple to measure the temperature at the center of the superheated solvent vapor zone while the solvent cleaning machine is in the idling mode.

- B. Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the equipment standards of section [IV.B.1\(i\)](#) or [IV.B.2\(i\)](#) of this Category shall conduct monitoring and record the results on a monthly basis for the control devices, as appropriate, specified in paragraphs B.1 and B.2 of this Section.
1. If a cover (working-mode, downtime-mode, and/or idling-mode cover) is used to comply with these standards, the owner or operator shall conduct a visual inspection to determine if the cover is opening and closing properly, completely covers the cleaning machine openings when closed, and is free of cracks, holes, and other defects.
  2. If a dwell is used, the owner or operator shall determine the actual dwell time by measuring the period of time that parts are held within the freeboard area of the solvent cleaning machine after cleaning.
- C. Except as provided in paragraph G of this Section, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the equipment or idling standards in [section IV](#) of this Category shall monitor the hoist speed as described in paragraphs C.1 through C.4 of this Section.
1. The owner or operator shall determine the hoist speed by measuring the time it takes for the hoist to travel a measured distance. The speed is equal to the distance in meters divided by the time in minutes (meters per minute).
  2. The monitoring shall be conducted monthly. If after the first year, no exceedances of the hoist speed are measured, the owner or operator may begin monitoring the hoist speed quarterly.
  3. If an exceedance of the hoist speed occurs during quarterly monitoring, the monitoring frequency returns to monthly until another year of compliance without an exceedance is demonstrated.
  4. If an owner or operator can demonstrate to the Administrator's satisfaction in the initial compliance report that the hoist cannot exceed a speed of 3.4 meters per minute (11 feet per minute), the required monitoring frequency is quarterly, including during the first year of compliance.
- D. Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the equipment standards in section [IV.B.1\(ii\)](#) or [IV.B.2\(ii\)](#) of this Category using a reduced room draft shall conduct monitoring and record the results as specified in paragraph VII.D.1. or VII.D.2 of this Category. [40 CFR 63.466(d)]
1. If the reduced room draft is maintained by controlling room parameters (i.e., redirecting fans, closing doors and windows, etc.), the owner or operator shall conduct an initial monitoring test of the windspeed and of room parameters, quarterly monitoring of windspeed, and weekly monitoring of room parameters as specified in paragraphs VII.D.1(i) and VII.D.1(ii) of this Category.
    - (i). Measure the windspeed within 6 inches above the top of the freeboard area of the solvent cleaning machine using the procedure specified in paragraphs VII.D.1.(i).(A) through VII.D.1.(i).(D) of this Category.
      - (A) Determine the direction of the wind current by slowly rotating a velometer or similar device until the maximum speed is located.
      - (B) Orient a velometer in the direction of the wind current at each of the four corners of the machine.

- (C) Record the reading for each corner.
  - (D) Average the values obtained at each corner and record the average wind speed.
  - (ii) Monitor on a weekly basis the room parameters established during the initial compliance test that are used to achieve the reduced room draft.
2. If an enclosure (full or partial) is used to achieve a reduced room draft, the owner or operator shall conduct an initial monitoring test and, thereafter, monthly monitoring tests of the windspeed within the enclosure using the procedure specified in paragraphs VII.D.2.(i) and V.II.D.2.(ii) of this Category and a monthly visual inspection of the enclosure to determine if it is free of cracks, holes and other defects.
- (i) Determine the direction of the wind current in the enclosure by slowly rotating a velometer inside the entrance to the enclosure until the maximum speed is located.
  - (ii) Record the maximum wind speed.
- E. Except as provided in paragraph VII.G of this Category, each owner or operator using a carbon adsorber to comply with this subpart shall measure and record the concentration of halogenated HAP solvent in the exhaust of the carbon adsorber weekly with a colorimetric detector tube. This test shall be conducted while the solvent cleaning machine is in the working mode and is venting to the carbon adsorber. The exhaust concentration shall be determined using the procedure specified in paragraphs VII.E.1 through VII.E.3 of this Category. [40 CFR 63.466(e)]
- 1. Use a colorimetric detector tube designed to measure a concentration of 100 parts per million by volume of solvent in air to an accuracy of  $\pm 25$  parts per million by volume.
  - 2. Use the colorimetric detector tube according to the manufacturer's instructions.
  - 3. Provide a sampling port for monitoring within the exhaust outlet of the carbon adsorber that is easily accessible and located at least 8 stack or duct diameters downstream from any flow disturbance such as a bend, expansion, contraction, or outlet; downstream from no other inlet; and 2 stack or duct diameters upstream from any flow disturbance such as a bend, expansion, contraction, inlet or outlet.
- F. Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the idling emission limit standards of section [IV.B.1.\(ii\)](#) or [IV.B.\(2\)\(ii\)](#) of this Category shall comply with the requirements specified in paragraphs VII.F.1. and VII.F.2 of this Category. [40 CFR 63.466(f)]
- 1. If using controls listed in paragraphs A through E of this Section, the owner or operator shall comply with the monitoring frequency requirements in paragraphs A through E of this Section.
  - 2. If using controls not listed in paragraphs A through E of this Section, the owner or operator shall establish the monitoring frequency for each control and submit it to the Administrator for approval in the initial test report.
- G. Each owner or operator using a control device listed in section [VII.A](#) through [VII.E](#) of this Category can use alternative monitoring procedures approved by the Control Officer.
- H. The Permittee shall demonstrate compliance with the synthetic minor limitation (product usage limitation) requirement in section III of this Category by recording (within 10 days of the end of the month) the following:

- a. The inventory/usage of Trichloroethylene (TCE) used each month.
- b. Yearly totals of Trichloroethylene (TCE) used for the most recent 12-consecutive month period. This shall be kept by adding the totals from section VII.H.a (above) to the record of the previous 11 consecutive months.

