

1 H.289

2 Introduced by Representatives Ram of Burlington and Webb of Shelburne

3 Referred to Committee on

4 Date:

5 Subject: Conservation; air pollution; perchloroethylene

6 Statement of purpose: This bill proposes to phase out the use of
7 perchloroethylene dry-cleaning systems. The bill would require the agency of
8 natural resources to adopt by rule operating standards and minimum
9 requirements for the use of classes of perchloroethylene dry-cleaning
10 equipment.

11 An act relating to perchloroethylene emissions from dry-cleaning systems

12 It is hereby enacted by the General Assembly of the State of Vermont:

13 Sec. 1. 10 V.S.A. § 575a is added to read:

14 § 575a. PERCHLOROETHYLENE DRY-CLEANING SYSTEMS

15 (a) Definitions. As used in this section:

16 (1) "Closed-loop machine" means dry-cleaning equipment in which
17 washing, extraction, and drying are all performed in the same single unit and
18 which recirculates the perchloroethylene-laden vapor through a primary
19 control system with no exhaust to the atmosphere during the drying cycle.

1 (2) “Converted machine” means a vented machine that has been
2 modified to be a closed-loop machine by eliminating the aeration step, and
3 installing a primary control system, and providing for recirculation of the
4 perchloroethylene-laden vapor with no exhaust to the atmosphere. A
5 converted machine allows for venting to the ambient air through a fugitive
6 control system after the drying cycle is complete and only while the machine
7 door is open.

8 (3) “Dip tank operation” means immersion of garments in a solution that
9 contains perchloroethylene, for purposes other than dry cleaning, in a tank or
10 container that is separate from the dry-cleaning equipment.

11 (4) “Dry-cleaning equipment” means any machine, device, or apparatus
12 used to dry-clean garments with perchloroethylene or to remove residual
13 perchloroethylene from previously cleaned garments. Dry-cleaning equipment
14 may include a transfer machine, a vented machine, a converted machine, a
15 closed-loop machine, a reclaimer, or a drying cabinet.

16 (5) “Dry-cleaning facility” means a property on which one or more
17 dry-cleaning systems are located.

18 (6) “Dry-cleaning system” means all of the following equipment,
19 devices, or apparatus associated with the perchloroethylene dry-cleaning
20 process: dry-cleaning equipment; filter or purification systems; waste holding,
21 treatment, or disposal systems; perchloroethylene supply systems; dip tanks;

1 pumps; gaskets; piping, ducting, fittings, valves, or flanges that convey
2 perchloroethylene-contaminated air; and control systems.

3 (7) "Drying cabinet" means a housing in which garments previously
4 cleaned with perchloroethylene are placed to dry and which is used only to dry
5 garments that would otherwise be damaged by the heat and tumbling action of
6 the drying cycle.

7 (8) "Drying cycle" means the process used to actively remove the
8 perchloroethylene remaining in the garments after washing and extraction.

9 (9) "Equivalent closed-loop vapor recovery system" means any device
10 or combination of devices that achieves, in practice, a perchloroethylene
11 recovery performance equal to or exceeding that of refrigerated condensers.

12 (10) "Fugitive control system" is a device or apparatus that collects
13 fugitive perchloroethylene vapors from the machine door, button and lint traps,
14 still, or other intentional openings of the dry-cleaning system, and routes those
15 vapors to a device that reduces the mass of perchloroethylene prior to exhaust
16 of the vapor to the atmosphere.

17 (11) "Garments" means any article placed in dry-cleaning equipment.

18 (12) "Leak" means a vapor emission or liquid leak containing
19 perchloroethylene and that is obvious from:

20 (A) the odor of perchloroethylene;

1 (B) the observation of gas flow by feel, by application of bubble
2 solution, or by the use of any held halogenated carbon detector;

3 (C) visual observation, such as pools or droplets of liquid.

4 (13) “Perchloroethylene” means a colorless volatile chlorinated
5 hydrocarbon with the chemical formula C₂Cl₄, also known by the name
6 tetrachloroethylene.

7 (14) “Primary control system” means a refrigerated condenser or an
8 equivalent closed-loop vapor recovery system approved by the agency.

9 (15) “Refrigerated condenser” means a closed-loop vapor recovery
10 system into which perchloroethylene vapors are introduced and trapped by
11 cooling below the dew point of the perchloroethylene.

12 (16) “Secondary control system” means a device or apparatus that
13 reduces the concentration of perchloroethylene in the recirculating air at the
14 end of the drying cycle, beyond the level achievable with a refrigerated
15 condenser alone.

16 (17) “Still” means a device used to volatilize and recover
17 perchloroethylene from contaminated solvent removed from the cleaned
18 garments.

19 (18) “Vented machine” means dry-cleaning equipment in which
20 washing, extraction, and drying are all performed in the same single unit and in

1 which fresh air is introduced into the drum in the last step of the drying cycle
2 and exhausted to the atmosphere, either directly or through a control device.

