



## **HALOGENATED SOLVENT DEGREASERS**

### **Air General Permit Registration Worksheet**

The Florida Department of Environmental Protection (“Department” or “FDEP”) has established an air general permit under paragraph 62-210.310(5)(h), Florida Administrative Code (“F.A.C.”), for halogenated solvent degreasers. An air general permit is an authorization by rule to construct or operate a specific type of air pollutant emitting facility. Use of such authorization by any individual facility does not require action by the Department. The terms and conditions of the air general permit are set forth in the rule, rather than in a separately issued air construction or air operation permit.

If you are the owner or operator of an eligible facility comprising one or more halogenated solvent degreasers, you may register to use the air general permit under paragraph 62-210.310(5)(h), F.A.C., by following the general procedures and conditions given under subsections 62-210.310(2) and 62-210.310(3), F.A.C.

To register, you may use the Department’s new online Air General Permit Electronic Registration Submittal system (<https://floridadep.gov/air/permitting-compliance/content/air-general-permits>), or complete this registration worksheet and submit it to the address below, along with the air general permit registration processing fee (\$100.00), payable to FDEP.

Department of Environmental Protection  
Attn: FDEP Air General Permits  
2600 Blair Stone Road, MS 5500  
Tallahassee, Florida, 32399-2400

If you properly register to use an air general permit, and are not denied use of the air general permit by the Department, you are authorized to construct and operate the facility in accordance with the general terms and conditions of Rule 62-210.310, F.A.C., and the specific terms and conditions of paragraph 62-210.310(5)(h), F.A.C. Your facility may vary, so be sure your registration describes the operations at your facility in sufficient detail to demonstrate the facility’s eligibility for use of the air general permit and to provide a basis for tracking any future equipment or process changes. Your registration should describe all air pollutant-emitting processes and equipment at the facility, and it should identify any air pollution control measures or equipment used.

The rules do not require any specific format for the registration. This worksheet, however, has been designed to assist owners and operators. Using it as a template for a general permit registration will help ensure that all necessary information is submitted.

Additional information can be found on the Department’s air general permit program website listed above or by calling the Small Business Environmental Assistance Program Hotline at 1-800-722-7457.

**HALOGENATED SOLVENT DEGREASERS  
AIR GENERAL PERMIT REGISTRATION WORKSHEET**

**Facility Identification Number** (For existing permitted facilities, enter the seven-digit facility ID number. Please include any leading zeros necessary to reach seven digits.)

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**Registration Type**

Check one of the seven options below:

**INITIAL REGISTRATION** - Notification of intent to:

Construct and operate a proposed new facility.

Operate an existing permitted facility not currently using an air general permit (e.g., a facility proposing to go from an air operation permit to an air general permit). If the facility currently holds one or more air operation permits, such permit(s) must be surrendered by the owner or operator upon the effective date of this air general permit. (See "Surrender of Existing Air Operation Permit(s)" below.)

Operate an existing facility not currently permitted or using an air general permit.

**RE-REGISTRATION** (for facilities currently using an air general permit) - Notification of intent to:

Continue operating the facility after expiration of the current term of air general permit use.

Continue operating the facility after a change of ownership.

Make an equipment change requiring re-registration pursuant to paragraph 62-210.310(2)(e), F.A.C.

Any other change not considered an administrative correction under paragraph 62-210.310(2)(d), F.A.C.

**Surrender of Existing Air Operation Permit(s) - For Initial Registrations, if Applicable**

All existing air operation permits for this facility are hereby surrendered upon the effective date of this air general permit; specifically permit number(s):

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**General Facility Information**

**Facility Owner/Company Name** (Name of corporation, agency, or individual owner who or which owns, leases, operates, controls, or supervises the facility.)

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**Site Name** (Name, if any, of the facility site; e.g., Plant A, Metropolis Plant, etc. If more than one facility is owned, a complete registration must be submitted for each.)

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**Facility Location** (Physical location of the facility, not necessarily the mailing address.)

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ County: \_\_\_\_\_ Zip Code: \_\_\_\_\_

**Facility Start-Up Date** (New facilities only)

If existing facility, check this Not Applicable box:

If new facility, select or type in the estimated start-up date:

## Authorized Representative

The Authorized Representative is an individual who owns the facility or is authorized to make decisions or sign documents on behalf of the owner. This is typically the person to whom the Department will direct correspondence related to the facility.

Name: \_\_\_\_\_

Position Title: \_\_\_\_\_

### Mailing Address:

Organization/Firm Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

### Contact Details

Office Phone: \_\_\_\_\_

Cell Phone: \_\_\_\_\_

E-mail: \_\_\_\_\_

## Facility Contact

The Facility Contact is typically a person who works at or closely with the facility, such as the plant manager or environmental coordinator. The Facility Contact is the individual that the Department may contact directly when on-site information is needed.