### Section VIII. Recordkeeping Requirements

- A. Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of [section IV](#) shall maintain records in written or electronic form specified in paragraphs (a)(1) through (6) of this Section for the lifetime of the machine. [40 CFR 63.467]
  1. Owner's manuals, or if not available, written maintenance and operating procedures, for the solvent cleaning machine and control equipment.
  2. The date of installation for the solvent cleaning machine and all of its control devices. If the exact date for installation is not known, a letter certifying that the cleaning machine and its control devices were installed prior to, or on, November 29, 1993, or after November 29, 1993, may be substituted.
  3. If a dwell is used to comply with these standards, records of the tests required in [section VI.D](#) to determine an appropriate dwell time for each part or parts basket.
  4. Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the idling emission limit standards of section [IV.B.1.\(ii\)](#) or [IV.B.\(2\)\(ii\)](#) of this Category shall maintain records of the initial performance test, including the idling emission rate and values of the monitoring parameters measured during the test.
  5. Records of the halogenated HAP solvent content for each solvent used in a solvent cleaning machine subject to the provisions of this subpart.
  6. If an air knife system or a combination squeegee and air knife system is used to comply with these standards, records of the determination of the proper operating parameter and parameter value for the air knife system.
- B. Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with [section IV](#) of this Category shall maintain records specified in paragraphs VIII.B.1 through VIII.B.4 of this Category either in electronic or written form for a period of 5 years.
  1. The results of control device monitoring required under [section VII](#) (Monitoring Procedures) of this Category.
  2. Information on the actions taken to comply with section [IV.D](#) and [IV.E](#) of this Category. This information shall include records of written or verbal orders for replacement parts, a description of the repairs made, and additional monitoring conducted to demonstrate that monitored parameters have returned to accepted levels.
  3. Estimates of annual solvent consumption for each solvent cleaning machine.
  4. If a carbon adsorber is used to comply with these standards, records of the date and results of the weekly measurement of the halogenated HAP solvent concentration in the carbon adsorber exhaust required in [section VII.E of this Category](#).

- C. Except as provided in paragraph E of this Category for continuous web cleaning machines, each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of [section V](#) (Alternative Standards) of this Category shall maintain records specified in paragraphs VIII.C.1 through VIII.C.3 of this Category either in electronic or written form for a period of 5 years.
1. The dates and amounts of solvent that are added to the solvent cleaning machine.
  2. The solvent composition of wastes removed from cleaning machines as determined using the procedure described in [section VI.C.2](#) of this Category.
  3. Calculation sheets showing how monthly emissions and the rolling 3-month average emissions from the solvent cleaning machine were determined, and the results of all calculations.
- D. Each owner or operator of a solvent cleaning machine without a solvent/air interface complying with the provisions of [section V](#) (Alternative Standards) shall maintain records on the method used to determine the cleaning capacity of the cleaning machine.
- E. The Permittee shall keep the following records:
1. The inventory/usage of Trichloroethylene (TCE) used each month.
  2. Yearly totals of Trichloroethylene (TCE) for the most recent 12-consecutive month period.

#### **Section IX. Reporting Requirements**

- A. Each owner or operator of an existing solvent cleaning machine subject to the provisions of this subpart shall submit an initial notification report to the Control Officer no later than August 29, 1995. This report shall include the information specified in paragraphs IX.A.1 through IX.A.6 of this Category. [40 CFR 63.468]
1. The name and address of the owner or operator.
  2. The address (i.e., physical location) of the solvent cleaning machine(s).
  3. A brief description of each solvent cleaning machine including machine type (batch vapor, batch cold, vapor in-line or cold in-line), solvent/air interface area, and existing controls.
  4. The date of installation for each solvent cleaning machine or a letter certifying that the solvent cleaning machine was installed prior to, or after, November 29, 1993.
  5. The anticipated compliance approach for each solvent cleaning machine.
  6. An estimate of annual halogenated HAP solvent consumption for each solvent cleaning machine.
- B. Each owner or operator of a new solvent cleaning machine subject to the provisions of this subpart shall submit an initial notification report to the Control Officer. New sources for which construction or reconstruction had commenced and initial startup had not occurred before December 2, 1994, shall submit this report as soon as practicable before startup but no later than January 31, 1995. New sources for which the construction or reconstruction commenced after December 2, 1994, shall submit this report as soon as practicable before the construction or reconstruction is planned to commence. This report shall include all of the information required in

40 CFR 63.5(d)(1) of subpart A (General Provisions), with the revisions and additions in paragraphs IX.B.1 through IX.B.3 of this Category.

