

PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY

Air Program

33 N Stone Avenue, Suite 700, Tucson, Arizona 85701 • Phone: (520) 724-7400

GENERAL AIR QUALITY PERMIT

FOR

**PERCHLOROETHYLENE DRY
CLEANERS**

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

THIS GENERAL PERMIT ISSUED SUBJECT TO SPECIFIC AND ADMINISTRATIVE CONDITIONS IDENTIFIED IN THIS PERMIT.

PDEQ GENERAL PERMIT NUMBER **6099**

PERMIT CLASS **II**

PERMIT ISSUED **July 02, 2020**

EXPIRATION DATE **July 01, 2025**



SIGNATURE

Rupesh Patel, Air Program Manager, PDEQ

TITLE

TABLE OF CONTENTS

<u>Title of Permit Part</u>	<u>Page</u>
I. Part 1: Explanation of Permit Structure (Applicable to All Dry Cleaning Machines)	3
II. Part 2: Applicable Regulations for Category 1 Machines	4
III. Part 3: Applicable Regulations for Category 2 Machines	7
IV. Part 4: Applicable Regulations for Category 3 Machines	12
V. Part 5: Applicable Regulations for Category 4 Machines	16
VI. Part 6: Generic Conditions for Boilers.....	22
VI. Part 7: Generic Conditions (Applicable to All Dry Cleaning Machines)	23
VII. Part 8: Applicable Regulations	24

PART 1

EXPLANATION OF PERMIT STRUCTURE

This is a general permit for dry cleaning machines using perchloroethylene (PCE) and operating in Pima County. Whereas all dry cleaning machines covered under this general permit are substantially similar, the regulations governing the operation and monitoring of these machines varies greatly. During the application process for this general permit, the Permittee supplied various pieces of information about the machines operated at the permitted facility, and the facility itself. This information was used to categorize each machine operated at the permitted facility into one of four categories.

The four categories of machines used in the permit were developed by PDEQ in order to clarify which regulations apply to each machine operated at the permitted facility. Depending on the age of the machine, and how much PCE is consumed at the facility, each machine operating at the facility could be subject to substantially different regulations. Some regulations, however, are the same for all machines and do not vary. The permit has been structured to reflect these facts.

This general permit is divided into eight parts. Parts 1, 7 and 8 apply to all machines regardless of age and facility PCE consumption. Parts 2 through 4 contain the separate sets of applicable regulations for each of the four categories of dry cleaning machines. Each dry cleaning machine operated at the permitted facility is regulated by one, and only one, of these four parts (it is possible for separate machines at the same facility to be subject to different sets of regulations.) The specific federal regulations applicable to each category of dry cleaning machine are identified in whole within each Part.

Each dry cleaning machine authorized to operate in Pima County at the permitted facility shall be provided an Authorization to Operate (ATO) certificate. This certificate lists each dry cleaning machine at the permitted facility, along with the specific category each machine fits into and the corresponding parts of the permit which apply to each machine. See the attached ATO certificate to clarify which regulations apply to each machine operated at your facility.

Part 6 of the permit is the set of additional conditions that applies to any fossil fuel fired boilers or water heaters operated at the permitted facility. Any fossil fuel fired equipment authorized to operate at the permitted facility is included in the ATO certificate. The applicable parts of the permit that apply to the fossil fuel fired equipment are also enumerated in the ATO certificate. If no fossil fuel fired equipment is permitted to operate at the facility, this is reflected by an absence of such equipment on the ATO certificate.

PART 2

SPECIFIC CONDITIONS FOR CATEGORY 1 MACHINES (For Existing Small Area Source PCE Dry Cleaning Equipment)

This Part applies to all dry-to-dry dry cleaning machines for which installation, relocation or reconstruction was commenced before December 9, 1991; and which are located at a dry cleaning facility with a facility-wide, total yearly perchloroethylene consumption of less than 140 gallons/year.

A. Required Control Technology

There are no requirements to install or maintain any PCE control devices on machines within this category.

B. Standards for Operating Dry Cleaning Machinery

1. The Permittee shall operate the dry cleaning system according to the manufacturer's specifications and recommendations. [40 CFR 63.322(d)]
2. The Permittee shall close the door of each dry cleaning machine immediately after transferring articles to or from the machine and shall keep the door closed at all other times. [40 CFR 63.322(c)]
3. The Permittee shall store all PCE and wastes that contain PCE in solvent tanks or solvent containers with no perceptible leaks. The exception to this requirement is that containers for separator water may be uncovered, as necessary, for proper operation of the machine and still. [PCC 17.16.400.A & 40 CFR 63.322(j)]
4. The Permittee shall drain all cartridge filters in their housing, or other sealed container, for a minimum of 24 hours, or shall treat such filters in an equivalent manner, before removal from the dry cleaning facility. [40 CFR 63.322(i)]

C. Maintenance, Leak Detection, and Repair

1. General Maintenance Requirement

The Permittee shall maintain the dry cleaning system according to the manufacturer's specifications and recommendations. [40 CFR 63.322(d)]

2. Perceptible Leak Checks

The Permittee shall inspect the system **biweekly** for *perceptible leaks* while the dry cleaning system is operating. (*Perceptible leaks* are PCE vapor or liquid leaks that are obvious from the odor of PCE, visual observation, such as pools or droplets of liquid, or the detection of gas flow by passing the fingers over the surface of equipment.) Inspection with a halogenated leak detector or PCE gas analyzer also fulfills the requirement for inspection of *perceptible leaks*. The following components shall be inspected: [40 CFR 63.321 & 40 CFR 63.322(k) & (l)]

- a. Hose and pipe connections, fittings, couplings, and valves;
- b. Door gaskets and seatings;
- c. Filter gaskets and seatings;
- d. Pumps;
- e. Solvent tanks and containers;
- f. Water separators;
- g. Muck cookers;
- h. Stills;
- i. Exhaust dampers;
- j. Diverter valves; and
- k. All Filter housings.