Name: \_\_\_\_\_

Position Title: \_\_\_\_\_

### Mailing Address:

Organization/Firm Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

### Contact Details:

Office Phone: \_\_\_\_\_

Cell Phone: \_\_\_\_\_

E-mail: \_\_\_\_\_

## Facility Information

1. For each halogenated solvent degreaser, provide the information in the table below.

Halogenated Solvent Degreaser Table

Machine number or other specific identifier	Type of Machine (batch vapor solvent; batch cold; or in-line)	Date Initially Purchased from Manufacturer	Machine Classification	Date Control Device Installed, if applicable
			<input type="checkbox"/> New or <input type="checkbox"/> Existing	
			<input type="checkbox"/> New or <input type="checkbox"/> Existing	
			<input type="checkbox"/> New or <input type="checkbox"/> Existing	
			<input type="checkbox"/> New or <input type="checkbox"/> Existing	
			<input type="checkbox"/> New or <input type="checkbox"/> Existing	

2. Halogenated Solvent Usage

If this is an initial registration, provide an estimate of the halogenated solvents to be used over the next 12-month period, in gallons.

\_\_\_\_\_

If this is a re-registration, provide the total amount of halogenated solvents used in the most recent 12 months, in gallons.

\_\_\_\_\_

3. Which of the following halogenated solvents are used at the facility (check one or more)?

- |   |  |
|---|--|
| <input type="checkbox"/> perchloroethylene    | <input type="checkbox"/> methylene chloride    |
| <input type="checkbox"/> trichloroethylene    | <input type="checkbox"/> 1,1,1-trichloroethane |
| <input type="checkbox"/> carbon tetrachloride | <input type="checkbox"/> chloroform            |

4. Which method of compliance will be used at your facility (check one)?

- complying with an alternative solvent emission limit
- implementing a control device combination/work practice standards
- meeting an idling emission limit/work practice standards, or
- meeting the requirements for batch cold cleaning machines

5. If implementing a control device combination, what controls apply to your facility (check one or more)?

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> 1.0 freeboard ratio            | <input type="checkbox"/> carbon adsorber    | <input type="checkbox"/> dwell time         |
| <input type="checkbox"/> reduced room draft             | <input type="checkbox"/> working mode cover | <input type="checkbox"/> super-heated vapor |
| <input type="checkbox"/> freeboard refrigeration device |   |   |

## Helpful Definitions

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

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

**"Automated Parts Handling System"** - A mechanical device that carries all parts and parts baskets at a controlled speed from the initial loading of soiled or wet parts through the removal of the cleaned or dried parts. Automatic parts handling systems include hoists and conveyors.

**"Batch Cleaning Machine"** - A solvent cleaning machine in which individual parts or a set of parts move through the entire cleaning cycle before new parts are introduced into the solvent cleaning machine. Examples include an open-top vapor cleaning machine, a ferris wheel cleaner which cleans multiple batch loads simultaneously and is manually loaded, and a cross-rod degreasing machine.

**"Carbon Adsorber"** - A bed of activated carbon into which an air-solvent gas-vapor stream is routed and which absorbs the solvent on the carbon.

**"Clean Liquid Solvent"** - Fresh unused solvent, recycled solvent, or used solvent that has been cleaned of soils (e.g., skimmed of oils or sludge and strained of metal chips).

**"Cleaning Capacity"** - For a cleaning machine without a solvent/air interface, the maximum volume of parts that can be cleaned at one time. The capacity is generally equal to the volume (length times width times height) of the cleaning chamber.

**"Cold Cleaning Machine"** - Any device or piece of equipment that contains and/or uses liquid solvent, into which parts are placed to remove soils from the surfaces of the parts or to enhance drying of those parts. Units which contain and use heated, non-boiling solvent to clean the parts are also classified as cold cleaning machines.

**"Construction"** - The fabrication (on-site), erection, or installation of a halogenated solvent degreasing unit.

**"Combined Squeegee and Air-Knife System"** – A system consisting of a combination of a squeegee system and an air-knife system within a single enclosure.

**"Consumption"** - The amount of halogenated solvent added to the solvent cleaning machine.

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

**"Cover"** - A lid, top, or portal cover that shields the solvent cleaning machine openings from air disturbances when in place and is designed to be easily opened and closed without disturbing the vapor zone. Air disturbances include lip exhausts, ventilation fans, and general room drafts. Types of covers include sliding, biparting, and rolltop covers.

**"Cross-rod Solvent Cleaning Machine"** - A batch solvent cleaning machine in which part baskets are suspended from "cross-rods" as they are moved through the machine. In a cross-rod cleaning machine, parts are loaded semi-continuously, and enter and exit the machine from a single portal.

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

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

**"Dwell Time"** - The required minimum length of time that a part must dwell within the cleaning machine as determined in paragraph (5)(c)6.f. of this part.

**"Emissions"** - The amount of halogenated solvent consumed minus the amount of liquid halogenated solvent removed from the machine and the amount of halogenated solvent removed from the cleaning machine in the form of solid waste.

