

2016

PERC

Dry Cleaner Compliance Calendar



AIR EMISSION STANDARDS FOR PERCHLOROETHYLENE DRY CLEANING FACILITIES

The U.S. Environmental Protection Agency (EPA) has set standards for the control of perc releases from dry cleaning facilities. Perc is suspected of causing cancer in humans. These emission standards are different from hazardous waste regulations. They

are based on use of perc, not generation of perc-related drained spent cartridge filters, still bottoms, or filter muck waste. These emission standards are also different from the Occupational Safety and Health Administration (OSHA) regulations that set a time-

weighted average of 25 ppm of perc as the exposure limit for employees.

Coin-operated dry cleaning facilities are exempt from these requirements.

Requirements Summary	Small Area Sources*	Large Area Sources*	Major Sources*
Dry-to-dry facilities:	Purchase less than 140 gallons perc/year:	Purchase equal to or between 140-2,100 gallons perc/year:	Purchase more than 2,100 gallons perc/year:
Process vent control			
Constructed or reconstructed before December 9, 1991 or	Closed loop dry-to-dry machine	Closed loop dry-to-dry machines with RC** (CA installed before September 22, 1993, can remain; it does not have to be replaced by RC)	
On or after December 9, 1991, but before December 21, 2005 or	Closed loop, dry-to-dry machine with RC**	Closed loop, dry-to-dry machine with RC** followed by CA** operated immediately before or as the door is opened	
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 Control			
	Sealed containers; leak detection/repair		
Monitoring			
	If a RC is present, measure weekly the outlet temperature (before the end of the cool down or drying cycle) or the pressure (during the drying phase) to confirm the value is within the manufacturers' operating instructions. If a CA is present, use a colorimetric detector tube or a perc gas analyzer to monitor weekly.		
Inspections			
	Inspect weekly for perceptible leaks (those you can see, feel, or smell). Inspect for vapor leaks on a monthly basis using a halogenated hydrocarbon detector or a perc gas analyzer. Repair leaks and maintain records.	Inspect weekly for perceptible leaks. Inspect for vapor leaks on a monthly basis using a perc gas analyzer and operate it according to EPA Method 21. Repair leaks and maintain records.	
Reporting			
	Submit a Notification of Compliance Status form within 30 days of startup. This notification is required when a new machine is installed at an existing site.		

* Area sources are permanently exempted from air permitting requirements. All major sources need Part 70 (federal) air quality permits. • ** Or equivalent control Refrigerated Condenser (RC) • Carbon Adsorber (CA) • All perc transfer machines were required to be removed by July 28, 2008.

If located in a building with a residence

If you installed a perc machine in a building with a residence: • after December 21, 2005, then you should have removed your perc machine by July 27, 2009
• before December 21, 2005, then you must eliminate our perc machine by December 21, 2020

instructions for use



Record the date you bought PERC this month, if any.

If you bought PERC this month, record the amount and add it to the subtotal. This amount will also go on next year's calendar for this same month under SUBTRACT PERC PURCHASED.

PERC PURCHASES RUNNING TOTAL		
Total from last month December 2015		15
Subtract solvent purchased January 2015		-10
SUBTOTAL		45
Purchase DATE	Purchase AMOUNT	12-Month Running Total
7/12	+ 15	60
	+	

Enter running total from last month.

Enter the amount of PERC you bought during this same month last year, from last year's records or calendar.

Subtract that amount.

This is your 12-month running total if you do not buy PERC this month.

This is your 12-month running total if you bought PERC this month. Record the bottom number in this column on next month's form in the line, TOTAL FROM LAST MONTH.

GENERAL

You may use this calendar to keep records required by DHEC's rule for air program compliance. Keep these records at your facility for 5 years.

CONDENSER TEMPERATURE LOG

Check the outlet temperature of the refrigerated condenser every week. Record the temperature and date in the space provided. In the block marked "Is temp less than or equal to 45° Fahrenheit (7.2°Celsius)?" check "Y" for yes or "N" for no. If you checked "N," the machine must be repaired.

INSPECTIONS

If you buy **140 gallons or more** of PERC per year, you must check your machine weekly for leaks and record the results.

If you buy **less than 140 gallons** of PERC per year, you must conduct and record leak inspections at least every other week.

