



Operational Permit Application

Dry Cleaning



www.cityofvancouver.us/departments/fire-department

International Fire Code as adopted by VMC 16.04 (Washington State Fire Code)

Permitting Requirements

Dry cleaning is the process of removing dirt, grease, paints and other stains from items such as apparel, textiles, fabrics, and rugs using nonaqueous liquids (solvents). An **operational permit** is required to engage in the business of dry cleaning or to change to a more hazardous cleaning solvent used in existing dry-cleaning equipment.

Project Information

Site Address		Owner Name	
Other			

Applicant Information

Company Name		Address		
Contact Name				
Office Phone		Cellular		Email

Contractor

Company Name		Address		
Contact Name				
Office Phone		Cellular		Email

Installation by:	<input type="checkbox"/> Contractor <input type="checkbox"/> Owner <input type="checkbox"/> Tenant	Reason for Submittal of Application:	<input type="checkbox"/> New Installation <input type="checkbox"/> Modification of Existing Permitted Equipment <input type="checkbox"/> Other (Specify): _____
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Related Permits:	RES _____	CMI _____	DEF _____	MPE _____
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Description of Work

Type of Equipment:	<input type="checkbox"/> Dry to Dry	<input type="checkbox"/> Hydrocarbon	<input type="checkbox"/> Perc Dry	Load Capacity: _____ lbs.
Manufacturer:	_____	Model:	_____	S/N: _____
Type of Refrigerant:	_____	Compressor Capacity:	_____ hp	
Blower/Fan Motor:	_____ hp	Tumber Volume:	_____ cu ft	
Clothes Washed Per Day:	_____ lbs.			

Solvent class: Class I Class II Class IIIA Class IIIB Class IV

Volume in use _____ gallons; Volume in storage (new/used) _____ gallons

Electronic Plan Standards

File Naming Standards:

Electronic plans and documents shall be named as specified in the City of Vancouver [ePLANS](https://www.cityofvancouver.us/business/permits-licenses-and-inspections/eplans/) system:
<https://www.cityofvancouver.us/business/permits-licenses-and-inspections/eplans/>



Acceptable File Types:

Plans, calculations, specifications and supporting documents shall be uploaded as a PDF file.

Plan Sheet Standards:

All plans shall be drawn to scale, as identified in the checklist, and each sheet shall state the scale and show a measurable scale on the page for measurement calibrations.

Document Orientation:

All plans must be uploaded in "Landscape" format in the horizontal position with a north indicator. All other documents can be in "Portrait" format.

Stamped:

Where documentation contains a code analysis or engineering calculations, such documents shall be stamped by the design professional.

Minimum Submittal Checklist for Upload to ePLANS

- Completed Fire Installation Permit Application – Dry Cleaning (this document) Check all *Permit Conditions* checkboxes that are applicable to your project
- Completed Hazardous Materials Inventory Statement (HMIS) and other HMMP documents indicated below
- Supporting documents listed below (See *Document Details* below)
- Site plans and floor plans (see *Plan Details* below)

Document Details

HMMP Guide: <https://www.cityofvancouver.us/wp-content/uploads/2023/10/Hazardous-Materials-Management-Plan.pdf>

See Vancouver Fire Department HMMP Guide Page 4 for further direction on completing required HMMP and/or supplemental forms

Does your business...	If YES, please complete these pages of the HMMP and supplemental (linked above)	
Perform dry cleaning operations?	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> Facility Information Forms <input type="checkbox"/> HMIS <input type="checkbox"/> Site Map & Storage Plan

If a full HMMP is required, it must contain the following minimum elements:

- Facility Information Form: Business Activities Declaration page
- Facility Information Form: Business Owner/Operator Identification page
- Hazardous Materials Inventory Statement (HMIS)
- HMIS Hazard Class Summary Report
- Emergency Response/Contingency Plan
- Employee Training Plan
- Recordkeeping
- Facility Site Plan & Storage Map

Where required, complete the following supplemental forms:

- Multi-tenant Building Control Area Agreement

In addition to the HMMP documents listed above, provide the following documents:

- Equipment manufacturer’s specifications and drawings showing all vents and operating controls
- Narrative describing operating schedule including the maximum hours per day, days per week, and weeks per year of operation.
- Solvent information, to include the following:
 - Solvent(s) used (include manufacturer, Product ID Code, and Safety Data Sheets
 - Annual solvent usage in gallons
 - Storage method for solvent, still residues, spent cartridges, and waste solvent
 - Waste solvent and cartridge hauler

Plan Details

The following is a list of information required on all plan submittals for review of a dry cleaning permit. The plan shall be drawn to 1/8"= 1'-0" minimum scale. The applicant is required to submit all applicable information so an accurate and timely review may be done:

HMMP Site Plan & Storage Map:

- Provide a Site Plan & Storage Map as directed in the Vancouver Fire Department HMMP Guide:
<https://www.cityofvancouver.us/wp-content/uploads/2023/10/Hazardous-Materials-Management-Plan.pdf>

Floorplan:

- Fire-resistance rated construction
- Type and location of fire extinguishers
- Method and material to filter exhaust air
- Exhaust termination height above roof and distance to openings
- Areas of open flames and sparks, hot surfaces, or other ignition sources

Permit Conditions

The following is a list of WSFC requirements related to dry cleaning operations. Use this form to confirm that applicable requirements are met. Non-applicable requirements can be left blank.