3. Vapor Leak Checks

The Permittee shall inspect the components listed in C.2.a through k of this Part for *vapor leaks* **monthly** while the component is in operation. (*Vapor leaks* are emissions of PCE vapor of a concentration exceeding 25 parts per million by volume - 50 parts per million by volume as methane - as indicated by a halogenated hydrocarbon detector or PCE gas analyzer.) [40 CFR 63.322(o) & 40 CFR 63.321]

- a. Inspections shall be conducted using a halogenated hydrocarbon detector or PCE gas analyzer that is operated according to the manufacturer's instructions. The operator shall place the probe inlet at the surface of each component interface where leakage could occur and move it slowly along the interface periphery. [40 CFR 63.322(o)(1)(i)]
- b. Any inspection conducted according to this paragraph shall satisfy the requirements to conduct an inspection for perceptible leaks under C.2 of this Part. [40 CFR 63.322(o)(1)(iii)]

4. Repair Requirement for Leaks Detected

The Permittee shall repair all leaks detected during the inspections required by C.2 or C.3 of this Part within 24 hours. If repair parts must be ordered, either a written or verbal order for those parts shall be initiated within 2 working days of detecting such a leak. Such repair parts shall be installed within 5 working days after receipt. [40 CFR 63.322(m)]

5. The Permittee shall keep records of all inspections and repairs conducted as specified in D.1 of this Part.

D. Recordkeeping

1. Inspection and Repair Records

The Permittee shall keep a log of the following information and maintain such information on-site and show it upon request for a period of 5 years:

- a. The dates when the dry cleaning system components are inspected for leaks, as specified in C.2 and C.3, and the name or location of the dry cleaning system components where leaks are detected; [40 CFR 63.324(d)(3)]
- b. The dates of repair and records of written or verbal orders for repair parts to demonstrate compliance with C.4 of this Part. [40 CFR 63.324(d)(4)]

2. PCE Consumption Calculations and Records

The Permittee shall keep all receipts of PCE purchases and a log of the following information (*including* all calculations.) The Permittee shall maintain such information on-site and show it upon request for a period of 5 years:

- a. The Permittee shall, on the first working day of each month record the total volume of all PCE purchases made in the *previous month* for the entire facility (if no PCE was purchased in a given month, the record shall record zero gallons for that month.) [40 CFR 63.324(d)]
- b. The Permittee shall, on the first working day of each month, sum and record the volume of all PCE purchases made *in each of the previous 12 months* for the entire facility, as recorded in the log described in D.2.a of this Part (if no PCE was purchased in a given month, the record shall record zero gallons for that month). The total sum recorded in this manner is the yearly PCE consumption for the permitted facility. [40 CFR 63.323(d)]

3. Operating Manuals and Design Specifications

The Permittee shall retain on-site a copy of the design specifications and the operating manuals for each dry cleaning system located at the dry cleaning facility. [40 CFR 63.324(e)]

E. Reporting Requirements

1. If the total yearly perchloroethylene consumption of the dry cleaning facility exceeds 140 gallons, the Permittee must comply with all applicable standards (including, but not limited to, installation and operation of control technology) within 180 days of first determining the facility exceeded the consumption limit. The Permittee shall submit the appropriate revisions to the Control Officer pursuant to PCC 17.13.100, 17.13.130, 17.13.140. [40 CFR 63.320(f) & PCC 17.13.020.A.5]
2. Should the Permittee relocate a used machine he or she shall promptly comply with any subsequently applicable requirements and shall submit the appropriate reports and revisions to the Control Officer pursuant to PCC 17.13.100, 17.13.130, 17.13.140, and 40 CFR 63.324(b). [PCC 17.13.020.A.5]

PART 3

SPECIFIC CONDITIONS FOR CATEGORY 2 MACHINES

(For Existing Large Area Source PCE Dry Cleaning Equipment)

This Part applies to all dry-to-dry dry cleaning machines for which installation, relocation or reconstruction was commenced before December 9, 1991; and which are located at a facility with a facility-wide, total yearly perchloroethylene consumption greater than, or equal to, 140 gallons/year and less than, or equal to, 2100 gallons/year.

A. Required Emissions Control Devices

1. The Permittee shall comply with *one* of the following control technology requirements:
[40 CFR 63.322(a)]
 - a. The Permittee shall route the air-perchloroethylene gas-vapor stream contained within each dry cleaning machine through a refrigerated condenser or equivalent control device; or
 - b. The Permittee shall route the air-perchloroethylene gas-vapor stream contained within each dry cleaning machine through a carbon adsorber installed on the dry cleaning machine prior to September 22, 1993.
2. Each refrigerated condenser used for the purpose of complying with paragraph A.1.a of this Part shall:
[40 CFR 63.322(e)]
 - a. Be operated to not vent or release the air-perchloroethylene gas-vapor stream contained within the dry cleaning machine to the atmosphere while the dry cleaning machine drum is rotating.
 - b. Be monitored according to C.1 of this Part, and;
 - c. Prevent air drawn into the dry cleaning machine when the door is open from passing through the refrigerated condenser.
3. Each carbon adsorber used for the purpose of complying with paragraph A.1.b of this Part shall:
[40 CFR 63.322(g)]
 - a. Not be bypassed to vent or release any air-perchloroethylene gas-vapor stream to the atmosphere at any time; and
 - b. Shall be monitored according to C.2 of this Part.