Record the results of the inspections on the calendar. If leaks are found, they must be repaired within 24 hours. Indicate in the "DATE REPAIRED" block when repairs are completed. If parts must be purchased, indicate the dates they are ordered and the date installed. Parts must be ordered within two working days of leak detection and installed within five working days of receipt.

january 2016

Dry Cleaner Compliance Calendar



s	m	t	w	t	f	1	s	2
						Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
3	4	5	6	7	8	Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>	9	
10	11	12	13	14	15	Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>	16	
17	18	19	20	21	22	Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>	23	
24	25	26	27	28	29	Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>	30	31

february 2016

NOTES

CONDENSER TEMPERATURE LOG

DATE	TEMP	Is temp less than or equal to 45°F (7.2°C)?	
		Y	N
		Y	N
		Y	N
		Y	N
		Y	N

PERC PURCHASES RUNNING TOTAL

Total from last month January 2016			
Subtract solvent purchased February 2015			
SUBTOTAL			
Purchase DATE	Purchase AMOUNT	12-Month Running Total	
	+		
	+		

INSPECTIONS/REPAIR LOG: a perceptible leak is one that you can smell, see (pools or droplets of liquid), or feel (air flow).

INSPECTED	LEAKING?				DATE / INITIALS				DATE PARTS ORDERED	DATE PARTS RECEIVED	DATE REPAIRED		
	<input type="checkbox"/>												
Inspected with detector*	Y	N	Y	N	Y	N	Y	N	Y	N			
Hoses and pipes	Y	N	Y	N	Y	N	Y	N	Y	N			
Door gaskets	Y	N	Y	N	Y	N	Y	N	Y	N			
Pumps	Y	N	Y	N	Y	N	Y	N	Y	N			
Solvent tank	Y	N	Y	N	Y	N	Y	N	Y	N			
Water separator	Y	N	Y	N	Y	N	Y	N	Y	N			
Muck cooker	Y	N	Y	N	Y	N	Y	N	Y	N			
Stills	Y	N	Y	N	Y	N	Y	N	Y	N			
Exhaust damper	Y	N	Y	N	Y	N	Y	N	Y	N			
Diverter valve	Y	N	Y	N	Y	N	Y	N	Y	N			
Filter gaskets	Y	N	Y	N	Y	N	Y	N	Y	N			
Cartridge filters	Y	N	Y	N	Y	N	Y	N	Y	N			
Waste containers	Y	N	Y	N	Y	N	Y	N	Y	N			

labeled **Y** **N**

dated **Y** **N**

february 2016

Dry Cleaner Compliance Calendar



s	m	1	t	2	w	3	t	4	f	5	s	6
										Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
7		8		9		10		11		12		13
										Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
14		15		16		17		18		19		20
										Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
21		22		23		24		25		26		27
										Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
28		29										

march 2016

Dry Cleaner Compliance Calendar



s	m	t	1	w	2	t	3	f	4	s	5
								Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>			
6	7	8	9	10	11	12	Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>				
13	14	15	16	17	18	19	Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>				
20	21	22	23	24	25	26	Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>				
27	28	29	30	31							

april 2016

Dry Cleaner Compliance Calendar



s	m	t	w	t	f	1	s	2
						Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
3	4	5	6	7		8	9	
						Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
10	11	12	13	14		15	16	
						Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
17	18	19	20	21		22	23	
						Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
24	25	26	27	28		29	30	
						Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		

may 2016

Dry Cleaner Compliance Calendar



s	1	m	2	t	3	w	4	t	5	f	6	s	7
											Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
	8		9		10		11		12		13		14
											Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
	15		16		17		18		19		20		21
											Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
	22		23		24		25		26		27		28
											Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
	29		30		31								

june 2016

Dry Cleaner Compliance Calendar



s	m	t	w	1	t	2	f	3	s	4
							Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>			
5	6	7	8	9	10	11	Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>			
12	13	14	15	16	17	18	Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>			
19	20	21	22	23	24	25	Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>			
26	27	28	29	30						

july 2016

Dry Cleaner Compliance Calendar



s	m	t	w	t	f	1	s	2
						Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
3	4	5	6	7		8	9	
						Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
10	11	12	13	14		15	16	
						Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
17	18	19	20	21		22	23	
						Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
24	25	26	27	28		29	30	
31						Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		

august 2016

Dry Cleaner Compliance Calendar



s	m	1	t	2	w	3	t	4	f	5	s	6
										Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
7		8		9		10		11		12		13
										Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
14		15		16		17		18		19		20
										Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
21		22		23		24		25		26		27
										Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
28		29		30		31						

september 2016

Dry Cleaner Compliance Calendar



s	m	t	w	t	1	f	2	s	3
							Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
4	5	6	7	8	9	10	Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
11	12	13	14	15	16	17	Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
18	19	20	21	22	23	24	Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
25	26	27	28	29	30		Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		

october 2016

Dry Cleaner Compliance Calendar



s	m	t	w	t	f	s	1
2	3	4	5	6	7	8	8
9	10	11	12	13	14	15	15
16	17	18	19	20	21	22	22
23	24	25	26	27	28	29	29
30	31						

