



**OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY**

**GENERAL**

**AIR CONTAMINANT DISCHARGE PERMIT**

Air Quality Division  
Air Operations Section  
700 NE Multnomah St., Suite 600  
Portland, Oregon 97232  
Telephone: (503) 229-5696

This permit is issued in accordance with the provisions of ORS 468A.040 and OAR 340-216-0060

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**ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY**

Signed copy on file with DEQ

November 26, 2019

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Ali Mirzakhali, Air Quality Division Administrator

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Dated

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Halogenated solvent cleaning using batch cold, batch vapor, or in-line cleaning machines subject to Part 63, Title 40 of Code of Federal Regulations, Subpart T as adopted under OAR 340-244-0220.

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## **1.0 PERMIT ASSIGNMENT**

### **1.1. Qualifications**

All of the following conditions must be met in order to qualify for assignment to this General Air Contaminant Discharge Permit (ACDP):

- a. The permittee is performing halogenated solvent degreasing or cleaning as listed on the cover page of this permit, including supporting activities.
- b. The permittee is not subject to the VOC Point Source rules in OAR chapter 340 division 232, unless only subject to OAR 340-232-0180(4), (5), and/or (6). No other requirements of division 232 may apply to a source assigned to this permit.
- c. The permittee is not utilizing an 'idling emission limit' for compliance purposes with 40 C.F.R. part 63 subpart T (§63.463).
- d. The permittee is not utilizing an 'equivalent method of control' for compliance as described in 40 C.F.R. part 63 subpart T (§63.469).
- e. A Simple or Standard ACDP is not required for the source.
- f. The source is not having ongoing, recurring or serious compliance problems.

### **1.2. Assignment**

DEQ will assign qualifying permittee to this permit that have and maintain a good record of compliance with DEQ's Air Quality regulations and that DEQ determines would be appropriately regulated by a General ACDP. DEQ may rescind assignment if the permittee no longer meets the requirements of this permit.

### **1.3. Permitted Activities**

Until this permit expires, is modified, or is revoked, the permittee is allowed to discharge air contaminants from processes and activities directly related to or associated with the air contaminant source(s) listed in on the first page of this permit in addition to any categorically insignificant activities, as defined in OAR 340-200-0020, at the source. Discharge of air contaminants from any other equipment or activity not identified herein is not authorized by this permit.

### **1.4. Relation to local land use laws**

This permit is not valid in Lane County, or at any location where the operation of the permittee's processes, activities, and insignificant activities would be in violation of any local land use or zoning laws. For operation in Lane County, contact Lane Regional Air Protection Agency for any necessary permits at (541) 736-1056. It is the permittee's sole responsibility to obtain local land use approvals as, or where, applicable before operating at any location.

## **2.0 GENERAL EMISSION STANDARDS AND LIMITS**

### **2.1. Visible Emissions**

The permittee must comply with the following visible emission limits, as applicable:

- a. Visible emissions must not equal or exceed an average of 20 percent opacity.
- b. The visible emission limitation in this condition is based upon a six-minute block average of 24 consecutive observations recorded at 15-second intervals as specified in OAR 340-208-0110(2).
- c. The visible emission standard in this condition does not apply to fugitive emissions from the source.

## 2.2. Fugitive Emissions

The permittee must comply with the following [OAR 340-208-0210]:

- a. The permittee must take reasonable precautions to prevent particulate matter from becoming airborne from all site operations from which it may be generated. Such reasonable precautions include, but are not limited to:
  - i. Controlling vehicle speeds on unpaved roads;
  - ii. Application of water or other suitable chemicals on unpaved roads, material stockpiles, and other surfaces which can create airborne particulate;
  - iii. Full or partial enclosure of material stockpiles in cases where application of water or other suitable chemicals are not sufficient to prevent particulate matter from becoming airborne;
  - iv. Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne;
  - v. The prompt removal from paved street of earth or other material that may become airborne;
  - vi. Alternative precautions approved by DEQ.
- b. The permittee must not allow visible fugitive particulate emissions to leave the permittee's property for a period or periods totaling more than 18 seconds in a six minute period.
- c. Compliance with the fugitive emissions standard in Condition 2.2.b is determined by EPA Method 22 at the downwind property boundary.
- d. If requested by DEQ, the permittee must develop and implement a fugitive emission control plan to prevent any visible emissions from leaving the property of a source for more than 18 seconds in a six-minute period as determined by EPA Method 22.

## 2.3. Particulate Matter Fallout

The permittee must not cause or permit the deposition of any particulate matter larger than 250 microns in size at sufficient duration or quantity, as to create an observable deposition upon the real property of another person. [OAR 340-208-0450]

## 2.4. Operation of Pollution Control Devices and Processes

The permittee must operate and maintain air pollution control devices and emission reduction processes at the highest reasonable efficiency and effectiveness to minimize emissions. Air pollution control devices and components must be in operation and functioning properly at all times when the associated emission source is operating. [OAR 340-226-0120]

## 2.5. Nuisance and Odors

The permittee must comply with the following nuisance and nuisance odor requirements, as applicable:

- a. The permittee must not cause or allow air contaminants from any source to cause a nuisance. Nuisance conditions will be verified by DEQ personnel. [OAR 340-208-0300]
- b. When operating in Clackamas, Columbia, Multnomah, and Washington Counties, control apparatus and equipment, using the highest and best practicable treatment currently available, must be installed and operated to reduce to a minimum odor-bearing gases or odor-bearing particulate matter emitted into the atmosphere.

### 3.0 NESHAP SUBPART T APPLICABILITY

#### 3.1. 40 C.F.R. Part 63 Subpart T – Halogenated Solvent Cleaning NESHAP

The permittee must comply with all applicable provisions of 40 C.F.R. 63.460 – 63.471 for all affected emissions to which this subpart applies by the applicable date in 40 C.F.R. 63.460. The permittee must also comply with all applicable provisions of 40 C.F.R. Part 63, Subpart A – NESHAP General Provisions. For a full text of the federal standards, please refer to 40 C.F.R. Part 63, Subpart T and Subpart A.

NESHAP Subpart T is adopted and incorporated by reference in OAR 340-244-0220.

#### 3.2. Startup, Shutdown, and Malfunction Provisions

At all times, including periods of startup, shutdown, and malfunction, the permittee must operate and maintain any affected source, including associated air pollution control devices and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the permittee reduce emissions from the source to the greatest extent which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the permittee to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the permittee to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Malfunctions must be corrected as soon as practicable after their occurrence. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, the permittee must comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices.

### 4.0 SPECIFIC EMISSION STANDARDS AND LIMITS

#### 4.1. Facility-Wide Perchloroethylene Emission Limit

If the permittee operates any solvent cleaning machines, excluding cold batch cleaning machines, the permittee must ensure that the total emissions of perchloroethylene (PCE) from the affected facility are equal to or less than 4,800 kg (10,582 lbs. or 5.29 tons) on a 12-month rolling average. The permittee must keep all records necessary to demonstrate compliance with this emission limit for five (5) years.

#### 4.2. VOC Point Source Rules of Division 232

If the permittee is located inside the Portland AQMA, Medford-Ashland AQMA, or Salem-Keizer SKATS and uses trichloroethylene, carbon tetrachloride, or chloroform, the permittee must comply with the following:

For each cleaning machine using the following solvent...	The permittee must comply with the following requirements...
Trichloroethylene or Carbon Tetrachloride	<ul style="list-style-type: none"> <li>The machine cover must be designed, installed, and equipped so that it can be easily operated with one hand or foot; and</li> <li>The drainage facility must be internal, so that parts are enclosed under the cover while draining. The drainage facility may be external only for applications where an internal type cannot fit into the cleaning system; and</li> </ul>

(continued) Trichloroethylene or Carbon Tetrachloride	<ul style="list-style-type: none"> <li>• One of the following must be employed: <ul style="list-style-type: none"> <li>○ A freeboard ratio equal to or greater than 0.70; or</li> <li>○ Water must be kept over the solvent, which must be insoluble in and heavier than water; or</li> <li>○ A refrigerated chiller must be employed.</li> </ul> </li> </ul>
Chloroform	<ul style="list-style-type: none"> <li>• The machine cover must be designed, installed, and equipped so that it can be easily operated with one hand or foot.</li> </ul>

## 5.0 BATCH COLD CLEANING MACHINES

### 5.1. Control Equipment Options

The permittee must comply with the requirements of 5.1.a or 5.1.b, as applicable, for each affected batch cold cleaning machine:

- a. **Immersion Cold Machine:** For each immersion cold cleaning machine, the permittee must employ a tightly fitting cover that must be closed at all times except during parts entry and removal, and one of the following:
  - i. A 0.75 freeboard ratio (or greater) and work practices of Condition 5.2; or
  - ii. A 2.5 cm [1 inch] water layer.
- b. **Remote Reservoir Machine:** For each remote reservoir cold cleaning machine the permittee must comply with the following:
  - i. The permittee must employ a tightly fitting cover over the solvent sump that must be closed at all times except during the cleaning of parts; and
  - ii. The permittee must comply with the work practices of Condition 5.2.

### 5.2. Work Practices

For each immersion cold cleaner complying with the freeboard ratio requirement (Condition 5.1.a.i) and each remote reservoir cold cleaner (Condition 5.1.b), the permittee must comply with all following work and operational practices:

- a. **Waste collection and storage:** All waste solvent must be collected and stored in closed containers. The closed container may contain a device that allows pressure relief, but must not allow liquid solvent to drain from the container.
- b. **Flushing:** If a flexible hose or flushing device is used, flushing must be performed only within the freeboard area of the solvent cleaning machine.
- c. **Parts drainage:** The permittee must drain solvent cleaned parts for 15 seconds or until dripping has stopped, whichever is longer. Parts having cavities or blind holes must be tipped or rotated while draining.
- d. **Fill line:** The permittee must ensure that the solvent level does not exceed the fill line.
- e. **Spills:** Spills during solvent transfer must be wiped up immediately. The wipe rags must be stored in covered containers meeting the requirements of Condition 5.2.a.
- f. **Air- or pump-agitated solvent bath:** When an air- or pump-agitated solvent bath is used, the permittee must ensure that the agitator is operated to produce a rolling motion of the solvent but not observable splashing against tank walls or parts being cleaned.
- g. **Room draft:** The permittee must ensure that, when the cover is open, the cold cleaning machine is not exposed to drafts greater than 132 feet per minute as measured between 3.3 and 6.6 feet upwind and at the same elevation as the tank lip.
- h. **Porous materials:** Except as provided in Condition 5.2.i, sponges, fabric, wood, and paper products must not be cleaned.