B. Standards for Operating Dry Cleaning Machinery

1. The Permittee shall operate the dry cleaning system according to the manufacturer's specifications and recommendations.
[40 CFR 63.322(d)]
2. The Permittee shall close the door of each dry cleaning machine immediately after transferring articles to or from the machine and shall keep the door closed at all other times.
[40 CFR 63.322(c)]
3. The Permittee shall store all PCE and wastes that contain PCE in solvent tanks or solvent containers with no perceptible leaks. The exception to this requirement is that containers for separator water may be uncovered, as necessary, for proper operation of the machine and still. [PCC 17.16.400.A & 40 CFR 63.322(j)]
4. The Permittee shall drain all cartridge filters in their housing, or other sealed container, for a minimum of 24 hours, or shall treat such filters in an equivalent manner, before removal from the dry cleaning facility.
[40 CFR 63.322(i)]

C. Monitoring of Emissions Control Devices

1. Required Monitoring of Refrigerated Condensers

When a refrigerated condenser is used to comply with A.1.a of this Part, the Permittee shall monitor the following parameters, as applicable, on a **weekly** basis: [40 CFR 63.323(a)]

- a. The refrigeration system high pressure and low pressure during the drying phase to determine if they are in the range specified in the manufacturer's operating instructions; or
- b. If the machine is not equipped with refrigeration system pressure gauges, the temperature of the air-perchloroethylene gas-vapor stream on the outlet side of the refrigerated condenser on each dry cleaning machine with a temperature sensor 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 while the gas-vapor is flowing through the condenser; and
- c. The temperature sensor shall be used according to the manufacturer's instructions and shall be designed to measure a temperature of 7.2 °C (45 °F) to an accuracy of ± 1.1 °C (± 2 °F).

2. Required Monitoring of Carbon Adsorbers

When a carbon adsorber is used to comply with A.1.b of this Part, the Permittee shall measure the concentration of PCE in the exhaust of the carbon adsorber **weekly** with a colorimetric detector tube or PCE gas analyzer, and [40 CFR 63.323(b)]

- a. The measurement shall be taken while the dry cleaning machine is venting to that carbon adsorber at the end of the last dry cleaning cycle prior to desorption of that carbon adsorber or removal of the activated carbon to determine that the PCE concentration in the exhaust is equal to or less than 100 parts per million by volume; and
- b. The Permittee shall use a colorimetric tube or PCE gas analyzer designed to measure a concentration of 100 parts per million by volume of PCE in air to an accuracy of 25 parts per million by volume; and
- c. The Permittee shall use the colorimetric detector tube or PCE gas analyzer according to the manufacturer's instructions; and
- d. The Permittee shall provide a sampling port for monitoring within the exhaust outlet of the carbon adsorber that is easily accessible and located at least 8 stack or duct diameters downstream from any flow disturbance such as a bend, expansion, contraction, or outlet; downstream from no other inlet; and 2 stack or duct diameters upstream from any flow disturbance such as a bend, expansion, contraction, inlet, or outlet.

D. Maintenance, Leak Detection, and Repair

1. General Maintenance Requirement

The Permittee shall maintain the dry cleaning system according to the manufacturer's specifications and recommendations. [40 CFR 63.322(d)]

2. Perceptible Leak Checks

The Permittee shall inspect the system **weekly** for *perceptible leaks* while the dry cleaning system is operating. (*Perceptible leaks* are PCE vapor or liquid leaks that are obvious from the odor of PCE, visual observation, such as pools or droplets of liquid, or the detection of gas flow by passing the fingers over the surface of equipment.) Inspection with a halogenated leak detector or PCE gas analyzer also fulfills the requirement for inspection of *perceptible leaks*. The following components shall be inspected: [40 CFR 63.321, & 40 CFR 63.322(k)]

- a. Hose and pipe connections, fittings, couplings, and valves;
- b. Door gaskets and seatings;
- c. Filter gaskets and seatings;
- d. Pumps;
- e. Solvent tanks and containers;
- f. Water separators;
- g. Muck cookers;
- h. Stills;
- i. Exhaust dampers;
- j. Diverter valves; and
- k. All Filter housings.

3. Vapor Leak Checks

The Permittee shall inspect the components listed in D.2.a through k of this Part for *vapor leaks* **monthly** while the component is in operation. (*Vapor leaks* are emissions of PCE vapor of a concentration exceeding 25 parts per million by volume - 50 parts per million by volume as methane - as indicated by a halogenated hydrocarbon detector or PCE gas analyzer.) [40 CFR 63.322(o) & 40 CFR 63.321]

- a. Inspections shall be conducted using a halogenated hydrocarbon detector or PCE gas analyzer that is operated according to the manufacturer's instructions. The operator shall place the probe inlet at the surface of each component interface where leakage could occur and move it slowly along the interface periphery. [40 CFR 63.322(o)(1)(i)]
- b. Any inspection conducted according to this paragraph shall satisfy the requirements to conduct an inspection for perceptible leaks under D.2 of this Part. [40 CFR 63.322(o)(1)(iii)]

4. Repair Requirements for Leaks Detected

The Permittee shall repair all leaks detected during the inspections required by D.2 or D.3 of this Part within 24 hours. If repair parts must be ordered, either a written or verbal order for those parts shall be initiated within 2 working days of detecting such a leak. Such repair parts shall be installed within 5 working days after receipt. [40 CFR 63.322(m)]

5. Repair Requirements for Faulty Emissions Control Devices

If parameter values monitored under paragraphs A.2.b or A.3.b of this Part do not meet the values specified in paragraphs C.1.a, C.1.b or C.2.b, adjustments or repairs shall be made to the dry cleaning system or control device to meet those values. If repair parts must be ordered, either a written or verbal order for such parts shall be initiated within 2 working days of detecting such a parameter value. Such repair parts shall be installed within 5 working days after receipt. [40 CFR 63.322(n)]

6. The Permittee shall keep records of all inspections, parts orders and repairs conducted, as specified in E.2 of this Part.