1. The report shall include a brief description of each solvent cleaning machine including machine type (batch vapor, batch cold, vapor in-line, or cold-line), solvent/air interface area, and existing controls.
  2. The report shall include the anticipated compliance approach for each solvent cleaning machine.
  3. The owner or operator must report an estimate of annual halogenated HAP solvent consumption for each solvent cleaning machine.
- C. Each owner or operator of a batch cold solvent cleaning machine subject to the provisions of this subpart shall submit a compliance report to the Control Officer. For existing sources, this report shall be submitted to the Control Officer no later than 150 days after December 2, 1997. For new sources, this report shall be submitted to the Administrator no later than 150 days after startup or May 1, 1995, whichever is later. This report shall include the requirements specified in paragraphs IX.C.1 through IX.C.4 of this Category.
1. The name and address of the owner or operator.
  2. The address (i.e., physical location) of the solvent cleaning machine(s).
  3. A statement, signed by the owner or operator of the solvent cleaning machine, stating that the solvent cleaning machine for which the report is being submitted is in compliance with the provisions of this subpart.
  4. The compliance approach for each solvent cleaning machine.
- D. Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of [section IV](#) shall submit to the Control Officer an initial statement of compliance for each solvent cleaning machine. For existing sources, this report shall be submitted to the Control Officer no later than 150 days after December 2, 1997. For new sources, this report shall be submitted to the Control Officer no later than 150 days after startup or May 1, 1995, whichever is later. This statement shall include the requirements specified in paragraphs IX.D.1 through IX.D.6 of this Category. [40 CFR 63.468(d)]
1. The name and address of the owner or operator.
  2. The address (i.e., physical location) of the solvent cleaning machine(s).
  3. A list of the control equipment used to achieve compliance for each solvent cleaning machine.
  4. For each piece of control equipment required to be monitored, a list of the parameters that are monitored and the values of these parameters measured on or during the first month after the compliance date.
  5. Conditions to maintain the wind speed requirements of §63.463(e)(2)(ii), if applicable.
  6. Each owner or operator of a solvent cleaning machine complying with the idling emission limit standards of section [IV.B.1\(i\)](#) or [IV.B.2\(i\)](#) of this Category shall submit a test report for tests of idling emissions meeting the specifications in Method 307 of appendix A to this subpart. This report shall comply with the requirements specified in paragraphs IX.D.6.(i) through IX.D.6.(iv) of this Category.

- (i). This test must be on the same specific model cleaner used at the source. The test can be done by the owner or operator of the affected machine or can be supplied by the vendor of that solvent cleaning machine or a third party.
  - (ii). This report must clearly state the monitoring parameters, monitoring frequency and the delineation of exceedances for each parameter.
  - (iii). If a solvent cleaning machine vendor or third party test report is used to demonstrate compliance, it shall include the following for the solvent cleaning machine tested: Name of person(s) or company that performed the test, model name, the date the solvent cleaning machine was tested, serial number, and a diagram of the solvent cleaning machine tested.
  - (iv). If a solvent cleaning machine vendor or third party test report is used, the owner or operator of the solvent cleaning machine shall comply with the requirements specified in either paragraphs IX.D.6.(iv)(A) and IX.D.6.(iv)(B) of this Category.
    - (A) Submit a statement by the solvent cleaning machine vendor that the unit tested is the same as the unit the report is being submitted for.
    - (B) Demonstrate to the Administrator's satisfaction that the solvent emissions from the solvent cleaning machine for which the test report is being submitted are equal to or less than the solvent emissions from the solvent cleaning machine in the vendor test report.
7. If a carbon adsorber is used to comply with these standards, the date and results of the weekly measurement of the halogenated HAP solvent concentration in the carbon adsorber exhaust required in [section VII.E](#) (Monitoring Procedures) of this Category.
- E. Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of [section V](#) (Alternative Standards) of this Category shall submit to the Control Officer an initial statement of compliance for each solvent cleaning machine. For existing sources, this report shall be submitted to the Control Officer no later than 150 days after December 2, 1997. For new sources, this report shall be submitted to the Control Officer no later than 150 days after startup or May 1, 1995, whichever is later. The statement shall include the information specified in paragraphs (e)(1) through (e)(4) of this Category.
1. The name and address of the solvent cleaning machine owner or operator.
  2. The address of the solvent cleaning machine(s).
  3. The solvent/air interface area for each solvent cleaning machine or, for cleaning machines without a solvent/air interface, a description of the method used to determine the cleaning capacity and the results.
  4. The results of the first 3-month average emissions calculation.
- F. Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of [section IV](#) shall submit an annual report by February 1 of the year following the one for which the reporting is being made. This report shall include the requirements specified in paragraphs IX.F.1 through IX.F.3 of this Category.
1. A signed statement from the facility owner or his designee stating that, "All operators of solvent cleaning machines have received training on the proper operation of solvent cleaning machines and their control devices sufficient to pass the test required in [section IV.C.10](#)" of this Category.