**"Emissions Unit"** - Any part or activity of a facility that emits or has the potential to emit any air pollutant.

**"Existing"** - Any solvent cleaning machine, the construction or reconstruction of which was commenced on or before November 29, 1993, or those facilities which commenced usage of halogenated solvents on or after December 2, 1994. An existing solvent cleaning machine moved within a contiguous facility or to another facility under the same ownership will continue to be regulated as an existing machine.

**"Facility"** - All of the emissions units which are located on one or more contiguous or adjacent properties, and which are under the control of the same person (or persons under common control).

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

**"Freeboard Height"** - 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, as measured during the idling mode.

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

**"Freeboard Refrigeration Device (AKA Chiller)"** - A set of secondary coils mounted in the freeboard area that carries a refrigerant or other chilled substance to provide a chilled air blanket above the solvent vapor. A primary condenser capable of meeting the requirements of paragraph (5)(c)6.a. of this Part is defined as both a freeboard refrigeration device and a primary condenser for the purposes of this general permit.

**"Halogenated Solvent"** - For the purposes of this permit, the following solvents are regulated as halogenated solvents: methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, and chloroform.

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

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

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

**"Immersion Cold Cleaning Machine"** - A cold cleaning machine in which the parts are immersed in the solvent while being cleaned. A remote reservoir cold cleaning machine that is also an immersion cold cleaning machine is considered an immersion cold cleaning machine for the purposes of this permit.

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

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

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

**"Major Source"** - Any affected source which emits or has the potential to emit 10 or more tons per year of any halogenated solvent or 25 or more tons per year of several halogenated solvents, as regulated pursuant to this permit.

**"Monthly Reporting Period"** - Any calendar month in which the owner or operator of a solvent cleaning machine is required to calculate and report the solvent emissions from each solvent cleaning machine.

**"New"** - Any solvent cleaning machine, the construction or reconstruction of which commenced after November 29, 1993.

**"Open-top Vapor Cleaning Machine"** - A batch solvent cleaning machine that has its upper surface opens to the air and boils solvent to create solvent vapor used to clean and/or dry parts.

**"Owner" or "Operator"** - Any person or entity who or which owns, leases, operates, controls or supervises an emissions unit or facility.

**"Part"** - Any object that is cleaned in a solvent cleaning machine. Parts include discrete parts, assemblies, sets of parts, and continuous parts (continuous sheets of metal).

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

**"Reconstruction"** - The replacement of any components of a halogenated solvent degreasing unit to such an extent that the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new system.

**"Reduced Room Draft"** - Decreasing the flow or movement of air across the top of the freeboard area of the solvent cleaning machine to meet the specifications of paragraph (5)(c)6.b. of this Part. Methods of achieving a reduced room draft include redirecting fans and/or air vents away from the cleaning machine, moving the cleaning machine to a corner where there is less room draft, and constructing a partial or complete enclosure around the cleaning machine.

**"Remote Reservoir Cold Cleaning Machine"** - Any device in which liquid solvent is pumped to a sink-like work area that drains solvent back into an enclosed container while parts are being cleaned, allowing no solvent to pool in the work area.

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

**"Soils"** - Contaminants that are removed from the parts being cleaned. Soils include grease, oils, waxes, metal chips, carbon deposits, fluxes, and tars.

**"Solvent/Air Interface"** - For a vapor cleaning machine: the location of contact between the concentrated solvent vapor layer and the air. This location of contact is defined as the mid-line height of the primary condenser coils. For a cold cleaning machine: the location of the contact between the liquid solvent and the air.

**"Solvent/Air Interface Area"** - For a vapor cleaning machine: the surface area of the solvent vapor zone that is exposed to the air; for an in-line cleaning machine: the total surface area of all the sumps; for a cold cleaning machine: the surface area of the liquid solvent that is exposed to the air.

**"Solvent Cleaning Machine"** - Any device or piece of equipment that uses halogenated solvent liquid or vapor to remove soils from the surfaces of materials. Types of solvent cleaning machines include batch cold, batch vapor, in-line vapor, and in-line cold solvent cleaning machines.

**"Solvent Vapor Zone"** - For a vapor cleaning machine: the area that extends from the liquid solvent surface to the level that solvent vapor is condensed. This condensation level is defined as the midline height of the primary condenser coils.

**"Source"** - Each halogenated solvent degreasing facility.

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

**"Sump"** - The part of the solvent cleaning machine where the liquid solvent is located.

**"Sump Heater Coils"** - The heating system on a cleaning machine that uses steam, electricity, or hot water to heat or boil the liquid solvent.

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

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

**"Vapor Cleaning Machine"** - A batch or in-line solvent cleaning machine that boils liquid solvent, generating solvent vapor which is used as part of the cleaning or drying cycle.

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

**"Working Mode"** - The time period when the solvent cleaning machine is actively cleaning parts.

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

**"Year or Yearly"** - Any consecutive 12-month period of time.