E. Recordkeeping

1. Emissions Control Device Monitoring Records

The Permittee shall keep a log of the following information and maintain such information on-site and show it upon request for a period of 5 years, as applicable:

- a. Refrigerated Condenser Monitoring Records (if used): [40 CFR 63.324(d)(5)]
 - i. The date and refrigeration high pressure and low pressure monitoring results, as specified in C.1.a; or
 - ii. The date and temperature sensor monitoring results, as specified in C.1.b if no refrigeration system pressure gauges are installed.

- b. Carbon Adsorber Monitoring Records (if used): [40 CFR 63.324(d)(6)]

The date and monitoring results, as specified in C.2.a.

2. Inspection and Repair Records

The Permittee shall keep a log of the following information and maintain such information on-site and show it upon request for a period of 5 years:

- a. The dates when the dry cleaning system components are inspected for leaks, as specified in D.2 and D.3, and the name or location of the dry cleaning system components where leaks are detected; [40 CFR 63.324(d)(3)]
- b. The dates of repair and records of written or verbal orders for repair parts to demonstrate compliance with D.4 and D.5 of this Part. [40 CFR 63.324(d)(4)]

3. PCE Consumption Calculations and Records

The Permittee shall keep all receipts of PCE purchases and a log of the following information (*including* all calculations.) The Permittee shall maintain such information on-site and show it upon request for a period of 5 years:

- a. The Permittee shall, on the first working day of each month record the total volume of all PCE purchases made in the *previous month* for the entire facility (if no PCE was purchased in a given month, the record shall record zero gallons for that month.) [40 CFR 63.324(d)]
- b. The Permittee shall, on the first working day of each month, sum and record the volume of all PCE purchases made *in each of the previous 12 months* for the entire facility, as recorded in the log described in E.3.a of this Part (if no PCE was purchased in a given month, the record shall record zero gallons for that month). The total sum recorded in this manner is the yearly PCE consumption for the permitted facility. [40 CFR 63.323(d)]

4. Operating Manuals and Design Specifications

The Permittee shall retain on-site a copy of the design specifications and the operating manuals for each dry cleaning system located at the dry cleaning facility. [40 CFR 63.324(e)]

F. Reporting Requirements

1. If the total yearly perchloroethylene consumption of the dry cleaning facility exceeds 2100 gallons, the Permittee must comply with all applicable standards (including, but not limited to, installation and operation of control technology) within 180 days of first determining the facility exceeded the consumption limit. The Permittee shall submit the appropriate revisions to the Control Officer pursuant to PCC 17.13.100, 17.13.130, 17.13.140. [40 CFR 63.320(i) & PCC 17.13.020.A.5]
2. Should the Permittee relocate a used machine he or she shall promptly comply with any subsequently applicable requirements and shall submit the appropriate reports and revisions to the Control Officer pursuant to PCC 17.13.100, 17.13.130, 17.13.140, and 40 CFR 63.324(b). [PCC 17.13.020.A.5]

PART 4

SPECIFIC CONDITIONS FOR CATEGORY 3 MACHINES *(For New Area Source PCE Dry Cleaning Equipment Specified Below)*

This Part applies to all dry-to-dry dry cleaning machines for which installation, relocation or reconstruction was commenced on or after December 9, 1991, and before or on December 21, 2005; and which are located at a facility with a facility-wide, total yearly perchloroethylene consumption of less than, or equal to, 2100 gallons/year.

A. Required Emissions Control Device (Refrigerated Condenser)

1. The Permittee shall route the air-perchloroethylene gas-vapor stream contained within each dry cleaning machine through a refrigerated condenser or equivalent control device. [40 CFR 63.322(a)]
2. Each refrigerated condenser used for the purpose of complying with paragraph A.1 of this Part shall: [40 CFR 63.322(e)]
 - a. Be operated to not vent or release the air-perchloroethylene gas-vapor stream contained within the dry cleaning machine to the atmosphere while the dry cleaning machine drum is rotating.
 - b. Be monitored according to C.1 or C.2 of this Part, and;
 - c. Prevent air drawn into the dry cleaning machine when the door is open from passing through the refrigerated condenser.

B. Standards for Operating Dry Cleaning Machinery

1. The Permittee shall operate the dry cleaning system according to the manufacturer's specifications and recommendations. [40 CFR 63.322(d)]
2. The Permittee shall close the door of each dry cleaning machine immediately after transferring articles to or from the machine and shall keep the door closed at all other times. [40 CFR 63.322(c)]
3. The Permittee shall store all PCE and wastes that contain PCE in solvent tanks or solvent containers with no perceptible leaks. The exception to this requirement is that containers for separator water may be uncovered, as necessary, for proper operation of the machine and still. [PCC 17.16.400.A & 40 CFR 63.322(j)]
4. The Permittee shall drain all cartridge filters in their housing, or other sealed container, for a minimum of 24 hours, or shall treat such filters in an equivalent manner, before removal from the dry cleaning facility. [40 CFR 63.322(i)]

C. Monitoring of Emissions Control Device (Refrigerated Condenser)

Each refrigerated condenser used to comply with A.1 of this Part, shall be monitored by the Permittee for the following parameters on a **weekly** basis: [40 CFR 63.323(a)]

1. The refrigeration system high pressure and low pressure during the drying phase to determine if they are in the range specified in the manufacturer's operating instructions; or
2. If the machine is not equipped with refrigeration system pressure gauges, the temperature of the air-perchloroethylene gas-vapor stream on the outlet side of the refrigerated condenser on each dry cleaning machine with a temperature sensor 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 while the gas-vapor is flowing through the condenser; and,

3. The temperature sensor shall be used according to the manufacturer's instructions and shall be designed to measure a temperature of 7.2 °C (45 °F) to an accuracy of ± 1.1 °C (± 2 °F).

