Definitions used:

- °C – degrees Celsius.
- °F – degrees Fahrenheit.
- CA – carbon adsorber – “sniffer” – bed of activated carbon into which an air-perchloroethylene gas-vapor stream is routed and which adsorbs the perchloroethylene on the carbon.
- Colorimetric detector tube – glass tube (sealed prior to use), containing material impregnated with a chemical that is sensitive to perchloroethylene and is designed to measure the concentration of perchloroethylene in air.
- Dry-to-dry machine – one-machine dry cleaning operation in which washing and drying are performed in the same machine.
- Existing – began construction or reconstruction before December 9, 1991.
- Fugitive emissions – emissions that cannot reasonably be collected and emitted through a process vent.
- Halogenated hydrocarbon detector – portable device capable of detecting vapor concentrations of perchloroethylene of 25 parts per million by volume or greater by emitting an audible or visual signal that varies as the concentration changes.
- New – began construction or reconstruction on or after December 9, 1991.
- oC – degrees Celsius.
- oF – degrees Fahrenheit.
- RC – refrigerated condenser – “chiller” – vapor recovery system into which an air-perchloroethylene gas-vapor stream is routed and the perchloroethylene is condensed by cooling the gas-vapor stream.
- Process vent controls – devices used to control emissions from a vent, stack or similar device.
- ppm – parts per million by volume (or weight as noted).
- ppmv – parts per million by volume.
- ppmw – parts per million by weight.
- QA – quality assurance.
- QC – quality control.
- PER – perchloroethylene.
- Site – property on which a transfer machine system is located.
- Transfer machine system – multiple-machine dry cleaning operation in which washing and drying are performed in different machines. Examples include, but are not limited to: (1) a washer and dryer, (2) a washer and reclaimer, or (3) a dry-to-dry machine and reclaimer.

The U.S. Environmental Protection Agency (EPA) has set standards for the control of perchloroethylene releases from dry cleaning facilities. Perchloroethylene is suspected of causing cancer in humans. These emission standards are different from hazardous waste regulations. They are based on use of perchloroethylene, not generation of perchloroethylene related drained spent cartridge filters, still bottoms, or filter muck waste. Coin-operated dry cleaning facilities are exempt from these requirements.

The Illinois Small Business Environmental Assistance Program can offer assistance to dry cleaning facilities. For more information, call 1-800-252-3998 or visit www.ildceo.net/enviro.

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2. Requirements
4. Reporting
5. Monitoring
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Other
Continuing Requirements

**Continuing Requirements**

**Applicability:**

<table>
<thead>
<tr>
<th>Source Type</th>
<th>Facilities with:</th>
<th>Consume less than</th>
<th>Consume equal to or between</th>
<th>Consume more than</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Area Sources</td>
<td>Only Dry-to-Dry</td>
<td>140</td>
<td>140-2,100</td>
<td>2,100</td>
</tr>
<tr>
<td></td>
<td>Only Transfer Systems</td>
<td>200</td>
<td>200-1,800</td>
<td>1,800</td>
</tr>
<tr>
<td>Major Sources</td>
<td>Both Dry-to-Dry and Transfer Systems</td>
<td>140</td>
<td>140-1,800</td>
<td>1,800</td>
</tr>
</tbody>
</table>

**Process Vent Controls:**

- **Existing Facilities**
  - Should already be in compliance with these continuing requirements.
- **New Facilities**
  - Meet parameters set for RC and CA

**Fugitive Contols:**

- **Existing Facilities**
  - Sealed containers
  - Leak detection/repair
  - Room enclosures
- **New Facilities**
  - No new transfer systems
  - Sealed containers
  - Leak detection/repair

**Monitoring:**

- **Existing Facilities**
  - Meet parameters set for RC and CA
- **New Facilities**
  - No new transfer systems
  - Sealed containers
  - Leak detection/repair

**Compliance Dates:**

- **Existing Facilities**
  - Should already be in compliance with these continuing requirements.
- **New Facilities**
  - Should comply upon start up with these continuing requirements.

**Regulatory Information:**

- Existing facilities – began compliance or recognition on or after December 9, 1991

- New facilities – began compliance or recognition on or after December 9, 1993

- Please refer to the Regulatory Update in the front of this workbook for further information regarding controls and compliance.
**Requirements since July 27, 2006**

**Process Vent Controls**

- **Small Area Sources** *(Small and Large)*
  - By July 27, 2006, or immediately upon start up, whichever is later.
  - Constructed or reconstructed on or after December 21, 2005.
  - **Closed loop, dry-to-dry machine with RC* followed by CA* operated immediately before the door is opened.**

- **Major Sources**
  - By July 27, 2006, or immediately upon start up, whichever is later.
  - Constructed or reconstructed on or after December 21, 2005.
  - **Closed loop, dry-to-dry machine with RC* followed by CA* operated immediately before the door is opened.**

**Fugitive Controls:**

  - You must eliminate perc machines installed before December 21, 2005.
  - After December 21, 2009

- By July 27, 2009
  - If located in a building with a residence:
    - **Temperature:** Use a calorimetric detector tube or a ppm gas analyzer to monitor CA.
    - Monitor high pressure and low pressure on RC, when pressure gauges are available.