- i. **Porous material exception:** The prohibition in Condition 5.2.h does not apply to the cleaning of porous materials that are part of polychlorinated biphenyl (PCB) laden transformers if those transformers are handled throughout the cleaning process and disposed of in compliance with an approved PCB disposal permit issued in accordance with the Toxic Substances Control Act.
  - i. If the permittee cleans any sponge, fabric, wood, or paper products, the approved PCB disposal permit referenced in Condition 5.2.i must be on-site and available for review at all times.

## 6.0 BATCH VAPOR & IN-LINE CLEANING MACHINES

### 6.1 Overall Control and Compliance Options

For each affected batch vapor and in-line cleaning machine, the permittee must comply with one of the following: Condition 6.1.a, 6.1.b, 6.1.c, or 6.1.d.

- a. Control Requirements: The permittee must employ one of the control combinations listed in Condition 19.0, Attachment 1.
- b. Alternative Standards/Overall Emission Limits: For each **batch vapor or in-line cleaning machine with a solvent/air interface**, as an alternative to the control requirements in Condition 6.1.a, the permittee must demonstrate that the emissions from the cleaning machine are equal to or less than the following overall emission limits.

Affected Machine	Average Monthly Emission Limit*
Batch vapor degreaser	150 kg/m <sup>2</sup> or 30.7 lb/ft <sup>2</sup>
Existing in-line degreaser	153 kg/m <sup>2</sup> or 31.4 lb/ft <sup>2</sup>
New in-line degreaser	99 kg/m <sup>2</sup> or 20 lb/ft <sup>2</sup>

\*based on a 3-month rolling average.

- c. Alternative Standards/Overall Emission Limits: For each **batch vapor cleaning machine that does not have a solvent/air interface**, as an alternative to the control requirements of Condition 6.1.a, the permittee must determine the overall emission limit according to 40 C.F.R. 63.464(a)(2). Any combination of control techniques may be used to meet the overall emission limits.
- d. Alternative Standards/Overall Control System Efficiency: For each **continuous web or remote reservoir continuous web cleaning machine**, as an alternative to the control requirements in Condition 6.1.a, the permittee must demonstrate an overall cleaning system control efficiency of 70 percent or greater using the procedures in Condition 8.2.b.
  - i. This demonstration can be made for either a single cleaning machine or for a solvent cleaning system that contains one or more cleaning machines and ancillary equipment, such as storage tanks and distillation units.
  - ii. If the demonstration is made for a cleaning system, the facility must identify any modifications required to the procedures in Condition 8.1.a or 8.2.a and they must be approved by DEQ in writing (e-mail or hard copy letter).

### 6.2 Design Requirements: Batch Vapor & In-Line

For each batch vapor and in-line cleaning machine complying with the control requirements in Condition 6.1.a, the permittee must ensure the machine conforms to the design requirements in Conditions 6.2.a through 6.2.g.

For each continuous web or remote reservoir continuous web cleaning machine, the permittee must comply with the requirements in Condition 6.3 or 6.4, as appropriate for each machine, in lieu of complying with this Condition 6.2.

- a. **Air disturbances:** Each cleaning machine must be designed or operated to meet the following control equipment or technique requirements:
  - i. A reduced room draft of 50 feet per minute or less; or
  - ii. An idling and downtime mode: The cover must 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. The cover may be readily opened or closed, must completely cover the cleaning machine openings when in place, and must be free of cracks, holes or other defects.
- b. **Freeboard ratio:** Each cleaning machine must have a freeboard ratio of 0.75 or greater.
- c. **Parts handling system:** Each cleaning machine must have an automated parts handling system capable of moving parts or parts baskets at a speed of 11 feet per minute or less from the initial loading of parts through removal of cleaned parts.
- d. **Sump heat shutoff:** Each vapor cleaning machine must be equipped with a device that shuts off the sump heat if the sump liquid solvent level drops to the sump heater coils. The sump heat shutoff requirement of Condition 6.2.d does not apply to a vapor cleaning machine that uses steam to heat the solvent.
- e. **Vapor level control:** Each vapor cleaning machine must be equipped with a vapor level control device that shuts off sump heat if the vapor level in the machine rises above the height of the primary condenser.
- f. **Primary Condenser:** Each vapor cleaning machine must have a primary condenser.
- g. **Lip exhaust:** Each cleaning machine that uses lip exhaust must be designed and operated to route all collected solvent vapors through a properly operated and maintained carbon adsorber as described in Condition 7.1.g.

### 6.3. Design Requirements: Continuous Web Machines

For each continuous web cleaning machine complying with the control requirements in Condition 6.1.a, the permittee must ensure the machine conforms to the following design requirements:

- a. **Air disturbances:** Each cleaning machine must meet one of the following control equipment or technique requirements:
  - i. An idling and downtime mode cover that may be readily opened or closed; that completely covers the cleaning machine openings when in place; and is free of cracks, holes, and other defects. A continuous web part that completely occupies

an entry or exit port when the machine is idle is considered to meet this requirement.

- ii. A reduced room draft of 50 feet per minute or less.
  - iii. Gasketed or leakproof doors that separate both the continuous web part feed reel and take-up reel from the room atmosphere if the doors are checked according to the requirements of Condition 7.1.c.
  - iv. A cleaning machine that is demonstrated to be under negative pressure during idling and downtime and is vented to a carbon adsorption system that meets either the overall control system efficiency of Condition 6.1.d or Condition 7.1.g.
- b. **Freeboard ratio:** Each continuous web cleaning machine must have a freeboard ratio of 0.75 or greater unless that cleaning machine is a remote reservoir continuous web cleaning machine.
  - c. **Automated parts handling system:** Each cleaning machine must have an automated parts handling system capable of moving parts or part baskets at a speed of 11 feet per minute or less from the initial loading of parts through removal of cleaned parts, unless the cleaning machine is a continuous web cleaning machine that has a squeegee system or air knife system that is installed, maintained, and operated to meet the requirements of Condition 7.1.
  - d. **Sump heat shutoff:** Each vapor cleaning machine must 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.
  - e. **Vapor level control:** Each vapor cleaning machine must 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.
  - f. **Primary condenser:** Each vapor cleaning machine must have a primary condenser.
  - g. **Exhaust:** Each cleaning machine that uses lip exhaust or any other exhaust within the solvent cleaning machine must be designed and operated to route all collected solvent vapors through a properly operated and maintained carbon adsorber that meets either the overall control system efficiency of Condition 6.1.d or Condition 7.1.g.

#### 6.4. Design Requirements: Remote Reservoir Continuous Web Machines

For each remote reservoir continuous web cleaning machine complying with the control requirements in Condition 6.1.a, the permittee must ensure the machine conforms to the following design requirements:

- a. **Automated parts handling system:** Each cleaning machine must have an automated parts handling system capable of moving parts or parts baskets at a speed of 3.4 meters per minute (11 feet per minute) or less from the initial loading of parts through removal of cleaned parts, unless the cleaning machine is a continuous web cleaning machine that has a squeegee system or air knife system that is installed, maintained, and operated meeting the requirements of Condition 7.1.
- b. **Sump heat shutoff:** Each vapor cleaning machine must be equipped with a device that shuts off the sump heat if the sump liquid solvent level drops to the sump heater coils.
- c. **Vapor level control:** Each vapor cleaning machine must 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.



- d. **Primary condenser:** Each vapor cleaning machine must have a primary condenser.
- e. **Exhaust:** Each cleaning machine that uses lip exhaust or any other exhaust within the solvent cleaning machine must be designed and operated to route all collected solvent vapors through a properly operated and maintained carbon adsorber that meets either the overall control system efficiency of Condition 6.1.d or Condition 7.1.g.

#### 6.5. Work Practices: Batch Vapor and In-Line Machines

For each batch vapor and in-line cleaning machine complying with the control requirements in Condition 6.1.a, the permittee must meet all the following work and operational practices.

For each continuous web or remote reservoir continuous web cleaning machine, the permittee must comply with the requirements in Conditions 6.6 or 6.7, as appropriate per machine, in lieu of complying with this Condition 6.5.

- a. **Air disturbances:** Control air disturbances across the cleaning machine opening(s) by incorporating the following control equipment or techniques:
  - i. Cover(s) to each solvent cleaning machine must be in place during the idling mode, and during the downtime mode unless either the solvent has been removed or maintenance or monitoring is being performed that requires the cover(s) to not be in place; or
  - ii. A reduced room draft of 50 feet per minute or less. The permittee must measure room draft as described in Condition 7.1.b. The permittee must establish and maintain the operating conditions under which the wind speed was demonstrated to be 50 feet per minute or less.
- b. **Parts coverage:** The parts baskets or the parts being cleaned in an open-top batch vapor cleaning machine must not occupy more than 50 percent of the solvent/air interface area unless the parts baskets or parts are introduced at a speed of 3.0 feet per minute or less.
- c. **Spraying operations:** Any spraying operations must be done within the vapor zone or within a section of the solvent cleaning machine that is not directly exposed to the ambient air.
- d. **Parts orientation:** Parts must be oriented so that the solvent drains from them freely. Parts having cavities or blind holes must be tipped or rotated before being removed from any solvent cleaning machine.
- e. **Parts drainage:** Parts baskets or parts must not be removed from any solvent cleaning machine until dripping has stopped.
- f. **Startup:** During startup of each vapor cleaning machine, the primary condenser must be turned on before the sump heater.
- g. **Shutdown:** During shutdown of each vapor cleaning machine, the sump heater must be turned off and the solvent vapor layer allowed to collapse before the primary condenser is turned off.
- h. **Solvent addition or drainage:** When solvent is added or drained from any solvent cleaning machine, the solvent must be transferred using threaded or other leakproof couplings and the end of the pipe in the solvent sump must be located beneath the liquid solvent surface.