D. Maintenance, Leak Detection, and Repair

1. General Maintenance Requirement

The Permittee shall maintain the dry cleaning system according to the manufacturer's specifications and recommendations. [40 CFR 63.322(d)]

2. Perceptible Leak Checks

The Permittee shall inspect the system **weekly** for *perceptible leaks* while the dry cleaning system is operating. (*Perceptible leaks* are PCE vapor or liquid leaks that are obvious from the odor of PCE, visual observation, such as pools or droplets of liquid, or the detection of gas flow by passing the fingers over the surface of equipment.) Inspection with a halogenated leak detector or PCE gas analyzer also fulfills the requirement for inspection of *perceptible leaks*. The following components shall be inspected: [40 CFR 63.321, & 40 CFR 63.322(k)]

- a. Hose and pipe connections, fittings, couplings, and valves;
- b. Door gaskets and seatings;
- c. Filter gaskets and seatings;
- d. Pumps;
- e. Solvent tanks and containers;
- f. Water separators;
- g. Muck cookers;
- h. Stills;
- i. Exhaust dampers;
- j. Diverter valves; and
- k. All Filter housings.

3. Vapor Leak Checks

The Permittee shall inspect the components listed in D.2.a through k of this Part for *vapor leaks* **monthly** while the component is in operation. (*Vapor leaks* are emissions of PCE vapor of a concentration exceeding 25 parts per million by volume - 50 parts per million by volume as methane - as indicated by a halogenated hydrocarbon detector or PCE gas analyzer.) [40 CFR 63.322(o) & 40 CFR 63.321]

- a. Inspections shall be conducted using a halogenated hydrocarbon detector or PCE gas analyzer that is operated according to the manufacturer's instructions. The operator shall place the probe inlet at the surface of each component interface where leakage could occur and move it slowly along the interface periphery. [40 CFR 63.322(o)(1)(i)]
- b. Any inspection conducted according to this paragraph shall satisfy the requirements to conduct an inspection for perceptible leaks under D.2 of this Part. [40 CFR 63.322(o)(1)(iii)]

4. Repair Requirements for Leaks Detected

The Permittee shall repair all leaks detected during the inspections required by D.2 or D.3 of this Part within 24 hours. If repair parts must be ordered, either a written or verbal order for those parts shall be initiated within 2 working days of detecting such a leak. Such repair parts shall be installed within 5 working days after receipt. [40 CFR 63.322(m)]

5. Repair Requirements for Faulty Emissions Control Devices (Refrigerated Condenser)

If parameter values monitored under paragraph A.2.b of this Part do not meet the values specified in paragraph C.1. or C.2, adjustments or repairs shall be made to the dry cleaning system or control device to meet those values. If repair parts must be ordered, either a written or verbal order for such parts shall be initiated within 2 working days of detecting such a parameter value. Such repair parts shall be installed within 5 working days after receipt. [40 CFR 63.322(n)]

6. The Permittee shall keep records of all inspections, parts orders and repairs conducted, as specified in E.2 of this Part.

E. Recordkeeping

1. Emissions Control Device (Refrigerated Condenser) Monitoring Records

The Permittee shall keep a log of the following information and maintain such information on-site and show it upon request for a period of 5 years, as applicable: [40 CFR 63.324(d)(5)]

- a. The date and refrigeration high pressure and low pressure monitoring results, as specified in paragraph C.1; or
- b. The date and temperature sensor monitoring results, as specified in paragraph C.2 if no refrigeration system pressure gauges are installed.

2. Inspection and Repair Records

The Permittee shall keep a log of the following information and maintain such information on-site and show it upon request for a period of 5 years:

- a. The dates when the dry cleaning system components are inspected for leaks, as specified in D.2 and D.3, and the name or location of the dry cleaning system components where leaks are detected; [40 CFR 63.324(d)(3)]
- b. The dates of repair and records of written or verbal orders for repair parts to demonstrate compliance with D.4 and D.5 of this Part. [40 CFR 63.324(d)(4)]

3. PCE Consumption Calculations and Records

The Permittee shall keep all receipts of PCE purchases and a log of the following information (*including* all calculations.) The Permittee shall maintain such information on-site and show it upon request for a period of 5 years:

- a. The Permittee shall, on the first working day of each month record the total volume of all PCE purchases made in the *previous month* for the entire facility (if no PCE was purchased in a given month, the record shall record zero gallons for that month.) [40 CFR 63.324(d)]
- b. The Permittee shall, on the first working day of each month, sum and record the volume of all PCE purchases made *in each of the previous 12 months* for the entire facility, as recorded in the log described in E.3.a of this Part (if no PCE was purchased in a given month, the record shall record zero gallons for that month). The total sum recorded in this manner is the yearly PCE consumption for the permitted facility. [40 CFR 63.323(d)]

4. Operating Manuals and Design Specifications

The Permittee shall retain on-site a copy of the design specifications and the operating manuals for each dry cleaning system located at the dry cleaning facility. [40 CFR 63.324(e)]

F. Reporting Requirements

1. If the total yearly perchloroethylene consumption of the dry cleaning facility exceeds 2100 gallons, the Permittee must comply with all applicable standards (including, but not limited to, installation and operation of control technology) within 180 days of first determining the facility exceeded the consumption limit. The Permittee shall submit the appropriate reports and revisions to the Control Officer pursuant to PCC 17.13.100, 17.13.130, 17.13.140, and 40 CFR 63.324(c). [40 CFR 63.320(i) & PCC 17.13.020.A.5]
2. Should the Permittee relocate a used machine he or she shall promptly comply with any subsequently applicable requirements and shall submit the appropriate reports and revisions to the Control Officer pursuant to PCC 17.13.100, 17.13.130, 17.13.140, and 40 CFR 63.324(b). [PCC 17.13.020.A.5]

PART 5

SPECIFIC CONDITIONS FOR CATEGORY 4 MACHINES (For New Area Source PCE Dry Cleaning Equipment Specified Below)

This Part applies to all dry-to-dry dry cleaning machines for which installation, relocation or reconstruction was commenced after December 21, 2005; and which are located at a facility with a facility-wide, total yearly perchloroethylene consumption of less than, or equal to, 2100 gallons/year.