**MONITORING:**

- **BY JULY 27, 2006, OR IMMEDIATELY UPON START UP, WHICHEVER IS LATER.**
  - Monitor high pressure and low pressure on RC, when pressure gauges are available. After July 13, 2006, you must meet these requirements:

**If located in a building with a residence:**

- **Temperature:** Use a calorimetric detector tube or a ppm gas analyzer to monitor CA.
- Monitor high pressure and low pressure on RC, when pressure gauges are available.

**MONITORING:**

- **BY JULY 27, 2006, OR IMMEDIATELY UPON START UP, WHICHEVER IS LATER.**
  - Monitor high pressure and low pressure on RC, when pressure gauges are available.

**Requirements since July 27, 2006**
Compliance Steps Required of All Perc Dry Cleaners

**Reporting**

Illinois perc dry cleaners must send reports to both the Illinois Environmental Protection Agency and USEPA. Each perc dry cleaner must submit an initial notification report and compliance reports. The initial notification report lets regulators know that you are affected by this rule. These were due on June 18, 1994, for existing machines. For new machines, they are due 30 days after installation. Compliance reports let regulators know if you are meeting the requirements of this rule.

- Compliance Reports for Pollution Prevention were due on June 18, 1994, for existing machines. For new machines, they are due 30 days after installation.
- Compliance Reports for Control Requirements were due by October 23, 1996, for existing machines. For new machines, they are due 30 days after installation.

**New Training Requirements**

Effective January 1, 2014, all operators of perc drycleaning machines must have completed an initial environmental training course that focuses on "best management practices." These training requirements were developed by the Illinois Drycleaner Environmental Response Trust Fund, the Illinois Environmental Protection Agency and industry representatives. Fund approved seminars focusing on "best management practices" can be used to meet some of the initial training requirements. Once every 4 years, the operator must successfully complete a refresher course.

**Other**

The license renewal application will include a certification by the applicant that all hazardous waste stored at the drycleaning facility is stored and transported in accordance with applicable federal and state laws and regulations. The drycleaner must submit with the license application copies all hazardous waste manifests for waste transported from the facility for the previous 12 months. With the 2019 license renewal application, the Illinois Drycleaner Environmental Response Trust Fund is requesting copies of all waste manifests for the period of January 1, 2018 through December 31, 2018.

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**Inspections**

Perceptible leaks – those you can see, feel or smell. Inspections for vapor leaks using a halogenated hydrocarbon detector or a perc gas analyzer always suffice for perceptible leak inspections. Inspections for vapor leaks using a perc gas analyzer and operate it according to EPA Method 21. Place the probe at the surface where leakage could occur and move it slowly along the surface where leakage could occur. Inspect for vapor leaks on a monthly basis. Inspection forms must be submitted within 30 days.

**Table:**

<table>
<thead>
<tr>
<th>Requirements</th>
<th>New Facilities</th>
<th>Existing Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspect for vapor leaks on a monthly basis</td>
<td>By July 27, 2006</td>
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**Permeable Leaks**

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- Permeable leaks are those you can see, feel or smell. Inspections for vapor leaks using a halogenated hydrocarbon detector or a perc gas analyzer always suffice for perceptible leak inspections.
Monitoring: Required monitoring must begin immediately for new installations and was required to begin November 23, 1996, for existing facilities.

1. Refrigerated Condenser (RC): Monitor weekly. Measure the refrigeration system high pressure and low pressure during the drying phase to determine if they are in the range specified by the manufacturer's operating instructions. If the machine is not equipped with refrigeration system pressure gauges, monitor temperature. Use the temperature sensor according to manufacturer’s instructions.

   Measurement: The temperature of the air-perc to gas-vapor stream on the outlet side of the RC on a dry-to-dry machine, dryer, or reclaimer to determine if it is equal to or less than 7.2°C (45°F) before the end of the cool down or drying cycle. The temperature sensor should be designed to measure a temperature of 7.2°C (45°F) to an accuracy of ±1.1°C (±2°F).

   Measurement: The inlet and outlet temperature of the RC on a washer. Calculate the difference. It must be greater than 11.1°C (20°F). The temperature sensor should be designed to measure at least a temperature range from 0°C (32°F) to 48.9°C (120°F) to an accuracy of ±1.1°C (±2°F).