2. An estimate of solvent consumption for each solvent cleaning machine during the reporting period.
  3. The reports required under paragraphs IX.F and IX.G of this Category can be combined into a single report for each facility.
- G. Each owner or operator of a batch vapor or in-line solvent cleaning machine complying with the provisions of [section V](#) of this Category shall submit a solvent emission report every year. This solvent emission report shall contain the requirements specified in paragraphs IX.G.1 through IX.G.4 of this Category.
1. The size and type of each unit subject to this subpart (solvent/air interface area or cleaning capacity).
  2. The average monthly solvent consumption for the solvent cleaning machine in kilograms per month.
  3. The 3-month monthly rolling average solvent emission estimates calculated each month using the method as described in [section VI.C](#) of this Category.
  4. The reports required under paragraphs IX.F and IX.G of this Category can be combined into a single report for each facility.
- H. Each owner or operator of a batch vapor or in-line solvent cleaning machine shall submit an exceedance report to the Control Officer semiannually except when, the Control Officer determines on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the source or, an exceedance occurs. Once an exceedance has occurred the owner or operator shall follow a quarterly reporting format until a request to reduce reporting frequency under paragraph (I) of this Category is approved. Exceedance reports shall be delivered or postmarked by the 30th day following the end of each calendar half or quarter, as appropriate. The exceedance report shall include the applicable information in paragraphs IX.H.1 through IX.H.3 of this Category. [40 CFR 63.468(h)]
1. Information on the actions taken to comply with section [IV.D](#) and [IV.E](#) of this Category. This information shall include records of written or verbal orders for replacement parts, a description of the repairs made, and additional monitoring conducted to demonstrate that monitored parameters have returned to accepted levels.
  2. If an exceedance has occurred, the reason for the exceedance and a description of the actions taken.
  3. If no exceedances of a parameter have occurred, or a piece of equipment has not been inoperative, out of control, repaired, or adjusted, such information shall be stated in the report.
- I. An owner or operator who is required to submit an exceedance report on a quarterly (or more frequent) basis may reduce the frequency of reporting to semiannual if the conditions in paragraphs IX.I.1 through IX.I.3 of this Category are met.
1. The source has demonstrated a full year of compliance without an exceedance.
  2. The owner or operator continues to comply with all relevant recordkeeping and monitoring requirements specified subpart A (General Provisions) and in this subpart.

3. The Administrator does not object to a reduced frequency of reporting for the affected source as provided in the following paragraph:

[40 CFR 63.468 (i)(3) and 40 CFR 63.10 (e)(3)(iii) of subpart A (General Provisions).

The frequency of reporting of excess emissions and continuous monitoring system performance (and summary) reports required to comply with a relevant standard may be reduced only after the owner or operator notifies the Control Officer in writing of his or her intention to make such a change and the Control Officer does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Control Officer may review information concerning the source's entire previous performance history during the 5-year recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Control Officer to make a judgment about the source's potential for noncompliance in the future. If the Control Officer disapproves the owner or operator's request to reduce the frequency of reporting, the Control Officer will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Control Officer to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted

- J. [Reserved]
- K. Each owner or operator of a solvent cleaning machine requesting an equivalency determination, as described in [section X](#) (Equivalent Test Methods of Control) of this Category shall submit an equivalency request report to the Administrator. For existing sources, this report must be submitted to the Control Officer no later than June 3, 1996. For new sources, this report must be submitted and approved by the Administrator prior to startup.
- L. The Permittee shall retain records of all required monitoring and support information for at least 5 years from the date of the monitoring sample, measurement or report. Support information includes copies of all reports required by the permit. [PCC 17.12.185.4.b]

## **Section X. Equivalent Methods of Control**

Upon written application, the Control Officer may approve the use of equipment or procedures after they have been satisfactorily demonstrated to be equivalent, in terms of reducing emissions of methylene chloride, perchloroethylene, **trichloroethylene**, 1,1,1-trichloroethane, carbon tetrachloride or chloroform to the atmosphere, to those prescribed for compliance within a specified paragraph of this subpart. The application must contain a complete description of the equipment or procedure and the proposed equivalency testing procedure and the date, time, and location scheduled for the equivalency demonstration. [40 CFR 63.469]

## **Section XI. Implementation and Enforcement**

[40 CFR 63.470]

- A. This Category can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local (Pima County), or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local (Pima County), or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart.
- B. In delegating implementation and enforcement authority of this subpart to a State, local (Pima County), or Tribal agency under Subpart E (Approval of State Programs and Delegation of Federal Authorities ) of 40 CFR Part 63, the authorities contained in paragraph XI.C of this subsection are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local (Pima County), or Tribal agency.

- C. The authorities that cannot be delegated to State, local (Pima County), or Tribal agencies are as specified in paragraphs C.1 through 4 of this Section.
1. Approval of alternatives to the requirements in section [II](#), and section [IV](#) through section [V](#) (except for the authorities in section [IV.C.9](#)) of this Category. Use the procedures in [section X](#) (Equivalent Methods of Control) of this Category to request the use of alternative equipment or procedures.
  2. Approval of major alternatives to test methods under [§63.7\(e\)\(2\)\(ii\)](#) and [\(f\)](#), as defined in [§63.90](#), and as required in this subpart.
  3. Approval of major alternatives to monitoring under [§63.8\(f\)](#), as defined in [§63.90](#), and as required in this subpart.
  4. Approval of major alternatives to recordkeeping and reporting under [§63.10\(f\)](#), as defined in [§63.90](#), and as required in this subpart.

**Section XII. Facility-Wide Standards**

[40 CFR 63.471]

Solvent cleaning machines used in the manufacture and maintenance of aerospace products are not subject to the facility wide standards of Subpart T of Part 63.

[40 CFR 63.471(a)]

**Appendix A to Subpart T of Part 63**

**Solvent Cleaning Procedures (Questions and Answers)**

- 1. What is the maximum allowable speed for parts entry and removal?**
  - 3.4 meters per minute (11 feet per minute).
  