A. Required Emissions Control Devices

1. The Permittee shall comply with *both* of the following control technology requirements:
[40 CFR 63.322(a) & 40 CFR 63.322(o)(2)]
 - a. The Permittee shall route the air-perchloroethylene gas-vapor stream contained within each dry cleaning machine through a refrigerated condenser; and
 - b. The Permittee shall route the air-perchloroethylene gas-vapor stream from inside the dry cleaning machine drum through a non-vented carbon adsorber or equivalent control device immediately before the door of the dry cleaning machine is opened.
2. Each refrigerated condenser used for the purpose of complying with paragraph A.1.a of this Part shall:
[40 CFR 63.322(e)]
 - a. Be operated to not vent or release the air-perchloroethylene gas-vapor stream contained within the dry cleaning machine to the atmosphere while the dry cleaning machine drum is rotating.
 - b. Be monitored according to C.1 of this Part, and;
 - c. Prevent air drawn into the dry cleaning machine when the door is open from passing through the refrigerated condenser.
3. Each carbon adsorber used for the purpose of complying with paragraph A.1.b of this Part shall:
[40 CFR 63.322(o)(2) & 40 CFR 63.323(c)]
 - a. Be desorbed in accordance with the manufacturer's instructions
 - b. Shall be monitored according to C.2 of this Part.

B. Standards for Operating Dry Cleaning Machinery

1. The Permittee shall operate the dry cleaning system according to the manufacturer's specifications and recommendations.
[40 CFR 63.322(d)]
2. The Permittee shall close the door of each dry cleaning machine immediately after transferring articles to or from the machine and shall keep the door closed at all other times.
[40 CFR 63.322(c)]
3. The Permittee shall store all PCE and wastes that contain PCE in solvent tanks or solvent containers with no perceptible leaks. The exception to this requirement is that containers for separator water may be uncovered, as necessary, for proper operation of the machine and still.
[PCC 17.16.400.A & 40 CFR 63.322(j)]
4. The Permittee shall drain all cartridge filters in their housing, or other sealed container, for a minimum of 24 hours, or shall treat such filters in an equivalent manner, before removal from the dry cleaning facility.
[40 CFR 63.322(i)]

C. Monitoring of Emissions Control Devices

1. Required Monitoring of Refrigerated Condenser

[40 CFR 63.323(a)]

Each refrigerated condenser used to comply with A.1.a of this Part, shall be monitored for the following parameters, as applicable, on a **weekly** basis:

- a. The refrigeration system high pressure and low pressure during the drying phase to determine if they are in the range specified in the manufacturer's operating instructions; or
- b. If the machine is not equipped with refrigeration system pressure gauges, the temperature of the air-perchloroethylene gas-vapor stream on the outlet side of the refrigerated condenser on each dry cleaning machine with a temperature sensor 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 while the gas-vapor is flowing through the condenser; and
- c. The temperature sensor shall be used according to the manufacturer's instructions and shall be designed to measure a temperature of 7.2 °C (45 °F) to an accuracy of ± 1.1 °C (± 2 °F).

2. Required Monitoring of Carbon Adsorber Exhaust

[40 CFR 63.323(b)]

When a carbon adsorber is used to comply with A.1.b of this Part, the Permittee shall measure the concentration of PCE in the exhaust of the carbon adsorber **weekly** with a colorimetric detector tube or PCE gas analyzer, and

- a. The measurement shall be taken while the dry cleaning machine is venting to that carbon adsorber at the end of the last dry cleaning cycle prior to desorption of that carbon adsorber or removal of the activated carbon to determine that the PCE concentration in the exhaust is equal to or less than 100 parts per million by volume; and
- b. The Permittee shall use a colorimetric tube or PCE gas analyzer designed to measure a concentration of 100 parts per million by volume of PCE in air to an accuracy of 25 parts per million by volume; and
- c. The Permittee shall use the colorimetric detector tube or PCE gas analyzer according to the manufacturer's instructions; and
- d. The Permittee shall provide a sampling port for monitoring within the exhaust outlet of the carbon adsorber that is easily accessible and located at least 8 stack or duct diameters downstream from any flow disturbance such as a bend, expansion, contraction, or outlet; downstream from no other inlet; and 2 stack or duct diameters upstream from any flow disturbance such as a bend, expansion, contraction, inlet, or outlet.

3. Required Monitoring of Dry Cleaning Machine Drum

[40 CFR 63.323(c)]

For each dry cleaning machine that uses a carbon adsorber to comply with A.1.b of this Part, the Permittee shall measure the concentration of PCE in the dry cleaning machine drum at end of the dry cleaning machine **weekly** with a colorimetric detector tube or PCE gas analyzer. The Permittee shall:

- a. Use the colorimetric detector tube or PCE gas analyzer to determine that the PCE concentration in the dry cleaning machine drum is equal to or less than 300 parts per million by volume; and

- b. The Permittee shall use a colorimetric tube or PCE gas analyzer designed to measure a concentration of 300 parts per million by volume of PCE in air to an accuracy of ± 75 parts per million by volume; and
- c. The Permittee shall use the colorimetric detector tube or PCE gas analyzer according to the manufacturer's instructions; and
- d. The Permittee shall conduct the weekly monitoring by inserting the colorimetric detector or PCE gas analyzer tube into the open space above the articles at the rear of the dry cleaning machine drum immediately upon opening the dry cleaning machine door.