- i. **Maintenance:** Each solvent cleaning machine and associated controls must be maintained as recommended by the manufacturers of the equipment or by using alternative maintenance practices that have been demonstrated to achieve the same or better results as those recommended by the manufacturer.
  - i. Any alternative maintenance practices must be approved, in writing, by DEQ and be retained with the written approval on site at all times.
- j. **Operator test:** Each operator of a solvent cleaning machine must complete and pass the applicable sections of the 'test of solvent cleaning procedures' in Appendix A to 40 C.F.R. part 63 subpart T if requested during an inspection.
- k. **Waste collection and storage:** Waste solvent, still bottoms, and sump bottoms must be collected and stored in closed containers. The closed containers may contain a device that would allow pressure relief, but must not allow liquid solvent to drain from the container.
  - l. **Porous materials:** Sponges, fabric, wood, and paper products must not be cleaned.

#### 6.6. Work Practices: Continuous Web Machines

For each continuous web cleaning machine complying with the control requirements in Condition 6.1.a, the permittee must meet all the following work and operational practices:

- a. **Air disturbances:** Control air disturbances across the cleaning machine opening(s) by incorporating one of the following control equipment or techniques:
  - i. Idling and downtime cover: Cover(s) to each solvent cleaning machine must be in place during the idling mode and during the downtime mode unless either the solvent has been removed from the machine or maintenance or monitoring is being performed that requires the cover(s) in place. A continuous web part that completely occupies an entry or exit port when the machine is idle is considered to meet this requirement.
  - ii. Reduced room draft: A reduced room draft of 50 feet per minute or less. The permittee must comply with Condition 7.1.b.
  - iii. Gasketed or leakproof doors or covers: Gasketed or leakproof doors or covers that separate both the continuous web part feed reel and take-up reel from the room atmosphere if the doors are checked according to the requirements of Condition 7.1.b.iv.
  - iv. Negative pressure: A cleaning machine that is demonstrated to be under negative pressure during idling and downtime and is vented to a carbon adsorption system that meets either the overall control system efficiency of Condition 6.1.d or Condition 7.1.g.
- b. **Spraying operations:** Any spraying operations must be conducted in a section of the solvent cleaning machine that is not directly exposed to the ambient air or within a machine having a door or cover that meets the requirements of Condition 6.6.a.iii.
- c. **Startup:** During startup of each vapor cleaning machine, the primary condenser must be turned on before the sump heater.
- d. **Shutdown:** During shutdown of each vapor cleaning machine, the sump heater must be turned off and the solvent vapor layer allowed to collapse before the primary condenser is turned off.
- e. **Solvent addition or drainage:** When solvent is added or drained from any solvent cleaning machine, the solvent must be transferred using threaded or other leakproof couplings, and the end of the pipe in the solvent sump must be located beneath the liquid solvent surface.

- f. **Maintenance:** Each solvent cleaning machine and associated controls must be maintained as recommended by the manufacturers of the equipment or using alternative maintenance practices that have been demonstrated to achieve the same or better results as those recommended by the manufacturer.
- g. **Waste collection and storage:** Waste solvent, still bottoms, sump bottoms, and waste absorbent materials used in the cleaning process for continuous web cleaning machines must be collected and stored in waste containers. The closed containers may contain a device that would allow pressure relief, but would not allow liquid solvent to drain from the container.
- h. **Porous materials:** Except as provided in Condition 6.6.i, sponges, fabric, wood, and paper products may not be cleaned.
- i. **Porous material exemption:** The prohibition in Condition 6.6.h does not apply to absorbent materials that are used as part of the cleaning process of continuous web cleaning machines, including rollers and roller covers.

#### 6.7. Work Practices: Remote Reservoir Continuous Web Machines

For each remote reservoir continuous web cleaning machine complying with the control requirements in Condition 6.1.a, the permittee must meet all the following work and operational practices:

- a. **Spraying operations:** Any spraying operations must be conducted in a section of the solvent cleaning machine that is not directly exposed to the ambient air; or  
**Spraying operations** must be conducted within a machine having a door or cover that meets the requirements and is operated and maintained in compliance with Condition 6.6.a.iii.
- b. **Startup:** During startup of each vapor cleaning machine, the primary condenser must be turned on before the sump heater.
- c. **Shutdown:** During shutdown of each vapor cleaning machine, the sump heater must be turned off and the solvent vapor layer allowed to collapse before the primary condenser is turned off.
- d. **Solvent addition or drainage:** When solvent is added or drained from any solvent cleaning machine, the solvent must be transferred using threaded or other leakproof couplings, and the end of the pipe in the solvent sump must be located beneath the liquid solvent surface.
- e. **Maintenance:** Each solvent cleaning machine and associated controls must be maintained as recommended by the manufacturers of the equipment or using alternative maintenance practices that have been demonstrated to achieve the same or better results as those recommended by the manufacturer.
- f. **Waste collection and storage:** Waste solvent, still bottoms, sump bottoms, and waste absorbent materials used in the cleaning process for continuous web cleaning machines must be collected and stored in waste containers. The closed containers may contain a device that would allow pressure relief, but would not allow liquid solvent to drain from the container.
- g. **Porous materials:** Except as provided in Condition 6.7.h, sponges, fabric, wood, and paper products may not be cleaned.
- h. **Porous material exemption:** The prohibition in Condition 6.7.g does not apply to absorbent materials that are used as part of the cleaning process of continuous web cleaning machines, including rollers and roller covers.

## 7.0 BATCH VAPOR & IN-LINE COMPLIANCE DEMONSTRATION FOR CONTROL COMBINATION

### 7.1. Control Requirements, Design Requirements, and Work Practices Compliance Demonstration

A permittee using a carbon adsorber on any affected machine must comply with all requirements of Condition 7.1.g for each cleaning machine equipped with a carbon adsorber.

For each batch vapor or in-line cleaning machine complying with a control combination, Condition 6.1.a, the permittee must operate, maintain, and monitor as outlined below for any controls used. The permittee must determine and record, during each monitoring period described below, whether each requirement was met.

- a. **Freeboard refrigeration:**
  - i. Freeboard refrigeration measurement and maintenance: The permittee must ensure that the chilled air blanket temperature, measured at the center of the air blanket using a thermometer or thermocouple, is no greater than 30 percent of the solvent's boiling point during the idling mode.
  - ii. Freeboard refrigeration temperature monitoring: **WEEKLY.** The permittee must determine and record the temperature on a weekly basis.
  - iii. Freeboard Exceedance: An exceedance has occurred if there is any deviation from or noncompliance with Condition 7.1.a.i that is not corrected within 15 days of detection. Adjustments or repairs must be made as soon as possible. The parameter must be remeasured immediately upon adjustment or repair to demonstrate compliance.
- b. **Reduced Room Draft:**
  - i. Room draft measurement: The permittee must ensure that the flow or movement of the air across the top of the freeboard area of the solvent cleaning machine or within the solvent cleaning machine enclosure does not exceed 50 feet per minute at any time.
  - ii. Room draft maintenance: The permittee must establish and maintain the operating conditions under which the speed was demonstrated to be 50 feet per minute or less.
  - iii. Room draft monitoring: **WEEKLY & QUARTERLY.** The permittee must conduct monitoring and record the results as follows:
    - If reduced room draft is maintained by controlling room parameters (i.e., redirecting fans, closing doors and windows, etc.) the permittee must conduct an initial monitoring test of the windspeed and of room parameters, quarterly monitoring of windspeed, and weekly monitoring of room parameters as follows:
      - **Initial and Quarterly:** Measure the windspeed within six (6) inches above the top of the freeboard area of the solvent cleaning machine using the following procedures:
        - Determine the direction of the wind current by slowly rotating a velometer, or similar device, until the maximum speed is located.
        - Orient a velometer, or similar device, in the direction of the wind current at each of the four corners of the machine.

- Record the reading for each corner.
- Average the values obtained at each corner and record the average wind speed.
- **Initial and Weekly:** Monitor, on a weekly basis, the room parameters established during the initial compliance test that are used to achieve the reduced room draft.
- If an enclosure (full or partial) is used to achieve a reduced room draft, the permittee must conduct an initial monitoring test and, thereafter, monthly monitoring tests of the windspeed within the enclosure using the following procedure.
  - **Initial and Monthly:** Determine the direction of the wind current in the enclosure by slowly rotating a velometer, or similar device, inside the entrance to the enclosure until the maximum speed is located.
  - **Initial and Monthly:** Record the maximum wind speed.
  - **Initial and Monthly:** Conduct a monthly visual inspection of the enclosure to determine if it is free of cracks, holes, and other defects.
- iv. Room Draft Exceedance: An exceedance has occurred if there is any deviation from or noncompliance with the maintenance Condition 7.1.b.ii.  
An exceedance has occurred if there is any deviation from or noncompliance with Condition 7.1.b.i that is not corrected within 15 days of detection. Adjustments or repairs must be made as soon as possible. The parameter must be remeasured immediately upon adjustment or repair to demonstrate compliance.
- c. **Working-Mode Cover:**
  - i. Cover Operation: The permittee must ensure that the cover opens only for part entrance and removal and completely covers the cleaning machine openings when closed.
  - ii. Cover maintenance: The permittee must ensure that the cover is maintained free of cracks, holes, and other defects.
  - iii. Cover monitoring: **MONTHLY.** The permittee must inspect and record the results of the inspection on a monthly basis to determine if the cover is opening and closing properly, completely covers the openings when closed, and is free of cracks, holes, and other defects.
  - iv. Cover Exceedance: An exceedance has occurred if there is any deviation from or noncompliance with the operation requirement of Condition 7.1.c.i.  
An exceedance has occurred if there is any deviation from or noncompliance with Condition 7.1.c.ii that is not corrected within 15 days of detection. Adjustments or repairs must be made as soon as possible. The parameter must be remeasured immediately upon adjustment or repair to demonstrate compliance.
- d. **Idling-mode Cover and/or Downtime-mode Cover:**
  - i. Cover operation: The permittee must ensure that the cover is in place whenever parts are not in the solvent cleaning machine. The permittee must ensure the cover completely covers the cleaning machine openings when in place.
  - ii. Cover maintenance: The permittee must ensure that the cover is maintained free of cracks, holes, and other defects.