Temp logged
Inspect logged

Temp logged
Inspect logged

Temp logged
Inspect logged

Temp logged
Inspect logged

november 2016

Dry Cleaner Compliance Calendar



s	m	t	1	w	2	t	3	f	4	s	5
									Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
6	7	8	9	10	11	12			Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
13	14	15	16	17	18	19			Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
20	21	22	23	24	25	26			Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
27	28	29	30								

december 2016

Dry Cleaner Compliance Calendar



s	m	t	w	t	1	f	2	s	3
							Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
4	5	6	7	8	9	10	Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
11	12	13	14	15	16	17	Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
18	19	20	21	22	23	24	Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		
25	26	27	28	29	30	31	Temp logged <input type="checkbox"/> Inspect logged <input type="checkbox"/>		

For More Information:

Anderson and Oconee counties:

Phone: (864) 260-5585

Abbeville, Greenwood, Laurens, and McCormick counties:

Phone: (864) 227-5915

Greenville and Pickens counties:

Phone: (864) 372-3273

Cherokee, Spartanburg, and Union counties:

Phone: (864) 596-3327

Fairfield, Lexington, Newberry, and Richland counties:

Phone: (803) 896-0620

Chester, Lancaster, and York counties:

Phone: (803) 285-7461

Chesterfield, Darlington, Dillon, Florence, Marion, and Marlboro counties:

Phone: (843) 661-4825

Clarendon, Kershaw, Lee, and Sumter counties:

Phone: (803) 778-6548

Aiken, Allendale, Barnwell, Edgefield, and Saluda counties:

Phone: (803) 642-1637

Georgetown, Horry, and Williamsburg counties:

Phone: (843) 238-4378

Berkeley, Charleston, and Dorchester counties:

Phone: (843) 953-0150

Beaufort, Colleton, Hampton, and Jasper counties:

Phone: (843) 846-1030

Bamberg, Calhoun, and Orangeburg counties:

Phone: (803) 533-5490

Air Emissions Compliance Steps

Operation/Maintenance

- The air-perc vapor should be recirculating back through the machine without venting to the atmosphere (closed loop).
- 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 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.
- 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.
- Do not bypass a CA at any time.
- Desorb each CA according to manufacturer's instructions.

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 and still.
- 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.

Air Emissions Compliance Steps

Monitoring

1. Refrigerated Condenser (RC)

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.

Alternately you may monitor temperature. Measure the temperature of the air-perc gas-vapor stream on

the outlet side of the RC 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 stream is flowing through the condenser. The temperature sensor should be designed to measure a temperature of 7.2°C (45°F) to an accuracy of $\pm 1.1^\circ\text{C}$ (2°F).

2. Carbon Adsorber (CA)

If you use a CA instead of a RC, or you 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.

A sampling port for monitoring within the exhaust outlet of the CA must be provided in a place that is easily accessible; located

Air Pollution Control Regulations CONTINUED

at least eight times the diameter of the stack or duct downstream from any flow disturbance (bend, expansion, contraction, or outlet); not downstream from any other inlet; and two times the diameters of the stack or duct upstream from any flow disturbance.

If you use a supplemental CA and the air-perc gas-vapor stream passes through the CA before the machine door is opened, measure the concentration of perc in the dry cleaning machine drum at the end of the dry cleaning cycle. Use a colorimetric detector tube or perc gas analyzer that measures a concentration of 300 ppm by volume of perc in air to an accuracy of ± 75 ppm by volume. Place the tube or analyzer into the open space at the rear end of the drum immediately after door opening. The perc concentration needs to be less than or equal to 300 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 2 working days of detecting the value. Install repair parts within 5 working days after receipt.

Inspection Requirements

Inspect components for leaks while the dry cleaning system is operating.

Inspect weekly for perceptible leaks (those you can see, feel, or smell). Inspect monthly using a detector. Area sources may use a halogenated hydrocarbon detector or a perc gas analyzer. Major sources must use a perc gas analyzer and operate it according to EPA Method 21. Inspections using

a halogenated hydrocarbon detector or a perc gas analyzer suffice for perceptible leak inspections. Follow the manufacturer's instructions. 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.

The National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Perchloroethylene Dry Cleaning Facilities requires documentation of operational parameters. This calendar provides a concise document to help small facilities to maintain the necessary records.