D. Maintenance, Leak Detection, and Repair

1. General Maintenance Requirement

The Permittee shall maintain the dry cleaning system according to the manufacturers' specifications and recommendations. [40 CFR 63.322(d)]

2. Perceptible Leak Checks

The Permittee shall inspect the system **weekly** for *perceptible leaks* while the dry cleaning system is operating. (*Perceptible leaks* are PCE vapor or liquid leaks that are obvious from the odor of PCE, visual observation, such as pools or droplets of liquid, or the detection of gas flow by passing the fingers over the surface of equipment.) Inspection with a halogenated leak detector or PCE gas analyzer also fulfills the requirement for inspection of *perceptible leaks*. The following components shall be inspected: [40 CFR 63.321, & 40 CFR 63.322(k)]

- a. Hose and pipe connections, fittings, couplings, and valves;
- b. Door gaskets and seatings;
- c. Filter gaskets and seatings;
- d. Pumps;
- e. Solvent tanks and containers;
- f. Water separators;
- g. Muck cookers;
- h. Stills;
- i. Exhaust dampers;
- j. Diverter valves; and
- k. All Filter housings.

3. Vapor Leak Checks

The Permittee shall inspect the components listed in D.2.a through k of this Part for *vapor leaks* **monthly** while the component is in operation. (*Vapor leaks* are emissions of PCE vapor of a concentration exceeding 25 parts per million by volume - 50 parts per million by volume as methane - as indicated by a halogenated hydrocarbon detector or PCE gas analyzer.) [40 CFR 63.322(o) & 40 CFR 63.321]

- a. Inspections shall be conducted using a halogenated hydrocarbon detector or PCE gas analyzer that is operated according to the manufacturer's instructions. The operator shall place the probe inlet at the surface of each component interface where leakage could occur and move it slowly along the interface periphery. [40 CFR 63.322(o)(1)(i)]
- b. Any inspection conducted according to this paragraph shall satisfy the requirements to conduct an inspection for perceptible leaks under D.2 of this Part. [40 CFR 63.322(o)(1)(iii)]

4. Repair Requirements for Leaks Detected

The Permittee shall repair all leaks detected during the inspections required by D.2 or D.3 of this Part within 24 hours. If repair parts must be ordered, either a written or verbal order for those parts shall be initiated within 2 working days of detecting such a leak. Such repair parts shall be installed within 5 working days after receipt. [40 CFR 63.322(m)]

5. Repair Requirements for Faulty Emissions Control Devices

If parameter values monitored under paragraphs A.2.b or A.3.b of this Part do not meet the values specified in paragraphs C.1.a, C.1.b or C.2.b, adjustments or repairs shall be made to the dry cleaning system or control device to meet those values. If repair parts must be ordered, either a written or verbal order for such parts shall be initiated within 2 working days of detecting such a parameter value. Such repair parts shall be installed within 5 working days after receipt. [40 CFR 63.322(n)]

6. The Permittee shall keep records of all inspections, parts orders and repairs conducted, as specified in E.2 of this Part.

E. Recordkeeping

1. Emissions Control Device Monitoring Records

The Permittee shall keep a log of the following information and maintain such information on-site and show it upon request for a period of 5 years, as applicable:

a. Refrigerated Condenser Monitoring Records: [40 CFR 63.324(d)(5)]

- i. The date and refrigeration high pressure and low pressure monitoring results, as specified in C.1.a; or
- ii. The date and temperature sensor monitoring results, as specified in C.1.b if no refrigeration system pressure gauges are installed.

b. Carbon Adsorber Monitoring Records:

The date and monitoring results, as specified in C.2.a. [40 CFR 63.324(d)(6)]

2. Inspection and Repair Records

The Permittee shall keep a log of the following information and maintain such information on-site and show it upon request for a period of 5 years:

a. The dates when the dry cleaning system components are inspected for leaks, as specified in D.2 and D.3, and the name or location of the dry cleaning system components where leaks are detected; [40 CFR 63.324(d)(3)]

b. The dates of repair and records of written or verbal orders for repair parts to demonstrate compliance with D.4 and D.5 of this Part. [40 CFR 63.324(d)(4)]

3. PCE Consumption Calculations and Records

The Permittee shall keep all receipts of PCE purchases and a log of the following information (*including* all calculations.) The Permittee shall maintain such information on-site and show it upon request for a period of 5 years:

- a. The Permittee shall, on the first working day of each month record the total volume of all PCE purchases made in the *previous month* for the entire facility (if no PCE was purchased in a given month, the record shall record zero gallons for that month.) [40 CFR 63.324(d)]
- b. The Permittee shall, on the first working day of each month, sum and record the volume of all PCE purchases made *in each of the previous 12 months* for the entire facility, as recorded in the log described in E.2.a of this Part (if no PCE was purchased in a given month, the record shall record zero gallons for that month). The total sum recorded in this manner is the yearly PCE consumption for the permitted facility. [40 CFR 63.323(d)]

4. Operating Manuals and Design Specifications

The Permittee shall retain on-site a copy of the design specifications and the operating manuals for each dry cleaning system located at the dry cleaning facility. [40 CFR 63.324(e)]