2. Carbon Adsorber (CA): Monitor weekly. Follow the manufacturer’s instructions.

   Procedure: If you use a CA instead of a RC or use a supplemental CA and the exhaust passes through the CA immediately upon door opening, measure the concentration of perc in the exhaust of the CA. Use a colorimetric detector tube or perc gas analyzer that measures a concentration of 100 ppm by volume of perc in air to an accuracy of ±25 ppm by volume. Take the measurement while the dry cleaning machine is venting to the CA at the end of the last dry cleaning cycle prior to desorption of the CA or removal of the activated carbon. The perc concentration needs to be less than or equal to 100 ppm.

   If required monitoring detects values that do not meet the parameters set in the standard, make adjustments or repairs to the dry cleaning system or control device to meet those values. If repair parts are needed, make a written or verbal order within two working days of detecting the value and install repair parts within five working days of receipt.

   Inspection Requirements: Inspection requirements dictate that dry cleaners inspect the following components for leaks while the dry cleaning system is operating.

   1. Hose and pipe connections, fittings, couplings, and valves;
   2. Door gaskets and seatings;
   3. Filter gaskets and seatings;
   4. Pumps;
   5. Solvent tanks and containers;
   6. Water separators;
   7. Muck cookers;
   8. Sumps;
   9. Exhaust dampers;
   10. Directrices, valves, and exhaust dampers;
   11. All filter housings;

   Repair all leaks detected during inspections within 24 hours. If repair parts are needed, make a written or verbal order within two working days of detecting the leak. Inspection requirements also require that the dry cleaning system be inspected for leaks while the system is operating. This inspection should be conducted by a qualified inspector who is trained to perform this inspection. The inspection should be performed at least once every year and documented in writing. The inspector should check for leaks in the following areas:

   1. Hose and pipe connections, fittings, couplings, and valves;
   2. Door gaskets and seatings;
   3. Filter gaskets and seatings;
   4. Pumps;
   5. Solvent tanks and containers;
   6. Water separators;
   7. Muck cookers;
   8. Sumps;
   9. Exhaust dampers;
   10. Directrices, valves, and exhaust dampers;
   11. All filter housings;

   Repair all leaks detected during inspections within 24 hours. If repair parts are needed, make a written or verbal order within two working days of detecting the leak. Install repair parts within five working days after receipt.
Other Requirements For All Perc Dry Cleaning Facilities:

- **Fugitive Controls**
  - Use solvent tanks or containers to store all perc and perc related waste. Ensure that these tanks and containers are closed so that they have no perceptible leaks. Except that you may leave containers for separator water uncovered if it is necessary for proper operation of your machine.
  - Drain all cartridge filters in their housing, or other sealed container, for a minimum of 24 hours (or treat such filter in an equivalent manner) before removal from the dry cleaning plant.

- **Operation/Maintenance**
  - Close the door of each dry cleaning machine immediately after transferring articles to or from the machine; keep the door closed at all other times.
  - Operate and maintain dry cleaning systems according to manufacturer’s specifications and recommendations.
  - Operate each RC to prevent air drawn into the dry cleaning machine when the door of the machine is open from passing through the RC.
  - Operate each RC to not vent or release the air-perc gas-vapor stream contained within the dry cleaning machine to the atmosphere while the dry cleaning drum is rotating. The air-perc vapor should be recirculating back through the machine without venting to the atmosphere (closed loop).
  - Do not bypass a CA at any time.
  - Desorb each CA according to manufacturer’s instructions.

- **Records**
  - Retain on site a copy of the design specifications and the operating manuals for each dry cleaning system and each emission control device located at your facility.
  - Keep receipts of perc purchases and a log of the following information, maintain such information on site, and show it upon request for a period of five years:
    1. Volume of perc purchased each month.
    2. Volume of perc purchased each month.
    3. Dates when the dry cleaning system components are inspected for leaks, as specified, and the name or location of dry cleaning system components where leaks are detected.
    4. Days of repair and records of written or verbal orders.
    5. Dates of repair and records of written or verbal orders for repairs of dry cleaning system components where leaks are detected.
    6. Days and conforming dates of RC if required.

**Illinois Permits:**

If you are a perc dry cleaner and nearing the 360 gallon/yr threshold which requires a permit from the Illinois EPA Bureau of Air, you must apply for a construction/operating permit before using 360 gallons. Failure to get EPA Bureau of Air’s approval may result in double fees plus fines and penalties.

For more information, please contact the Illinois EPA Bureau of Air at 800-252-3998 or go to [http://www.epa.gov/ttn/atw/dryperc/dryclpg.html](http://www.epa.gov/ttn/atw/dryperc/dryclpg.html).

* Please refer to the Regulatory Update in the front of this workbook for further information regarding controls and compliance.