- iii. Cover monitoring: **MONTHLY**. The permittee must inspect and record the results of the inspection on a monthly basis to determine if the cover is opening and closing properly, completely covers the openings when closed, and is free of cracks, holes, and other defects.
  - iv. Cover Exceedance: An exceedance has occurred if there is any deviation from or noncompliance with the operation requirements of Condition 7.1.d.i.  
An exceedance has occurred if there is any deviation from or noncompliance with Condition 7.1.d.ii that is not corrected within 15 days of detection. Adjustments or repairs must be made as soon as possible. The parameter must be remeasured immediately upon adjustment or repair to demonstrate compliance.
- e. **Dwell:**
- i. Determination of appropriate dwell time: The permittee must determine the amount of time for the part or parts basket to cease dripping once placed in the vapor zone for each type of part or parts basket, or using the most complex part type. 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. The parts or parts basket used for this determination must be at room temperature before being placed in the vapor zone.
  - ii. Dwell time maintenance: The permittee must 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.
  - iii. Dwell time monitoring: **MONTHLY**. The permittee must determine and record the actual dwell time, on a monthly basis, by measuring the period of time that parts are held within the freeboard area of the solvent cleaning machine after cleaning.
  - iv. Dwell Exceedance: An exceedance has occurred if there is any deviation from or noncompliance with the requirements of Condition 7.1.e.
- f. **Superheated Vapor System:**
- i. Superheated vapor system maintenance: The permittee must ensure that the temperature of the solvent vapor at the center of the superheated vapor zone, using a thermometer or thermocouple, is at least 10 °F above the solvent's boiling point while the solvent cleaning machine is in the idling mode.
  - ii. Superheated vapor system dwell time: The permittee must ensure that the manufacturer's specifications for determining the minimum proper dwell time within the superheated vapor system is followed. The permittee must ensure that the parts remain within the superheated vapor for at least the minimum proper dwell time.
  - iii. Superheated vapor system temperature monitoring: **WEEKLY**. The permittee must determine and record the temperature on a weekly basis.
  - iv. Superheated Vapor Exceedance: An exceedance has occurred if there is any deviation from or noncompliance with the requirements of Condition 7.1.f.ii.  
An exceedance has occurred if there is any deviation from or noncompliance with Condition 7.1.f.i that is not corrected within 15 days of detection. Adjustments or

repairs must be made as soon as possible. The parameter must be remeasured immediately upon adjustment or repair to demonstrate compliance.

- g. **Carbon Adsorber:** 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 must comply with the following requirements.
- i. Carbon adsorber maintenance: The permittee must 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. If the halogenated HAP solvent concentration in the carbon adsorber exhaust exceeds 100 parts per million, the permittee must adjust the desorption schedule or replace the disposable canister, if not a regenerative system, so that the exhaust concentration of the halogenated HAP solvent is brought below 100 parts per million.
  - ii. Carbon adsorber operation: The permittee must ensure that the carbon adsorber bed is not bypassed during desorption.
  - iii. Lip exhaust location: The permittee must ensure that the lip exhaust is located above the solvent cleaning machine cover so that the cover closes below the lip exhaust level.
  - iv. Monitoring sampling port: The permittee must 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; the sampling port must not be downstream from any other inlet; and the sampling port must be 2 stack or duct diameters upstream from any flow disturbance such as a bend, expansion, contraction, inlet or outlet.
  - v. Carbon adsorber monitoring: **WEEKLY.** The permittee must measure and record the concentration of halogenated HAP solvent in the exhaust of the carbon adsorber weekly with a colorimetric detector tube. This test must be conducted while the solvent cleaning machine is in the working mode and is venting to the carbon adsorber. The permittee must 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. The permittee must use the colorimetric detector tube according to the manufacturer's instructions.
  - vi. Carbon Adsorber Exceedance: An exceedance has occurred if there is any deviation from or noncompliance with the requirements of Conditions 7.1.g.ii or 7.1.g.iii.  
  
An exceedance has occurred if there is any deviation from or noncompliance with Condition 7.1.g.i that is not corrected within 15 days of detection. Adjustments or repairs must be made as soon as possible. The parameter must be remeasured immediately upon adjustment or repair to demonstrate compliance.
- h. **Parts Handling System:**
- i. Hoist speed determination: The permittee must 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 or feet divided by the time in minutes (meters or feet per minute).

- ii. Hoist speed monitoring: **MONTHLY & QUARTERLY**. The hoist speed determination must be done monthly. If after the first year, no exceedances of the hoist speed are measured, the permittee may begin monitoring the hoist speed quarterly. If an exceedance of the hoist speed occurs during quarterly monitoring, the monitoring frequency returns to monthly. The permittee may return to quarterly monitoring if 12 separate consecutive monthly hoist speed determinations without an exceedance is demonstrated.
  - If the permittee can demonstrate in either the initial compliance report or by submitting documentation to DEQ that the hoist cannot exceed a speed of 11 feet per minute, the required monitoring frequency may be done quarterly, including during the first year of compliance. The permittee must receive written approval from DEQ prior to monitoring quarterly only.
- i. **Superheated Part System:**
  - i. Superheated part system monitoring: **EACH USE**. If a superheated part system is used to comply with the control requirements in Condition 6.1.a, the permittee must use a thermometer, thermocouple, or other temperature measurement device to measure the temperature of the continuous web part while it is in the solvent cleaning machine. This temperature measurement can also be taken at the exit of the solvent cleaning machine.
  - ii. Alternative superheated part system monitoring: As alternative to complying with the superheated part system monitoring of Condition 7.1.i.i, the permittee can provide data that demonstrates that the part temperature remains above the boiling point of the solvent at all times that the part is within the continuous web solvent cleaning machine. This data could include design and operating conditions such as information supporting any exothermic reaction inherent in the processing. The permittee must receive written approval from DEQ prior to utilizing this alternative monitoring method (email or hard copy letter).
  - iii. Superheated part system maintenance: The permittee must ensure that the temperature of the continuous web part is at least 10 degrees Fahrenheit above the solvent boiling point while the part is traveling through the cleaning machine.
- j. **Squeegee System**: If a squeegee system is used to comply with the continuous web or remote reservoir continuous web requirements, the permittee must comply with the following:
  - i. Maximum product throughput determination: Determine the appropriate maximum product throughput for the squeegees used in the squeegee system, as follows:
    - Conduct daily visible inspections of the continuous web part. This monitoring must be conducted at the point where the continuous web part exits the squeegee system. It is not necessary for the squeegees to be new at the time monitoring is begun if the two following conditions are both met.
      - 1) The continuous web part leaving the squeegee system has no visible solvent film.
      - 2) The amount of continuous web that has been processed through the squeegees since the last replacement is known.
    - Continue daily monitoring until a visible solvent film is noted on the continuous web part.



- Determine the length of continuous web product that has been cleaned using the squeegee since it was installed.
  - The maximum product throughput is equal to the time it takes to clean ninety-five (95) percent of the length of product determined above. This time period, in days, may vary depending on the amount of continuous web product cleaned each day.
- ii. Squeegee monitoring: **WEEKLY**. The permittee must visually inspect, once per each 7-day period, the continuous web part exiting the solvent cleaning machine to ensure that no solvent film is visible on the part. Record both results of the visible inspection and the length of continuous web product cleaned during the previous week.
  - iii. Product processed: Calculate the total amount of continuous web product processed since the squeegees were replaced and compare to the maximum product throughput for the squeegees.
  - iv. Squeegee replacement: Replace squeegees at or before the maximum product throughput is attained.
  - v. Recalculation of maximum product throughput: Redetermine the maximum product throughput for the squeegees if any solvent film is visible on the continuous web part immediately after it exits the cleaning machine.
- k. **Air Knife System**: If an air knife system is used to comply with the continuous web or remote reservoir continuous web requirements, the permittee must comply with the following:
- i. Air knife parameter determination: Determine the air knife parameter and parameter value that demonstrate that the air knife is properly operating. An air knife is properly operating if no visible solvent film remains on the continuous web part after it exits the cleaning machine.
  - ii. Air knife parameter maintenance: Maintain the air knife parameter value at the level determined in the preceding air knife parameter determination Condition 7.1.k.i.
  - iii. Air knife monitoring: **WEEKLY**. The permittee must visually inspect the continuous web part exiting the solvent cleaning machine to ensure that no solvent film is visible on the part once per each 7-day period.
  - iv. Redetermination of air knife parameter: Redetermine the proper air knife parameter value if any solvent film is visible on the continuous web part immediately after it exits the cleaning machine.
- l. **Combination Squeegee and Air Knife System**: If a combination squeegee and air knife system is used to comply with the continuous web or remote reservoir continuous web requirements, the permittee must comply with the following:

- i. Squeegee air knife parameter determination: Determine the system parameter and value that demonstrate that the system is properly operating.
- ii. Squeegee and air knife parameter maintenance: Maintain the selected parameter value at the level determined in the preceding squeegee air knife parameter determination Condition 7.1.1.i.
- iii. Squeegee and air knife monitoring: **WEEKLY**. The permittee must visually inspect the continuous web part exiting the solvent cleaning machine to ensure that no solvent film is visible on the part once per each 7-day period.
- iv. Redetermination of squeegee air knife parameter: Redetermine the proper parameter value if any solvent film is visible on the continuous web part immediately after it exits the cleaning machine.

## 8.0 ALTERNATIVE STANDARDS COMPLIANCE DEMONSTRATION

### 8.1. Alternative Standards Compliance Demonstration Option 1

For each batch vapor or in-line solvent cleaning machine complying with the alternative standards in Condition 6.1.b or Condition 6.1.c, the permittee must comply with the following:

- a. **Solvent Maintenance**: On the first operating day of the month, the permittee must 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 Condition 8.1.b. The solvent cleaning machine does not have to be emptied and filled with fresh unused solvent prior to the calculations.
- b. **Solvent emissions**: The permittee must calculate solvent emissions as follows on the first operating day of each month. Using the records of all solvent additions and deletions for the previous monthly reporting period, the permittee must determine solvent emissions ( $E_i$ ) using equation 1 for cleaning machines with a solvent/air interface and equation 2 for cleaning machines without a solvent/air interface:

$$E_i = \frac{SA_i - LSR_i - SSR_i}{AREA_i} \quad (1)$$

$$E_n = SA_i - LSR_i - SSR_i \quad (2)$$

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<sub>i</sub> = 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<sub>i</sub> = the total amount of halogenated HAP solvent removed from the solvent cleaning machine in solid waste during the most recent monthly reporting period i, (kilograms of solvent per month).
- AREA = the solvent/air interface area of the solvent cleaning machine (square meters).