- 2. How do you ensure that parts enter and exit the solvent cleaning machine at the speed required in the regulation?**
  - Program on computerized hoist monitors speed. or
  - Measure the time it takes the parts to travel a measured distance.
  
- 3. Identify the sources of air disturbances.**

Fans, Open doors, Open windows and Ventilation vents
  
- 4. What are the three operating modes?**
  - Idling, working and downtime
  
- 5. When can parts or parts baskets be removed from the solvent cleaning machine?**
  - When dripping stops
  
- 6. How must parts be oriented during cleaning?**
  - So that solvent drains from them freely.
  
- 7. During startup, what must be turned on first, the primary condenser or the sump heater?**
  - Primary condenser
  
- 8. During shutdown, what must be turned off first, the primary condenser or the sump heater?**
  - Sump heater
  
- 9. In what manner must solvent be added to and removed from the solvent cleaning machine?**
  - With leak proof couplings and with the end of the pipe in the solvent sump below the liquid solvent surface.
  
- 10. What must be done with waste solvent and still and sump bottoms?**
  - Store in closed container
  
- 11. What types of materials are prohibited from being cleaned in solvent cleaning machines using halogenated HAP solvents?**
  - Sponges, Fabrics or Paper

**CATEGORY 4**

**NEW AND EXISTING STATIONARY SOURCE PERFORMANCE STANDARDS FOR SURFACE COATING AND SOLVENT DEGREASING/CLEANING ACTIVITIES**

**Section I. Surface Coating and Solvent Degreasing/Cleaning Operations**

[PCC 17.16.400.C]

**A. Spray Paint Operations**

1. The Permittee shall not conduct any 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]

**[Material Permit Condition]**

2. The Permittee is prohibited from or performing paint stripping operations that involve the use of methylene chloride (MeCl, CAS # 75092), and except for facility maintenance, the Permittee is prohibited from conducting any spray application of coatings that contain target Hazardous air Pollutants (HAP) to metal or plastic parts or products, without applying for a permit revision as provided in section V.A of this Category and submitting an Initial Notification in accordance with 40 CFR Part 63, Subpart HHHHHH to the Control Officer. For the purpose of this provision “*a target HAP containing coating*” means a spray applied coating that contains compounds of Chromium (Cr), Lead (Pb), Manganese (Mn), Nickel (Ni), or Cadmium (Cd) as defined in 40 CFR 63.11180.

[PCC 17.16.530.B.111, 40 CFR 63.11169, & 40 CFR 63.11180]

**B. Surface Coating Operations (includes spray paint operations)**

A facility engaged in the surface coating of miscellaneous metal parts and products may not operate a coating application system subject to section I.D of this Category that emits volatile organic compounds in excess of any of the following: [PCC 17.16.400.C.5]

1. 4.3 pounds per gallon (0.5 kilograms per liter) of coating, excluding water, delivered to a coating applicator that applies clear coatings.
2. 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).
3. 3.5 pounds per gallon (0.42 kilograms per liter) of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings.
4. 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.
5. If more than one emission limitation in section I.D.2 of this Category applies to a specific coating, then the least stringent emission limitation shall be applied.

### C. Solvent Degreasing/Cleaning Operations

Solvent degreasing and cleaning operations shall comply with the general materials handling standards in section I.B of Category 2. In addition, all VOC emissions from solvent washings shall be considered in the emission limitations in section I.D.2 of this Category, unless the solvent is directed into containers that prevent evaporation into the atmosphere. For the purpose of this provision, Solvent degreasing or cleaning shall mean “the removal of loosely held uncured adhesives, uncured ink, uncured coatings and contaminants which include dirt, soil, and grease from parts, products, tools, machinery, equipment, and general work areas using a solvent that contains two percent by weight of any regulated air pollutant.” [PCC 17.16.400.A & 17.16.400.C.7]

### D. Architectural Coating Operations

1. The Permittee shall not do either of the following: [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
  - b. Thin or dilute any architectural coating with a photochemically reactive solvent.
2. For purposes of section I.D.4 of this Category, 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 section I.D.4.b.i through iii of this Category, 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.
  - b. A combination of aromatic compounds with eight or more carbon atoms to the molecule, except ethylbenzene: eight percent.
  - c. A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: twenty percent.
3. 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 section I.D.4.b.i through iii of this Category, it shall be considered to be a member of the group having the least allowable percent of the total volume of solvents. [PCC 17.16.400.C.4]

**E. Synthetic Minor Limitation**

The Permittee shall not use more than the following totals of product/constituent per year in the facility wide processes combined per 12-month period. [PCC 17.12.190.B]

**[Voluntarily Accepted Condition and Material Permit Condition]**

<b>Product/Constituent</b>	<b>Use (lbs/yr)</b>	<b>Use (gal/yr)</b>
Chemlock 205	1300	162.5
Chemlock 234B(NW)	2270	253.6
Chemlock 234X(NW)	5400	675
Chemlock 238 (NW)	1300	162.5
Chemlock 607	1670	241.0
Chemglaze Z001	20	2.6
Chemlock 402	20	2.0
Methanol	2500	378.2
Toluene	6900	950.4
Xylene	278	34.8

**F. Monitoring Procedures**

The Permittee shall demonstrate compliance with the synthetic minor limitation (product usage limitation) requirement in section I.E of this Category by recording (within 10 days of the end of the month) the following:

- a. The inventory/usage of product/constituent used each month.
- b. Yearly totals of product/constituent used for the most recent 12-consecutive month period. This shall be kept by adding the totals from section I.E (above) to the record of the previous 11 consecutive months.