F. Reporting Requirements

- 1. If the total yearly perchloroethylene consumption of the dry cleaning facility exceeds 2100 gallons, the Permittee must comply with all applicable standards (including, but not limited to, installation and operation of control technology) within 180 days of first determining the facility exceeded the consumption limit. The Permittee shall submit the appropriate reports and revisions to the Control Officer pursuant to PCC 17.13.100, 17.13.130, 17.13.140, and 40 CFR 63.324(c). [40 CFR 63.320(i) & PCC 17.13.020.A.5]
- 2. Should the Permittee relocate a used machine he or she shall promptly comply with any subsequently applicable requirements and shall submit the appropriate reports and revisions to the Control Officer pursuant to PCC 17.13.100, 17.13.130, 17.13.140, and 40 CFR 63.324(b). [PCC 17.13.020.A.5]

PART 6

SPECIFIC CONDITIONS FOR BOILERS AND WATER HEATERS

A. Opacity Standard

1. The Permittee shall not cause, allow or permit the effluent from any boiler to have an average optical density equal to or greater than 20 percent opacity. [PCC 17.16.040]

2. *Opacity for Natural Gas fired Equipment*

The Permittee shall not be required to conduct a visible emission check on the exhaust stack of equipment while firing natural gas since the percent of opacity of visible emissions while combusting gaseous fuel is inherently low. The Permittee shall operate and maintain the equipment at all times - including periods of startup, shutdown, and malfunction - in a manner consistent with good air pollution control practices and consistent with manufacturer's guidelines.

3. *Opacity for Fuel Oil Fired Equipment*

The Permittee shall conduct a visible emissions check on the exhaust stack of each boiler at least quarterly while the boilers are operating. For the purposes of this permit, a visible emissions check is verification that abnormal emissions are not present at the boiler stack. The Permittee shall record the date and time of the check, the name of the person conducting the check, the results of the check, and the type of corrective action taken (if required). All records shall be maintained for five years.

3. When required by the Control Officer, the Permittee shall perform visible emissions observations in accordance with EPA Method 9, Appendix A in 40 CFR 60, on the boilers to demonstrate compliance with the opacity standard. [PCC 17.16.040 & PCC 17.20.010]

B. Fuel Limitation

[PCC 17.13.020.A.2]

1. The Permittee shall burn only the specified fuel allowed for the boilers identified in the Authorization to Operate certificate.
2. In order to demonstrate compliance with the fuel limitation required in B.1 of this Part, the Permittee shall maintain records of fuel supplier specifications which verify the fuel and sulfur content of the fuel, as delivered. All records shall be maintained for five years.
3. For equipment in the ATO that fires natural gas, the Permittee may demonstrate that only commercially available natural gas fuel was fired by making available to the Control Officer for inspection, documentation, such as invoices or statements from the fuel supplier, showing that natural gas was purchased for use in the equipment. Alternatively, the demonstration may be made by actual inspection of the equipment showing that natural gas is plumbed to the equipment for firing.

C. Facility Changes

Should the Permittee desire to change the facility or operations in any way (including, but not limited to, addition of new equipment, modification of current equipment or usage of fuels not specified within this Permit,) the Permittee will first submit the proper notification and follow the required permit revision procedure pursuant to PCC 17.13.110, PCC 17.13.130, or PCC 17.13.140.

PART 7

ADDITIONAL PERMIT REQUIREMENTS

I. Compliance with Permit Conditions

[PCC 17.13.020.A.7.a & b]

- A. The Permittee shall comply with all conditions of this permit including all applicable requirements of the Arizona air quality statutes and the air quality rules. Any permit noncompliance constitutes a violation of the Arizona Revised Statutes and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act.
- B. The Permittee shall report to the Control Officer any emissions in excess of the limits established by this permit. The report shall be in 2 parts as specified below: [PCC 17.13.020.A.5 & PCC 17.13.190]
 - 1. Notification by telephone or facsimile within 24 hours of the time the Permittee first learned of the occurrence of excess emission that includes all available information pursuant to PCC 17.13.190.B. To report excess emissions call **520-724-7400** or fax to **520-838-7432**.
 - 2. Detailed written notification by submission of an excess emissions report within 72 hours of the notification in I.B.1 above. **Send to PDEQ 33 N. Stone Ave, Suite 700, Tucson, Arizona 85701.**
- C. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- D. The permit does not convey any property rights of any sort, or any exclusive privilege to the permit holder.
- E. The Permittee shall pay fees to the Control Officer pursuant to PCC 17.13.240. [PCC 17.13.020.A.9 & PCC 17.13.240]

II. Permit Revision, Reopening, Revocation and Reissuance, or Termination for Cause

[PCC 17.13.020.A.7.c]

The permit may be revised, reopened, revoked and reissued, or terminated for cause pursuant to PCC 17.13.150. The filing of a request by the Permittee for a permit revision, revocation and reissuance, or termination; or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

III. Duty to Provide Information

[PCC 17.13.010.G & PCC 17.13.020.A.7.e]

- A. The Permittee shall furnish to the Control Officer, within a reasonable time, any information that the Control Officer may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Control Officer copies of records required to be kept by the permit. For information claimed to be confidential, the Permittee shall furnish a copy of such records to the Control Officer along with a claim of confidentiality.
- B. If the Permittee has failed to submit any relevant facts or if the Permittee has submitted incorrect information in the permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

IV. Severability Clause

[PCC 17.13.020.A.6]

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

PART 8

APPLICABLE REGULATIONS

Requirements Specifically Identified as Applicable

Title 40 of the Code of Federal Regulations, Part 63 (40 CFR 63)

Subpart M National Perchloroethylene Air Emission Standards for Dry Cleaning Facilities

Pima County Code (PCC) Title 17, Chapters:

- 17.16.040 Standards and Applicability (Including NESHAPS).
- 17.16.130 Applicability.
- 17.16.165 Standards of performance for fossil-fuel fired industrial and commercial equipment.
- 17.16.400 Organic Solvents and Other Organic Materials.
- 17.16.530 National Emission Standards for Hazardous Air Pollutants (NESHAP).