- c. **Solvent removed:** The permittee must determine SSR<sub>i</sub> from tests conducted using EPA Reference Method 25d or by engineering calculations included in the compliance report.
- d. **3-Month rolling average solvent emissions:** The permittee must determine the monthly rolling average, EA, for the 3-month period ending with the most recent reporting period using equation 3 for cleaning machines with a solvent/air interface or equation 4 for cleaning machines without a solvent/air interface:

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

$$EA_n = \frac{\sum_{j=1}^3 E_n}{3} \quad (4)$$

Where,

- Ea<sub>j</sub> = 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<sub>n</sub> = the average halogenated HAP solvent emissions over the preceding 3 monthly reporting periods, (kilograms of solvent per month)
- E<sub>i</sub> = 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<sub>n</sub> = 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

- i. Average Monthly Emission Limit Exceedance: An exceedance has occurred if the applicable 3-month rolling average emission limit is not met.

## 8.2. Alternative Standards Compliance Demonstration Option 2

For each continuous web or remote reservoir continuous web cleaning machine complying with the overall control system efficiency in Condition 6.1.d, the permittee must comply with the following:

- a. **Clean Solvent:** On the first operating day of the month, the permittee must 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 the overall cleaning system control efficiency. The solvent cleaning machine does not have to be emptied and filled with fresh unused solvent prior to the calculations.
- b. **Overall control system efficiency determination:** The permittee must, on the first operating day of the month, determine the overall control system efficiency as follows.
  - i. Using the records of all solvent additions, solvent deletions, and solvent recovered from the carbon adsorption system for the previous monthly reporting period required under Condition 11.5, determine overall control system efficiency ( $E_o$ ) using equation 5.

$$E_o = R_i / (R_i + Sa_i - SSR_i) \tag{5}$$

Where,

- $E_o$  = overall cleaning system control efficiency
- $R_i$  = the total amount of halogenated HAP liquid solvent recovered from the carbon adsorption system and recycled to the solvent cleaning system during the most recent monthly reporting period i, (kilograms of solvent per month)
- $Sa_i$  = the total amount of halogenated HAP liquid solvent added to the solvent cleaning system during the most recent monthly reporting period i, (kilograms of solvent per month)
- $SSR_i$  = the total amount of halogenated HAP solvent removed from the solvent cleaning system in solid waste, obtained as described in Condition 8.1.c, during the most recent monthly reporting period i, (kilograms of solvent per month)

## 9.0 PLANT SITE EMISSION LIMITS

### 9.1. Plant Site Emission Limits (PSEL)

The permittee must not cause or allow plant site emissions to exceed the following:

Pollutant	Limit	Units
VOC	39	tons per year
Single HAP	9	
Combined HAPs	24	

### 9.2. Annual Period

The annual plant site emissions limits apply to any 12-consecutive calendar month period.

## 10.0 PSEL COMPLIANCE DEMONSTRATION

DEQ and the permittee must account for any permit deviations and SSM episodes when determining compliance with all PSELs.

### 10.1. Hazardous Air Pollutant Emissions

Compliance with the individual HAP emission limit, except for perchloroethylene, in Condition 9.0 is determined for each 12-consecutive calendar month period based on the following calculation for each HAP:

$$E_{\text{HAPI}} = [\sum(C_X * D_X * K_X) - W] \times 1 \text{ ton} / 2000\text{lb.}$$

Where,

$E_{\text{HAPI}}$	=	Individual HAP emissions (ton/yr.);
I	=	Subscript I represents a specific HAP
$\sum$	=	Symbol meaning the sum of the emissions from all types of materials used.
C	=	Material usage for the period in gallons;
D	=	Material density in pounds per gallon;
K	=	Material HAP fraction in pounds of HAP per pound of material;
X	=	Subscript X represents a specific material;
W	=	Weight of HAP shipped offsite

Compliance with the combined HAP emission limit in Condition 9.0 is determined for each 12-consecutive calendar month period by summing the individual HAP emissions as determined above and by Condition 10.3.

### 10.2. VOC Emissions

Compliance with the VOC PSEL in Condition 9.0 is determined for each 12-consecutive calendar month period based on the following calculation:

$$E_{\text{VOC}} = [\sum(C_X * D_X * K_X) - W] \times 1 \text{ ton} / 2000\text{lb.}$$

Where,

$E_{\text{VOC}}$	=	VOC emissions (ton/yr.);
$\sum$	=	Symbol meaning the sum of the emissions from all types of materials used.
C	=	Material usage for the period in gallons;
D	=	Material density in pounds per gallon;
K	=	Material VOC fraction in pounds of VOC per pound of material;
X	=	Subscript X represents a specific material;
W	=	Weight of VOC shipped offsite

### 10.3. Perchloroethylene Emissions

If the permittee operates any batch vapor or in-line solvent cleaning machines that use perchloroethylene, the permittee must, on the first operating day of every month, demonstrate compliance with the facility-wide perchloroethylene emission limit in Condition 4.1 on a 12-month rolling total basis using the following procedures:

- The permittee must, on the first operating day of every month, ensure that each solvent cleaning machine system using perchloroethylene contains only clean liquid solvent. This includes, but is not limited to, fresh unused solvent, recycled solvent, and used

solvent that has been cleaned of soiled materials. A fill line must be indicated during the first month the measurements are made. The solvent level within the machine must be returned to the same fill-line each month, immediately prior to calculating monthly emissions as required by Condition 10.3.b and 10.3.c. The solvent cleaning machine does not have to be emptied and filled with fresh unused solvent prior to the calculations.

- b. The permittee must, on the first operating day of the month, using the records of all solvent additions and deletions for the previous month, determine perchloroethylene emissions ( $E_{\text{unit}}$ ) from each solvent cleaning machine using the following equation:

$$E_{\text{unit}} = SA_i - LSR_i - SSR_i$$

Where,

$E_{\text{unit}}$  = the total perchloroethylene emissions from the solvent cleaning machine during the most recent month  $i$ , (kilograms of solvent per month);

$SA_i$  = the total amount of perchloroethylene liquid solvent added to the solvent cleaning machine during the most recent month  $i$ , (kilograms of solvent per month);

$LSR_i$  = the total amount of perchloroethylene liquid solvent removed from the solvent cleaning machine during the most recent month  $i$ , (kilograms of solvent per month);

$SSR_i$  = the total amount of perchloroethylene solvent removed from the solvent cleaning machine in solid waste, obtained as described in Condition 10.3.c, during the most recent month  $i$ , (kilograms of solvent per month).

- c. The permittee must, on the first operating day of the month, determine  $SSR_i$  from tests conducted using EPA reference method 25d or by engineering calculations included in the compliance report.
- d. The permittee must on the first operating day of the month, after 12 months of perchloroethylene emissions data are available, determine the 12-month rolling total perchloroethylene emissions,  $ET_{\text{unit}}$ , for the 12-month period ending with the most recent month using the following equation:

$$ET_{\text{unit}} = \left[ \sum_{j=1}^{12} E_{\text{unit}} \right]$$

Where,

$ET_{\text{unit}}$  = the total perchloroethylene solvent emissions over the preceding 12 months, (kilograms of solvent emissions per 12-month period);

$\Sigma$  = Symbol meaning the sum of the monthly perchloroethylene emissions;

$E_{\text{unit}}$  = perchloroethylene solvent emissions for each month for the most recent 12 months (kilograms of solvent per month).

- e. The permittee must on the first operating day of the month, after 12 months of emissions data are available, determine the 12-month rolling total perchloroethylene emissions,  $ET_{\text{facility}}$ , for the 12-month period ending with the most recent month using following equation:

$$ET_{\text{facility}} = \left[ \sum_{j=1}^i ET_{\text{unit}} \right]$$

Where,

- $ET_{\text{facility}}$  = the total perchloroethylene solvent emissions over the preceding 12 months for all cleaning machines at the facility, (kilograms of solvent emissions per 12-month period);
- $\Sigma$  = Symbol meaning the sum of the monthly perchloroethylene emissions;
- $ET_{\text{unit}}$  = the total perchloroethylene solvent emissions over the preceding 12 months for each unit at the facility (kilograms of solvent per month).

- f. Emission Limit Exceedance: If the facility-wide perchloroethylene emission limit in Condition 4.1 is not met, an exceedance has occurred. All exceedances must be reported as required in Condition 14.5.e.

## 11.0 RECORDKEEPING: BATCH VAPOR AND IN-LINE MACHINES

### 11.1. Batch Vapor and In-Line Machine Information

For each batch vapor or in-line solvent cleaning machine, the permittee must maintain the following records in written or electronic form for the lifetime of the machine.

- a. **Machine and control equipment documentation:** Owner's manuals, or if not available, written maintenance and operating procedures, for the solvent cleaning machine and control equipment.
- b. **Machine and control device installation:** 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.
- c. **Dwell time determinations:** If a dwell is used to comply with this permit, records of the tests required in Condition 7.1.e to determine an appropriate dwell time for each part or parts basket.
- d. **Halogenated HAP solvent content:** Records of the halogenated HAP solvent content for each solvent used in the solvent cleaning machine.
- e. **Squeegee system:** If a squeegee system is used to comply, records of the test required by Condition 7.1.j to determine the maximum product throughput for the squeegees. The permittee must also retain records of the weekly visual inspection monitoring and the length of continuous web product cleaned during the previous week.
- f. **Air knife system and combination squeegee and air knife system parameter:** If an air knife system or a combination squeegee and air knife system is used to comply, records of the determination of the proper operating parameter and parameter value for the air knife system.

### 11.2. Batch Vapor and In-Line Machine Records for Controls

For each batch vapor or in-line solvent cleaning machine complying with the control combination of Condition 6.1.a, the permittee must maintain the following records either in electronic or written form:

- a. **Monitoring results:** The determinations and results of monitoring required under Condition 7.1.
- b. **Actions taken to comply with monitoring requirements:** Information on the actions taken to comply with Condition 7.1. This information must include at least 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.
- c. **Annual solvent consumption:** Estimates of annual solvent consumption for each solvent cleaning machine and supporting documentation that establishes how the final estimate was calculated.
- d. **Carbon adsorber monitoring:** If a carbon adsorber is used to comply, records of the date and results of the weekly measurement of the halogenated HAP solvent concentration in the carbon adsorber exhaust required in Condition 7.1.g.
- e. **Superheated vapor system:** If a superheated vapor system is used to comply, the permittee must retain the manufacturer's specifications for determining the minimum proper dwell time for as long as a superheated vapor system is used to demonstrate compliance with this permit.