**Section II. Abrasive Blasting Operations**

[PCC 17.16.100.D]

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.

**CATEGORY 5****FOSSIL FUEL FIRED INDUSTRIAL AND COMMERCIAL EQUIPMENT  
(BOILERS and HEATERS)**

The provisions of this Category are applicable to boilers, heaters, and other fuel fired equipment identified on the equipment list in Table 1 of Attachment 2. In addition to the following provisions, the general provisions of 40 CFR Part 60 and 63, Subpart A apply to affected steam generating units (boilers) as applicable. All Provisions of this Category are locally enforceable unless otherwise noted. [PCC 17.16.010.B]

**Section I. EMISSION LIMITATIONS AND STANDARDS**

[PCC 17.12.185.A.2]

**A. Fuel Limitations**

The Permittee shall burn only the following fuels in each boiler, heater, or other fuel fired equipment listed in Table 1 of Attachment 2, subject to the following limitations:

[PCC 17.12.190.B &amp; PCC 17.12.350.A.3.a]

**[Material Permit Conditions]****1. Natural Gas**

- a. There are no operating hours or fuel limitations for equipment, boilers or heaters when burning natural gas. For the purpose of this permit, *Natural gas* means: A naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or liquefied petroleum gas, as defined by the American Society for Testing and Materials in ASTM D1835; or a mixture of hydrocarbons that maintains a gaseous state at ISO conditions (*i.e.*, a temperature of 288 Kelvin, a relative humidity of 60 percent, and a pressure of 101.3 kilopascals), additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 35 and 41 megajoules (MJ) per dry standard cubic meter (950 and 1,100 Btu per dry standard cubic foot); or propane or propane-derived synthetic natural gas. *Propane* means a colorless gas derived from petroleum and natural gas, with the molecular structure C<sub>3</sub>H<sub>8</sub>. [40 CFR 63.11237]

**B. Opacity Standard**

Boilers, heaters, and other fuel fired equipment listed in Table 1 of Attachment 2 shall not exceed the facility wide opacity standards in section I.E of [Category 2](#). [PCC 17.16.165, PCC 17.16.130.B]

**Section II. MONITORING AND RECORDKEEPING REQUIREMENTS**

[PCC 17.12.185.A.3]

Follow the monitoring and recordkeeping requirements in sections II and III. of [Category 2](#).

**Section III. REPORTING REQUIREMENTS**

[PCC 17.12.185.A.5]

Follow the reporting requirements in sections IV.A through C of [Category 2](#).

**Section IV. TESTING REQUIREMENTS**

[PCC 17.12.045, PCC 17.12.050 &amp; PCC 17.20.010]

Comply with the testing requirements in section VI. of [Category 2](#) of this permit.

**CATEGORY 6**

**SPECIFIC APPLICABILITY PROVISIONS**

**Section I. Permitted Facility Sources**

The Specific Conditions in this permit apply to the following source categories, affected facilities, equipment, emission sources, installations, activities and operations at the facility.

**A. Facility-Wide Operations**

Except as provided in I.E of this Category, the following provisions apply to facility-wide operations ([Category 2](#)) and to all sources of air contaminants operating at the facility: Voluntary Limitations, general control standards, materials handling standards, odor limiting standard, opacity standards, visibility limiting standard, and asbestos requirements for demolition and renovation activities.

[PCC 17.12.475, PCC 17.16.010., PCC 17.16.020 thru 050, PCC 17.16.400.A, & PCC 17.16.430.F]

**[Locally Enforceable Conditions]**

**B. Fossil-Fuel Fired Industrial and Commercial Equipment (Boilers and Heaters)**

1. This Category applies to existing 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.

2. Voluntary Requirements [PCC 17.12.190.B]

**[Voluntary and Material Permit Conditions]**

a. Applicable boilers identified in Table 1 of Attachment 2 that comply with [Category 2](#) of this permit shall be considered to be compliant with the applicable requirements [PCC 17.16.165](#).

[40 CFR 60.42c(d), 40 CFR 60.43c(e)(4), & 40 CFR 60.48(g) & PCC 17.16.165]

b. Should the Permittee desire to fire fuels in a boiler that do not meet the fuel limitations in Section 3 of this permit, the Permittee shall submit a significant revision in accordance with V.A of Section 2 of this permit.

[40 CFR 60.43c(e)(1), 40 CFR 63.1194(d), 40 CFR 63.11201(a), & Table 2, to NESHAP Subpart JJJJJ]

**C. Local (New and Existing) Stationary Source Performance Standards**

Local performance standards apply to the following facilities or operations: Fossil fuel fired industrial and commercial equipment, each internal combustion engine, and each unclassified source.

[PCC 17.12.185.A.2, PCC 17.16.165, PCC 17.16.340, & PCC 17.16.430]

**[Locally Enforceable Conditions]**

**D. Exempt Sources**

The Specific Conditions contained in this air quality permit shall not apply to motor vehicles, agricultural vehicles, or agricultural equipment used in normal farm operations, unless their operation without a permit would result in a violation of the Act.