3 (19) "Water-repelling operations" means the treatment of garments with
4 a water-repellent solution that contains perchloroethylene.

5 (20) "Wet cleaning" means a process which is water-based and uses
6 computer-controlled washers and dryers, detergents, and specialized finishing
7 equipment.

8 (b) Owner requirements. The owner or operator of a dry-cleaning facility
9 shall comply with the following prohibitions and requirements.

10 (1) On or after January 1, 2012, a person shall not install or operate a
11 converted machine or modify a vented dry-cleaning machine to a converted
12 machine.

13 (2) On or after January 1, 2014, a person shall not perform any dip tank
14 operations in connection with dry cleaning.

15 (3) An owner or operator of a dry-cleaning facility that initiates
16 operation on or after January 1, 2014 may not install or operate a
17 perchloroethylene dry-cleaning system.

18 (4) On or after January 1, 2014, an owner or operator of a dry-cleaning
19 facility in existence on July 1, 2011 shall not install an additional
20 perchloroethylene dry-cleaning system.

1 (5) On or after December 6, 2014, an owner or operator of a
2 dry-cleaning facility in existence on July 1, 2011 shall be allowed to operate a
3 perchloroethylene dry-cleaning system until the end of the useful life of the
4 system or until January 1, 2020, whichever occurs first, provided that the
5 equipment has integral primary and secondary controls.

6 (c) Equipment requirements. On or before January 1, 2012, the secretary
7 of natural resources shall adopt by rule minimum requirements for the use of
8 the following types or classes of perchloroethylene dry-cleaning equipment:

9 (1) Primary control systems;

10 (2) Equivalent closed-loop vapor recovery systems, provided that a
11 closed-loop machine may allow for venting to the ambient air through a
12 fugitive control system after the drying cycle is completed and while the
13 machine door is open;

14 (3) Secondary control systems;

15 (4) Drying cabinets; and

16 (5) Converted machines.

17 (d) Good operating practices. On or before January 1, 2012, the secretary
18 of natural resources shall adopt by rule required operating practices for
19 perchloroethylene dry-cleaning systems. The operating practices shall include
20 standards for:

1 (1) Training and qualification of dry-cleaning equipment operators. A
2 dry-cleaning facility shall have one or more trained operators. A trained
3 operator shall be the owner, the operator, or another employee of the facility,
4 who successfully completes a training program. Dry-cleaning systems or
5 equipment not specifically addressed by the agency in the operating practices
6 shall be operated in accordance with the manufacturer's recommendations.

7 (2) Maintenance of dry-cleaning equipment. The rules shall require
8 dry-cleaning facility owners or operators to record maintenance activities and
9 report such activities to the agency on a regular basis. For dry-cleaning
10 operations not specifically addressed by rule, the equipment shall be
11 maintained in accordance with the manufacturer's recommendations. The rules
12 shall, at a minimum, address operation and maintenance of:

13 (A) Refrigerated condensers.

14 (B) Primary control systems, other than refrigerated condensers.

15 (C) Vapor adsorbers used as a primary control system or secondary
16 control system.

17 (D) Cooling coils.

18 (E) Main doors, still doors, button traps, and lint trap gaskets.

19 (F) Cartridge filters and adsorptive cartridge filters.

20 (G) Stills and muck cookers.

21 (H) Button and lint traps.

1 (I) All parts of the dry-cleaning system where perchloroethylene may
2 be exposed to the atmosphere or workroom.

3 (J) Wastewater evaporators.

4 (3) Testing requirements for perchloroethylene dry-cleaning equipment
5 and systems.

6 (4) Requirements for leak checks and repair. A trained operator or his
7 or her designee shall inspect a dry-cleaning system at least once a week for
8 liquid leaks and vapor leaks. A trained operator or his or her designee shall
9 record the status of each component on a checklist provided by the agency.
10 Any liquid leak or vapor leak detected by the operator or his or her designee
11 shall be noted on the checklist and repaired within 24 hours of detection. If the
12 leak is not repaired at the time of detection, the leaking component shall be
13 physically marked or tagged in a readily observable manner. The rules shall
14 list approved inspection techniques or requirements. The rules may also allow
15 a dry-cleaning facility additional time to repair a leak if:

16 (A) the delay in repairing the leak could not have been avoided by
17 action on the part of the facility;

18 (B) the facility used reasonable preventive measures and acted
19 promptly to initiate the repair;

20 (C) the leak would not significantly increase perchloroethylene
21 exposure near the facility; and

1 (D) the facility is in compliance with all other requirements of this
2 section and has a history of compliance.

3 (e) Water-repelling operations. No person shall perform water-repelling
4 operations unless all garments to be treated with perchloroethylene
5 water-repelling solutions are treated in a closed-loop machine.

6 (f) Reporting and record-keeping requirements. The agency shall adopt by
7 rule reporting and record-keeping requirements for facilities with
8 perchloroethylene dry-cleaning systems.

9 Sec. 2. EFFECTIVE DATE

10 This act shall take effect on passage.