### 11.3. Recordkeeping for Overall Emission Limit

For each batch vapor or in-line solvent cleaning machine complying with the overall emission limit in Condition 6.1.b or 6.1.c, the permittee must maintain the following records either in electronic or written form:

- a. **Solvent addition:** A log detailing the dates and amounts of solvent that are added to the solvent cleaning machine.
- b. **Solvent removal:** A log detailing the solvent composition of wastes removed from cleaning machines as determined using the procedure described in Condition 8.1.c.
- c. **Emission calculations:** 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. **Cleaning capacity:** For each solvent cleaning machine without a solvent/air interface, the permittee must maintain records on the method used to determine the cleaning capacity of the cleaning machine and the established emission limit. Any calculations used to establish the limit must be retained.

### 11.4. Recordkeeping for Facility-Wide Perchloroethylene Emission Limit

For each batch vapor or in-line solvent cleaning machine using perchloroethylene, the permittee must maintain the following records either in electronic or written form:

- a. The dates and amounts of solvent that are added to each solvent cleaning machine.
- b. The solvent composition of wastes removed from each solvent cleaning machine as determined using the procedure described in Condition 8.1.c.
- c. Calculation sheets showing how monthly perchloroethylene emissions and the 12-month rolling total emissions from each solvent cleaning machine were determined, and the results of all calculations.

### 11.5. Recordkeeping for Overall Control System Efficiency

For each continuous web or remote reservoir continuous web cleaning machine complying with the overall control system efficiency in Condition 6.1.d **Error! Reference source not found.**, the permittee must maintain the following records in either electronic or written form:



- a. **Solvent addition:** The dates and amounts of solvent that are added to the solvent cleaning machine.
- b. **Solvent recovery:** The dates and amounts of solvent that are recovered from the desorption of the carbon adsorber system.
- c. **Solvent removal:** The solvent composition of wastes removed from each cleaning machine as determined using the procedures in Condition 8.1.c
- d. **Emission calculations:** Calculation sheets showing the calculation and results of determining the overall cleaning system control efficiency required by Condition 8.2.b.

## **12.0 RECORDKEEPING: BATCH COLD MACHINES**

### **12.1. Compliance with Work Practices**

Each permittee subject to the work practices of Condition 5.2 (each immersion cold cleaner complying with the freeboard ratio requirement and each remote reservoir cold cleaner) must maintain the following records in either electronic or written form:

- a. Any and all logs, checklists, or training materials (training materials should include employee signatures certifying the training was taken or otherwise completed) to demonstrate ongoing compliance with Condition 5.2.
- b. Each work practice in Condition 5.2 must be identified in an operation and maintenance manual or equivalent (e.g. standard operating procedures manual) that is implemented at the source.

## **13.0 RECORDKEEPING: ALL FACILITIES**

### **13.1. VOC and HAP Emissions**

The permittee must maintain the following records on a monthly basis in either electronic or written form:

- a. List of VOC and HAP containing solvents used on site.
- b. Amount of each solvent used based on purchase records and inventories at the beginning and end of each calendar month. (gal.)
- c. Density of each type of material. (lb/gal.)
- d. VOC fraction for each type of material. (lb VOC/lb material)
- e. Individual HAP fraction for each type of material. (lb HAP/lb material)
- f. Weight of VOC shipped offsite.
- g. Weight of individual HAP shipped offsite.
- h. An SDS (or equivalent document) for each solvent used on site. The document must include all compounds in the material.

### **13.2. Potential To Emit (PTE)**

The permittee must determine their potential to emit from all solvent cleaning operations. The PTE and associated calculations must be retained for as long as the permittee is assigned to this permit. The PTE must be recalculated if a new solvent cleaning machine is installed at the facility (within 60 days of the new machine installation) or if a HAP-containing solvent, not included in the previous PTE calculations, is used at the facility (within 60 days of beginning use of the new solvent).

- a. 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. The permittee must determine the potential to emit using the following equation(s) for each cleaning machine:

$$PTE_i = H_i \times W_i \times SAI_i \quad (6)$$

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).  
= 8,760 hours per year, unless otherwise restricted by a Federally enforceable requirement.
- $W_i$  = The working mode uncontrolled emission rate (kilograms per square meter per hour).  
= 1.95 kilograms per square meter per hour for batch vapor and cold cleaning machines.  
= 1.12 kilograms per square meter per hour for in-line cleaning machines.
- $SAI_i$  = Solvent/air interface area of solvent cleaning machine i (square meters).  
For machines that have a solvent/air interface area, see definitions section Condition 18.  
For machines that do not have a solvent/air interface, calculate the solvent/air interface area by using the equation below:

$$SAI = 2.20 * (Vol)^{0.6}$$

Where,

- $SAI$  = The solvent/air interface area (square meters).
- $Vol$  = The cleaning capacity of the solvent cleaning machine (cubic meters).

### 13.3. Complaint Log

The permittee must maintain a log of all complaints received that specifically refer to air pollution, odor, or nuisance concerns associated to the permitted facility. The permittee must investigate the condition and provide a response to the complainant within 24 hours, if possible.

The log must include at least the following for each complaint or concern received:

- a. Date and time of complaint receipt.
- b. Date and time of response to complainant.
  - i. If the complaint is not investigated and responded to within 24 hours, the log must state the reason for the delay, the date, and the time the complaint was investigated and responded to.
- c. A description of the permittee's actions to investigate the plant operations and determine validity of the complaint.
- d. A description of any actions taken in response to the complaint investigation.

### 13.4. Records Retention

Unless otherwise specified, the permittee must retain all records for a period of at least five (5) years from the date of each report or record and make them available to DEQ upon request. The permittee must maintain at least the two (2) most recent years of records onsite or otherwise readily available electronically for expeditious review during an on-site inspection.

## 14.0 REPORTING REQUIREMENTS

### 14.1. Initial Notification of Affected Machine (All Machines)

For each new halogenated solvent cleaning machine, the permittee must submit an initial notification as soon as practicable before the construction or reconstruction is planned to commence. This must be at least thirty (30) days prior to the commencement of construction. The report must contain the information identified in §63.468(b).

### 14.2. Initial Notification for Facility (All Machines)

A new permittee must submit an initial notification report to DEQ as soon as practicable before the construction or reconstruction is planned to commence. This must be at least thirty (30) days prior to the commencement of construction. This report must include the following information:

- a. The name and address of the permittee.
- b. The address (i.e., physical location) of the solvent cleaning machine(s).
- c. A brief description of each solvent cleaning machine at, or planned to be at, the facility including machine type (batch vapor, vapor in-line or cold inline), solvent/air interface area, and existing or planned controls.
- d. The date of installation or proposed installation for each solvent cleaning machine.
- e. An estimate of annual halogenated HAP solvent consumption for each solvent cleaning machine.

### 14.3. Initial Statement of Compliance and Compliance Reports

A new permittee must submit an initial statement of compliance or compliance report, as appropriate, for each type of cleaning machine or compliance option as follows:

- a. **Control Requirements Compliance Option:** For each new solvent cleaning machine complying with the control requirements in Condition 6.1.a, the permittee must submit an initial statement of compliance. This report must be submitted no later than 150 days after startup. The report must contain the following information:
  - i. The name and address of the owner or operator; and the address of the solvent cleaning machine(s) (physical location); and a list of the control equipment used to achieve compliance for each solvent cleaning machine; and for each piece of control equipment required to be monitored, a list of the parameters that are monitored and the values of the parameters measured on or during the first month after the compliance date; and conditions to maintain the wind speed requirements of Condition 7.1.b, if applicable.
- b. **Overall Emission Limits Compliance Option:** For each new solvent cleaning machine complying with the overall emission limits in Condition 6.1.b or 6.1.c, the permittee must submit an initial statement of compliance. This report must be submitted no later than 150 days after startup. The report must contain the following information:
  - i. The name and address of the solvent cleaning machine owner or operator; and the address of the solvent cleaning machine(s) (physical location); and the solvent/air interface area for each solvent cleaning machine or, for machines without a

solvent/air interface, a description of the method used to determine cleaning capacity and the results; and the results of the first 3-month average emissions calculation.

- c. **Overall Control System Efficiency Compliance Option:** For each solvent cleaning machine complying with the overall control system efficiency in Condition 6.1.d, the permittee must submit an initial statement of compliance. This report must be submitted no later than 150 days after startup. The report must contain at least the information identified in Condition 14.3.b.i.
- d. **Batch Cold Machines:** For each batch cold solvent machine, the permittee must submit a compliance report no later than 150 days after startup. The report must contain the following information:
  - i. The name and address of the owner or operator; and the address of the solvent cleaning machine(s) (physical location); and a statement, signed by the owner or operated 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 40 C.F.R. part 63 subpart T and this permit; and the compliance approach for each solvent cleaning machine.

#### **14.4. Statement of Compliance for Facility-Wide Perchloroethylene Emission Limit**

A new permittee with any batch vapor or in-line cleaning machine that uses perchloroethylene, must submit to DEQ an initial notification and an initial statement of compliance in accordance with §63.471(f) and §63.471(g).

- a. The initial notification required by §63.471(f) may be satisfied by complying with the notification requirements of Condition 14.2.
- b. The initial statement of compliance required by §63.471(g) must be submitted to DEQ within thirteen (13) months of the first operation of a cleaning machine that uses perchloroethylene. The statement must include:
  - The name and address of the owner or operator of the affected facility.
  - The address of each solvent cleaning machine covered by this permit (physical location of machines).
  - The results of the first 12-month rolling total emissions calculation.