[PCC 17.12.140.C.3]

**GENERAL CONDITIONS****I. COMPLIANCE WITH PERMIT CONDITIONS**

[PCC 17.12.185.A.7.a &amp; b]

- A. The Permittee shall comply with all conditions of this permit including all applicable requirements of Arizona air quality statutes and the 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. The Permittee shall report to the Control Officer any emissions in excess of the limits established by this permit. The report shall be in 2 parts as specified below: [PCC 17.12.185.A.5 & PCC 17.12.040]
1. Notification by telephone or facsimile within 24 hours of the time the Permittee first learned of the occurrence of excess emission that includes all available information from 17.12.040.B. The number to report excess emissions is **520-724-7400**. The facsimile number is **520-838-7432**.
  2. Detailed written notification by submission of an excess emissions report within 72 hours of the notification under I.B.1 above. **Send to PDEQ 33 N. Stone Avenue, Suite 700, Tucson, Arizona 85701.**
- C. 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.
- D. The permit does not convey any property rights of any sort, or any exclusive privilege to the permit holder.
- E. The Permittee shall pay fees to the Control Officer pursuant to PCC 17.12.520. [PCC 17.12.185.A.9 & PCC 17.12.520]

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

[PCC 17.12.185.A.7.c]

The permit may be revised, reopened, revoked and reissued, or terminated for cause pursuant to PCC 17.12.270. The filing of a request by the Permittee for a permit revision, revocation and reissuance, or termination; or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

**III. DUTY TO PROVIDE INFORMATION**

[PCC 17.12.165.G &amp; PCC 17.12.185.A.7.e]

- 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 a copy of such records to the Control Officer along with a claim of confidentiality.
- B. If the Permittee has failed to submit any relevant facts or if the Permittee 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.

**IV. SEVERABILITY CLAUSE**

[PCC 17.12.185.A.6]

The provisions of this permit are severable. If any provision of this permit is held invalid, the remainder of this permit shall not be affected thereby.

**ATTACHMENT 1**

**APPLICABLE REGULATIONS**

**Requirements Specifically Identified as Applicable:**

Code of Federal Regulations, Title 40 Part 60

Subpart A: General Provisions.

60.7(a)(1), 60.7(a)(3), 60.7(a)(4), 60.7(b), 60.7(f), 60.7(f)(3), 60.8(a), 60.8(b), 60.8(c), 60.8(d), 60.8(e), 60.8(f), 60.11(d), 60.11(g), 60.12, and 60.15

Code of Federal Regulations, Title 40 Part 63

Subpart T National Emission Standards for Halogenated Solvent Cleaning  
Appendix A to Subpart T of Part 63 – Test of Solvent Cleaning Procedures

**40 CFR, Part 63 Standards of Performance for New Stationary Sources**

Subpart A	General Provisions
Appendix A	Test Methods
Appendix B	General Provisions Applicability to Subpart T

**Pima County Code Title 17, Chapter 17.12 – Permits and Permit Revisions**

**Article I – General Provisions**

17.12.010	Statutory Authority
17.12.020	Planning, Constructing, or Operating Without a Permit
17.12.040	Reporting requirements
17.12.045	Test methods and procedures
17.12.050	Performance tests
17.12.080	Permit Display or Posting

**Article II – Individual Source Permits**

17.12.165	Permit application processing procedures for Class II and Class III permits
17.12.185	Permit contents for Class II and Class III permits
17.12.190	Permits containing synthetic emission limitations and standards
17.12.235	Facility Changes that require a permit revision
17.12.240	Procedures for certain changes that do not require a permit revision Class II or Class III
17.12.255	Minor Permit Revision
17.12.260	Significant Permit Revision
17.12.270	Permit Reopenings – Revocation and reissuance – Termination
17.12.350	Material permit condition

**Article VI – Individual Source Permits**

17.12.520	Fees related to Class II and Class III permits
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**Pima County Code Title 17, Chapter 17.16 – Emission Limiting Standards**

**Article I – General Provisions**

- 17.16.010 Local rules and standards; Applicability of more than one standard
- 17.16.020 Noncompliance with applicable standards
- 17.16.030 Odor limiting standards

**Article II – Visible Emission Standards**

- 17.16.040 Standards and applicability (includes NESHAP)
- 17.16.050 Visibility limiting standard

**Article IV – New and Existing Stationary Source Performance Standards**

- 17.16.130 Applicability
- 17.16.165 Standards of performance for fossil-fuel fired industrial commercial equipment
- 17.16.340 Standards of performance for stationary rotating machinery
- 17.16.430 Standards of performance for unclassified sources

**Pima County Code Title 17, Chapter 17.20 – Emissions Source Testing and Monitoring**

- 17.20.010 Source sampling, monitoring and testing
- 17.20.040 Concealment of emissions