#### **14.5. Annual Report**

For each year this permit is in effect, the permittee must submit to DEQ by **February 15** two (2) copies of the following information for the previous calendar year, as applicable:

- a. **All permittees.** Emissions Data:

- i. VOC Emissions. (tons per year)
  - ii. Each individual HAP emitted. (tons per year)
  - iii. Total HAP emissions. (tons per year)
  - iv. List of each solvent used and gallons of each. (gallons per year)
  - v. A Safety Data Sheet (or equivalent) for each solvent used.
  - vi. Quantity of waste shipped offsite for each solvent.
  - vii. Confirmation of the number of solvent cleaning machines on site and compliance option(s) selected for each machine.
  - viii. Records of all planned and unplanned excess emissions events.
  - ix. A description, or negative declaration, of any permit deviations or malfunctions that had potential to cause an increase in emissions.
  - x. Summary of complaints relating to air quality received by the permittee during the reporting year.
  - xi. List of changes made in plant processes, production levels, equipment changes, materials used, and pollution control equipment. Identify which changes affected air contaminant emissions.
  - xii. List of major maintenance performed on cleaning machines and control equipment.
- b. **Permittees that operate a batch vapor or in-line cleaning machine that uses perchloroethylene** must submit a solvent emissions report for perchloroethylene. The annual report must also contain the following information:
- i. The average monthly perchloroethylene solvent consumption for the affected facility in kilograms per month.
  - ii. The 12-month rolling total perchloroethylene solvent emission estimates calculated each month using the methods as described in Condition 10.3
- c. **Permittees with a batch vapor or in-line machine complying with control options** (Condition 6.1.a) must also submit the following with the annual report:
- i. A signed statement from the facility owner or a designee stating that, "All operators of solvent cleaning machines have received training on the proper operation of solvent cleaning machines and their control devices sufficient to pass the test required in §63.463(d)(10)."
  - ii. An estimate of solvent consumption for each solvent cleaning machine during the previous calendar year.
- d. **Permittees with a batch vapor or in-line machine complying with an alternative standards option** (Condition 6.1.b or 6.1.c) must also submit the following with the annual report:
- i. The size and type of each unit subject to this permit and 40 C.F.R. part 63 subpart T (solvent/air interface area or cleaning capacity).
  - ii. The average monthly solvent consumption for the solvent cleaning machine in kilograms per month.
  - iii. The 3-month monthly rolling average solvent emission estimates calculated each month.

- e. **Permittees with a batch vapor or in-line machine complying with the alternative standards option** (Condition 6.1.d) must also submit the following with the annual report:
- i. The monthly system efficiency determination required by Condition 8.2.

#### 14.6. Exceedance Reports

For each batch vapor or in-line solvent cleaning machine, the permittee must submit an exceedance report semiannually unless or until quarterly reporting becomes required.

Exceedance reports must be delivered or postmarked by the 30th day following the end of each reporting period, unless otherwise specified. Reporting periods and due dates are:

Reporting Type	Reporting Periods	Postmark/Delivery Due Date
Semiannual	1. January 1 through June 30 2. July 1 through December 31	1. July 30 <sup>th</sup> 2. January 30 <sup>th</sup>
Quarterly	1. January 1 through March 31 2. April 1 through June 30 3. July 1 through September 30 4. October 1 through December 31	1. April 30 <sup>th</sup> 2. July 30 <sup>th</sup> 3. October 30 <sup>th</sup> 4. January 30 <sup>th</sup>

- a. Exceedance reports must contain at least the following information:
- i. **If the permittee operates a batch vapor or in-line cleaning machine complying with the control combination of Condition 6.1.a**, the report must contain information on the actions taken to comply with all applicable monitoring requirement(s) of each device and actions taken to meet the parameters specified in this permit.
- The report must 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.
- ii. The permittee must submit a description of all corrections and adjustments made to avoid an exceedance.
- iii. **If an exceedance has occurred**, the reason for the exceedance and a description of the actions taken.
- iv. **If no exceedances of a parameter have occurred**, this information must be stated in the report. If a piece of equipment has not been in operation, has been repaired or adjusted, this information must be stated in the report.
- b. The permittee must begin submitting exceedance reports quarterly if an exceedance occurs or upon DEQ's written request.
- i. If required, due to a DEQ request or exceedance, the permittee must follow the quarterly reporting format until a request to reduce reporting frequency under Condition 14.6.c is approved by DEQ in writing.
- c. A permittee that has triggered quarterly exceedance reporting may reduce the frequency of the exceedance reporting to semiannual if the following conditions are met:
- i. The permittee has demonstrated a full year of compliance without an exceedance.
- ii. The permittee continues to comply with all relevant recordkeeping and monitoring requirements specified in this permit.
- iii. DEQ does not object to a reduced frequency of reporting for the affected source.

- d. For semiannual and quarterly reporting periods that end on December 31, the exceedance report may be submitted by February 15 with the annual report.

#### **14.7. Notice of Change of Ownership**

The permittee must notify DEQ in writing using a DEQ 'Transfer Application Form' within 60 days after the following:

- a. Legal change of the name of the company as registered with the Corporations Division of the State of Oregon; or
- b. Sale or exchange of the activity or facility.

#### **14.8. Where to Send Reports and Notices**

Reports and notices, unless otherwise specified, must be sent to the permit coordinator for the region where the source is located as identified in Condition 15.3 and must have the permit number prominently displayed.

#### **14.9. Initial Startup Notice**

The permittee must notify DEQ in writing of the date a newly permitted source is first brought into normal operation. The notification must be submitted no later than seven (7) days after the initial startup.

#### **14.10. Construction or Modification Notices**

The permittee must notify DEQ in writing using a DEQ "Notice of Intent to Construct Form," or other permit application form and obtain approval in accordance with OAR 340-210-0205 through 340-210-0250 before:

- a. Constructing, installing, or establishing a new stationary source that will cause an increase in any regulated pollutant emissions;
- b. Making any physical change or change in operation of an existing stationary source that will cause an increase, on an hourly basis at full production, in any regulated pollutant emissions; or
- c. Constructing or modifying any air pollution control equipment.

### **15.0 ADMINISTRATIVE REQUIREMENTS**

#### **15.1. Employee Commute Options Program**

**Sources located inside the Portland Air Quality Maintenance Area (AQMA) with more than 100 employees at a work site** must comply with the Employee Commute Options Program requirements located in OAR 340-242-0020 through 340-242-0390.

For forms (Fact Sheet, Registration, or Survey Guidance documents) or questions regarding ECO, please contact the ECO program directly at 503-229-6154 or [ECO@deq.state.or.us](mailto:ECO@deq.state.or.us).

Additional information is available from DEQ's website for the ECO program located here: <https://www.oregon.gov/deq/aq/programs/Pages/ECO.aspx>

#### **15.2. Reassignment to the General ACDP**

A permittee that wishes to continue assignment to this General ACDP must submit to DEQ an application for reassignment.

- a. The application must be received by DEQ within 30 days prior to the expiration date listed on this permit.
- b. The application must be sent to the appropriate regional office identified in Condition 15.3.

- c. The permittee may submit an application for either a Simple or Standard ACDP at any time, but the permittee must continue to comply with the General ACDP until DEQ takes final action on the Simple or Standard ACDP application.

### 15.3. Permit Coordinator Addresses

All reports, notices, and applications should be directed to the Permit Coordinator for the area where the source is located unless otherwise specified. The Permit Coordinator addresses are as follows:

Counties	Permit Coordinator Address and Telephone
Clackamas, Clatsop, Columbia, Multnomah, Tillamook, and Washington	Department of Environmental Quality Northwest Region 700 NE Multnomah Street, Suite 600 Portland, OR 97232 Telephone: (503) 229-5696
Benton, Coos, Curry, Douglas, Jackson, Josephine, Lincoln, Linn, Marion, Polk, and Yamhill	Department of Environmental Quality Western Region 4026 Fairview Industrial Drive Salem, OR 97302 Telephone: (503) 378-8240
Baker, Crook, Deschutes, Gilliam, Grant, Harney, Hood River, Jefferson, Klamath, Lake, Malheur, Morrow, Sherman, Umatilla, Union, Wallowa, Wasco, and Wheeler.	Department of Environmental Quality Eastern Region 475 NE Bellevue, Suite 110 Bend, OR 97701 Telephone: (541) 388-6146

### 15.4. DEQ Contacts

Information about air quality permits and DEQ's regulations may be obtained from the DEQ web page at [www.deq.state.or.us](http://www.deq.state.or.us). All inquiries about this permit should be directed to the regional office for the area where the source is located. DEQ's regional offices are as follows:

Counties	Office Address and Telephone
Clackamas, Clatsop, Columbia, Multnomah, Tillamook, and Washington	Department of Environmental Quality Portland Office 700 NE Multnomah Street, Suite 600 Portland, OR 97232 Telephone: (503) 229-5696
Benton, Lincoln, Linn, Marion, Polk, and Yamhill	Department of Environmental Quality Salem Office 4026 Fairview Industrial Drive Salem, OR 97302 Telephone: (503) 378-8240
Coos, Curry, and Western Douglas	Department of Environmental Quality Coos Bay Office 381 N Second Street Coos Bay, OR 97420 Telephone: (541) 269-2721



Eastern Douglas, Jackson, and Josephine	Department of Environmental Quality Medford Office 221 Stewart Ave. Suite 201 Medford, OR 97501 Telephone: (541) 776-6010
Crook, Deschutes, Harney, Hood River, Jefferson, Klamath, Lake, Sherman, Wasco, and Wheeler	Department of Environmental Quality Bend Office 475 NE Bellevue, Suite 110 Bend, OR 97701 Telephone: (541) 388-6146
Baker, Gilliam, Grant, Malheur, Morrow, Umatilla, Union, and Wallowa	Department of Environmental Quality Pendleton Office 800 SE Emigrant Ave., Suite 330 Pendleton, OR 97801 Telephone: (541) 276-4063

## 16.0 FEES

### 16.1. Annual Compliance Fees

The permittee must pay the annual fees specified in OAR 340-216-8020, Table 2 by **December 1** of each year this permit is in effect. Invoices indicating the amount, as determined by DEQ regulations, will be mailed prior to the above date. **Late fees in accordance with Part 5 of the table will be assessed as appropriate.**

### 16.2. Change of Ownership or Company Name Fee

The permittee must pay the non-technical permit modification fee specified in OAR 340-216-8020, Table 2, Part 4 with an application for changing the ownership or the name of the company assigned to this permit.

### 16.3. Where to Submit Fees

The permittee must submit payments for invoices, applications that are accompanied by fees, and any other payments to DEQ's Business Office:

Oregon Dept. of Environmental Quality  
Financial Services – Revenue Section  
700 NE Multnomah St., Suite 600  
Portland, Oregon 97232-4100

## 17.0 GENERAL CONDITIONS AND DISCLAIMERS

### 17.1. Other Regulations

In addition to the specific requirements listed in this permit, the permittee must comply with all other applicable legal requirements enforceable by DEQ.

### 17.2. Conflicting Conditions

In any instance in which there is an apparent conflict relative to conditions in this permit, the most stringent conditions apply.

### 17.3. Masking of Emissions

The permittee must not cause or permit the installation of any device or use any means designed to mask the emissions of an air contaminant that causes or is likely to cause detriment to health,

safety, or welfare of any person or otherwise violate any other regulation or requirement. [OAR 340-208-0400]

#### **17.4. DEQ Access**

The permittee must allow DEQ's representatives access to the plant site and pertinent records at all reasonable times for the purposes of performing inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emissions discharge records and conducting all necessary functions related to this permit in accordance with ORS 468.095.

#### **17.5. Permit Availability**

The permittee must have a copy of the permit available at the facility at all times.

#### **17.6. Open Burning**

The permittee must not conduct any open burning except as allowed by OAR 340, division 264.

#### **17.7. Asbestos**

The permittee must comply with the asbestos abatement requirements in OAR 340, division 248 for all activities involving asbestos-containing materials, including, but not limited to, demolition, renovation, repair, construction, and maintenance.

#### **17.8. Property Rights**

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

#### **17.9. Permit Termination, Revocation, Rescission, or Modification**

DEQ may modify or revoke this permit as authorized under OAR chapter 340, division 216.

### **18.0 ABBREVIATIONS, ACRONYMS, AND DEFINITIONS**

<b>Affected Source</b>	Each solvent cleaning machine that uses any solvent containing halogenated HAP solvents, at a total concentration greater than 5%, to remove soils from the surfaces of materials. Buckets, pails and beakers with capacities of 2 gallons or less, are not considered solvent cleaning machines.
<b>Air Blanket</b>	The layer of air inside the freeboard located above the air/solvent interface. The centerline of the air blanket is equidistant between the sides of the machine.
<b>Air Knife [system]</b>	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.
<b>Batch Cleaning Machine</b>	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 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)

<b>Cold Cleaning Machine</b>	Machines that use unheated or heated, non-boiling liquid solvents to remove soils from the surface of parts.
<b>Combination Squeegee and Air-knife [system]</b>	A system consisting of a combination of a squeegee system and an air-knife system within a single enclosure.
<b>Continuous Web Cleaning Machine</b>	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. All continuous web cleaning machines are considered to be a subset of in-line solvent cleaning machines.
<b>Deposition</b>	Emissions from an air pollutant source which are deposited upon the property of another.
<b>Dwell</b>	The technique of holding parts within the freeboard area but above the vapor zone of the machine. Dwell occurs after cleaning to allow solvent to drain from the part or parts baskets back into the machine.
<b>Existing Source Freeboard Area</b>	Any affected source that is not a new source. For a batch cleaning machine: The area within the cleaning machine that extends from the solvent/air interface to the top of the cleaning machine. For an in-line cleaning machine: The area within the cleaning machine that extends from the solvent/air interface to the bottom of the entrance or exit opening, whichever is lower.
<b>Freeboard Height</b>	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: The distance from the solvent/air interface to the bottom of the entrance or exit opening, whichever is lower, of the cleaning machine as measured during the idling mode.
<b>Freeboard Ratio</b>	The ratio of the cleaning machine freeboard height to the smaller interior dimension (length, width, or diameter) of the solvent cleaning machine.
<b>Freeboard Refrigeration Device [a.k.a. chiller]</b>	A set of secondary coils mounted in the freeboard area that carries a substance to provide a chilled air blanket above the solvent vapor. A primary condenser capable of meeting the requirements of 40 CFR 63.463(e)(2)(i) (see Table 4) is defined as both a freeboard refrigeration device and a primary condenser.
<b>Fugitive Emissions</b>	Discharges of air pollutants through doors, windows, or other uncontrolled exit points.
<b>Halogenated Hazardous Air Pollutant (HAP) Solvent</b>	Any solvent that contains: methylene chloride (CAS No. 75-09-2), perchloroethylene (CAS No. 127-18-4), chloroform (CAS No. 67-66-3), 1,1,1-trichloroethane (CAS No. 71-55-6), trichloroethylene (CAS No. 79-01-6), or carbon tetrachloride (CAS No. 56-23-5).
<b>Immersion Cold Cleaning Machine</b>	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.

<b>In-Line Cleaning Machine</b>	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.
<b>New Source</b>	Any affected source that the construction or reconstruction of which is commenced after November 29, 1993.
<b>Opacity</b>	The degree to which an emission (smoke or dust) reduces transmission of light and obscures the view in the background.
<b>Remote Reservoir Cold Cleaning Machine</b>	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.
<b>Remote Reservoir Continuous Web Cleaning Machine</b>	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.
<b>Solvent/Air Interface</b>	Vapor machine: the location of contact between the concentrated solvent vapor layer and the air; or mid-line height of the primary condenser coils. Cold machine: the location of contact between the liquid solvent and the air.
<b>Solvent/Air Interface Area</b>	Vapor machine: the surface area of the solvent vapor zone that is exposed to the air Cold machine: the surface area of the liquid solvent that is exposed to the air In-line machine: the total surface area of all the sumps.
<b>Solvent Vapor Zone</b>	The area from the solvent surface to the level that solvent vapor is condensed. This condensation level is defined as the midline height of the primary condenser coils.
<b>Squeegee System</b>	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.
<b>Superheated Part Technology</b>	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.
<b>Superheated Vapor System Vapor Cleaning Machine</b>	A system using solvent heated past the boiling point to evaporate liquid solvent on cleaned parts prior to exiting the machine. A batch or in-line solvent cleaning machine that boils liquid solvent generating solvent vapor that is used as part of the cleaning or drying cycle.
<b>Other terms</b>	Additional definitions are available from: OAR chapter 340 division 200, 40 C.F.R. part 63 subpart A, 40 C.F.R. part 63 subpart T, and the 1990 Clean Air Act.

ACDP	Air Contaminant Discharge Permit	NSPS	New Source Performance Standard
ASTM	American Society for Testing and Materials	NSR	New Source Review
AQMA	Air Quality Maintenance Area	O <sub>2</sub>	oxygen
bbl	Barrel (42 gallon)	OAR	Oregon Administrative Rules
calendar year	The 12-month period beginning January 1st and ending December 31 <sup>st</sup>	ORS	Oregon Revised Statutes
CAO	Cleaner Air Oregon	O&M	operation and maintenance
CFR	Code of Federal Regulations	Pb	lead
CO	carbon monoxide	PCB	Polychlorinated biphenyl
CO <sub>2e</sub>	carbon dioxide equivalent	PCD	pollution control device
Date	Mm/dd/yy	PCE	perchloroethylene
DEQ	Oregon Department of Environmental Quality	PM	particulate matter
dscf	dry standard cubic foot	PM <sub>10</sub>	particulate matter less than 10 microns in size
EPA	US Environmental Protection Agency	PM <sub>2.5</sub>	particulate matter less than 2.5 microns in size
°F	Fahrenheit	ppm	part per million
FCAA	Federal Clean Air Act	ppmv	Parts per million by volume
ft <sup>2</sup>	Square feet	PSD	Prevention of Significant Deterioration
gal	gallon(s)	PSEL	Plant Site Emission Limit
GHG	greenhouse gas	PTE	Potential to Emit
gr/dscf	grains per dry standard cubic foot	RACT	Reasonably Available Control Technology
HAP	Hazardous Air Pollutant as defined by OAR 340-244-0040	scf	standard cubic foot
ID	Identification number	SDS	Safety Data Sheet
I&M	inspection and maintenance	SER	Significant Emission Rate
kg	kilogram	SIC	Standard Industrial Code
lb(s)	pound(s)	SIP	State Implementation Plan
m <sup>2</sup>	Square meters	SO <sub>2</sub>	sulfur dioxide
MMBtu	million British thermal units	Special Control Area	as defined in OAR 340-204-0070
NA	not applicable	SSM	Startup, Shutdown, and Malfunction
NESHAP	National Emissions Standards for Hazardous Air Pollutants	VE	visible emissions
NO <sub>x</sub>	nitrogen oxides	VOC	volatile organic compound
		year	A period consisting of any 12-consecutive calendar months

**19.0 ATTACHMENT 1: CONTROL COMBINATION OPTIONS**  
**For Batch Vapor, In-Line, and Remote Reservoir Continuous Web Cleaning Machines**

Cleaning Machine Type	Option	Working Mode Cover	1.0 Freeboard Ratio	Super Heated Vapor	Freeboard Refrigeration Device	Reduced Room Draft	Carbon Adsorber	Dwell	Super Heated Parts
Batch Vapor Cleaning Machine ≤ 1.21 m <sup>2</sup> [≤ 13 ft <sup>2</sup> ]	1	X	X	X					
	2			X	X				
	3	X			X				
	4		X	X		X			
	5				X	X			
	6		X		X				
	7				X			X	
	8		X				X	X	
	9				X			X	
	10			X	X			X	
Batch Vapor Cleaning Machine > 1.21 m <sup>2</sup> [> 13 ft <sup>2</sup> ]	1		X	X	X				
	2				X	X		X	
	3	X		X	X				
	4		X	X		X			
	5			X	X	X			
	6		X		X	X			
	7				X	X		X	
In-Line - Existing	1		X	X					
	2		X		X				
	3				X			X	
	4						X	X	
In-Line - New	1			X	X				
	2				X		X		
	3			X			X		
Continuous Web - Existing	1		X						X
	2		X	X					
	3		X		X				
	4						X		
Continuous Web - New	1			X	X				
	2				X				X
	3				X		X		
	4			X			X		
	5						X		X
Remote Reservoir Web -Continuous	1		X						X
	2		X	X					
	3		X		X				
	4						X		
Remote Reservoir Web - New	1			X					
	2								X
	3						X		

**20.0 ATTACHMENT 2: EXAMPLE DOCUMENTATION FOR IDENTIFICATION OF AFFECTED MACHINES**

Cleaner Identification Number	Use Halogenated Solvent?*	New or Existing		Machine Type (pick one)			Solvent Air Interface Area m <sup>2</sup> (ft <sup>2</sup> )	Misc.**
		N	E	Batch Cold	Batch Vapor	In-Line		

\*Greater than 5 percent.

\*\*Miscellaneous notes, including cleaning capacity if machine is a batch vapor cleaning machine with no solvent air interface.

Cleaner Identification Number	Compliance Option(s) Selected*

\*State a control combination used, control system efficiency, or overall emission limit for batch vapor or in-line machines. State freeboard ratio, water layer, and/or work practices for batch cold machines.