**Pima County Code Title 17, Chapter 17.24:**

- 17.24.020 Recordkeeping for compliance determination

**ATTACHMENT 2**

**EQUIPMENT LIST**

**Table 1 – Boilers, Heaters, & Other Fuel Fired Equipment (ref. Category 5)**

Description	MFR/Model Model	Serial Number/ Unique ID	Maximum Rated Capacity BTU	Date of MFR	Date Installed	Allowable Fuels and Annual Limits		Applicability <sup>1</sup>	
						Natural Gas	Fuel Oil	NSPS Subpart Dc	NESHAP Subpart JJJJJ
						(MMcf, hours, CF)	(Gallons, hours, CF)		
Boiler	Parker 40 HP	28524	1,680,000	1983	1983	Unlimited	N/A	N/A	N/A
Boiler	Parker 70 HP	26543	1,940,000	1981	1981	Unlimited	N/A	N/A	N/A
Boiler	Parker 75 HP	49158	3,150,000	1998	1998	Unlimited	N/A	N/A	N/A
Evaporator	Encon N33V1-18	37497	220,000	2015	2016	Unlimited	N/A	N/A	N/A
Oven	Wisconsin	47670298	700,000	N/A	N/A	Unlimited	N/A	N/A	N/A

**Table 2 – (ref. Category 5)**

Description	Serial Number / Mfg Yr	Capacity
Rubber Mixing Operation	N/A	N/A
Vapor Engineering Degreaser	BACT 96X	90 Gallons
Vapor Engineering Still	E15	30 Gallons
AAF Dust Collector	OP03-0018	N/A
AAF Dust Collector	CP110011	N/A
Rees Bag House on Sand Blaster	N/A	N/A
Farr Dust Collector	9212J0	N/A
Impco Bag House	730917-1	N/A
2 Grit Blast Cabinets	N/A	N/A
Grit Blast Cabinet	N/A	N/A
Grit Blast Unit (Self-Contained)	N/A	N/A
Delta Degreaser	D7001	60 Gallons
Delta Degreaser Still	D8085	1 Gallon
Solvent/ Buffing room (Vented Outside)	N/A	N/A
2 <sup>nd</sup> Solvent/ Buffing room (Vented Outside)	N/A	N/A

<sup>1</sup> The Permittee must submit a significant permit revision and meet applicable NESHAP subpart JJJJJ work practices (tune-ups), notification, and reporting requirements for boilers that switch to fuel oil use and become subject to the Subpart JJJJJ in the oil firing subcategory as defined in 40 CFR 63.11237.

**ATTACHMENT 3**

**INSIGNIFICANT ACTIVITIES**

The following equipment or operations have been determined by the control officer, because of their size or production rate, to be de minimus emission sources and insignificant or trivial activities in accordance with PCC 17.04.340.A.(114)

Description	Maximum Rated Capacity	Fuels Used
Landscaping, building maintenance, or janitorial services.	-	-
Gasoline storage tanks; provided such storage tanks are equipped with a submerged filling device, or acceptable equivalent, for the control of hydrocarbon emissions in accordance with PCC 17.16.230.B.	≤ 10,000 gallons	Gasoline
Diesel or Fuel Oil Storage Tanks.	≤ 40,000 gallons each	Diesel
Batch mixers.	≤ 5 cubic feet	-
Wet sand and gravel production facilities whose permanent in-plant roads are paved and cleaned to control dust. This does not include activities in emissions units which are used to crush or grind any nonmetallic minerals.	≤ 200 tons/hour	-
Hand-held or manually operated equipment used for buffing, polishing, carving, cutting, drilling, machining, routing, sanding, sawing, surface grinding, or turning of ceramic art work, precision parts, leather, metals, plastics, fiberboard, masonry, carbon, glass or wood.	-	-
Powder Coating Operations	-	-
Internal combustion (IC) engine-driven compressors, IC engine-driven electrical generator sets, and IC engine-driven water pumps used only for emergency replacement or standby service.  <i>Note: Portable or temporary IC engines or other non-road engines that operate, or are planned for operation, at a fixed location for more than 12 months are subject to stationary source permitting requirements. Portable or temporary IC located at a facility, may be required to keep records showing when the sources are transferred to or from the facility, or moved to alternate locations at the facility in order to establish that the sources are not stationary IC engines.</i>	-	-
Lab equipment used exclusively for chemical and physical analyses.	-	-
Trivial activities as provided in PCC 17.04.340.A.237 a through xx.	-	-

**ATTACHMENT 4**  
**EMISSIONS DISCHARGE OPACITY LIMITING STANDARDS**

**Table 17.16.040: EMISSIONS-DISCHARGE OPACITY LIMITING STANDARDS**

Type of Source	Instantaneous Opacity Measurements			Maximum Allowable Average Opacity, %
	Required No. (For a Set)	Excluded No. (Highest Values)	No. to Use For Averaging	
Asbestos-Containing Operation <sup>1</sup>	25	0	25	0
Cold Diesel Engines <sup>2</sup>	25	0	25	60
Loaded Diesel Engines <sup>3</sup>	26	1	25	60
Incinerators	27	2	25	20
Portland Cement Plants <sup>4</sup>	25	0	25	20
Other Sources <sup>5</sup>	25	0	25	20

<sup>1</sup> An asbestos mill, manufacturing or fabrication operation which uses asbestos as a raw material, or spraying operation which sprays materials containing more than 1% asbestos by weight.

<sup>2</sup> Applicable to the first 10 consecutive minutes after starting up a diesel engine.

<sup>3</sup> Applicable to a diesel engine being accelerated under load.

<sup>4</sup> Applicable to kiln, clinker cooler, and other process equipment.

<sup>5</sup> Any source not otherwise specifically covered within this table, unless otherwise specifically covered in this chapter.