General Requirements:

- Dry cleaning solvents and dry-cleaning plants and systems are classified as seen in the following tables (WSFC 2103.1 and 2103.2).
- Type I dry cleaning plants are prohibited. Limited quantities of Class I solvents stored and used in accordance with this section shall not be prohibited in dry cleaning plants (WSFC 2104.1).
- Building services and systems shall be designed, installed, and maintained in accordance with WSFC Chapter 21 and WSFC Chapter 6 (WSFC 2104.2).
 - Ventilation: Ventilation shall be provided in accordance with Section 502 of the International Mechanical Code and DOL 29 CFR Part 1910.1000, where applicable (WSFC 2104.2.1).
 - Heating: In Type II dry cleaning plants, heating shall be by indirect means using steam, hot water, or hot oil only (WSFC 2104.2.2).
 - Electrical Wiring and Equipment: Electrical wiring and equipment in dry cleaning rooms or other locations subject to flammable vapors shall be installed in accordance with NFPA 70 (WSFC 2104.2.3).

2103.1: Solvent Classification¹	
Class I	FP < 100°F
Class II	100°F < FP < 140°F
Class IIIA	140°F < FP < 200 °F
Class IIIB	FP > 200 °F
Class IV	Nonflammable
¹ FP = Flash Point (Closed Cup)	

- Bonding and Grounding: Storage tanks, treatment tanks, filters, pumps, piping, ducts, dry cleaning units, stills, tumblers, drying cabinets and other such equipment, where not inherently electrically conductive, shall be bonded together and grounded. Isolated equipment shall be grounded (WSFC 2104.2.4).

Operating Requirements:

- Written instructions covering the proper installation and safe operation and use of equipment and solvent shall be given to the buyer (WSFC 2105.1.1).
 - Type II, III-A, III-B and IV: In Type II, III-A, III-B and IV dry cleaning systems, machines shall be operated in accordance with the operating instructions furnished by the machinery manufacturer. Employees shall be instructed as to the hazards involved in their departments and in the work they perform (WSFC 2105.1.1.1).
 - Type V: Operating instructions for customer use of Type V dry cleaning systems shall be conspicuously posted in a location near the dry-cleaning unit. A telephone number shall be provided for emergency assistance (WSFC 2105.1.1.2).
- The manufacturer shall provide nameplates on dry-cleaning machines indicating the class of solvent for which each machine is designed (WSFC 2105.1.2).
- Dry-cleaning by immersion and agitation in open vessels is prohibited (WSFC 2105.1.3).
- The use of solvents with a flash point below that for which a machine is designed or listed shall be prohibited (WSFC 2105.1.4).
- Proper maintenance and operating practices shall be observed in order to prevent the leakage of solvent or the accumulation of lint. The handling of waste material generated by dry-cleaning operations and the maintenance of facilities shall comply with the provisions of this section (WSFC 2105.1.5).
 - Floors: Class I and II liquids shall not be used for cleaning floors (WSFC 2105.1.5.1).
 - Filters: Filter residue and other residues containing solvent shall be handled and disposed of in covered metal containers (WSFC 2105.1.5.2).
 - Lint: Lint and refuse shall be removed from traps daily, deposited in approved waste cans, removed from the premises, and disposed of safely. At all other times, traps shall be held securely in place (WSFC 2105.1.5.3).
 - Customer areas: In Type V dry cleaning systems, customer areas shall be kept clean (WSFC 2105.1.5.4).
- Special operating requirements for Type II dry-cleaning systems shall comply with the following provisions (WSFC 2105.2):
 - Inspection of materials: Materials to be dry cleaned shall be searched thoroughly and foreign materials, including matches and metallic substances, shall be removed (WSFC 2105.2.1).
 - Material transfer: In removing materials from the washer, provisions shall be made for minimizing the dripping of solvent on the floor. Where materials are transferred from a washer to a drain tub, a nonferrous metal drip apron shall be placed so that the apron rests on the drain tub and the cylinder of the washer (WSFC 2105.2.2).
 - Ventilation: A mechanical ventilation system that is designed to exhaust 1 cubic foot of air per minute for each square foot of floor area shall be installed in dry-cleaning rooms and in drying rooms. The ventilation systems shall operate automatically when the dry-cleaning equipment is in operation and shall have manual controls at an approved location (WSFC 2105.2.3).
- Type IV and V dry-cleaning systems shall be provided with an automatically activated exhaust ventilation systems to maintain an air velocity of not less than 100 feet per minute through the loading door when the door is opened. Such systems for dry-cleaning equipment shall comply with the International Mechanical Code (WSFC 2105.3).

2103.2: Dry Cleaning Plant/System Classification¹

Type I	Systems using Class I solvents
Type II	Systems using Class II solvents
Type IIIA	Systems using Class IIIA solvents
Type IIIB	Systems using Class IIIB solvents
Type IV	Systems using Class IV solvents in which dry cleaning is not conducted by the public
Type V	Systems using Class IV solvents in which dry cleaning is conducted by the public

¹ Dry cleaning plants using more than one class of solvent for dry cleaning shall be classified based on the numerically lowest solvent class.

Exception: Dry-cleaning units are not required to be provided with exhaust ventilation where an exhaust hood is installed immediately outside of and above the loading door and operates at an airflow rate as follows:

$$Q = 100 \times A_{LD} \quad \text{where: } Q = \text{flow rate exhausted through the hood (m}^3/\text{min)}$$

A_{LD} = area of the loading door (m²)

Spotting and Pretreating:

- The maximum quantity of Class I solvents permitted at any workstation shall be 1 gallon. Spotting or prespotting shall be permitted to be conducted with Class I solvents where they are stored in and dispensed from approved safety cans or in sealed DOT-approved metal shipping containers of not more than 1-gallon capacity (WSFC 2106.2).
 - Spotting and prespotting: Spotting and prespotting shall be permitted to be conducted with Class I solvents dispensed from plastic containers of not more than 1 pint capacity (WSFC 2106.2.1).
- Scouring, brushing, spotting and pretreating shall be permitted to be conducted with Class II or III solvents. The maximum quantity of Class II or III solvents permitted at any workstation shall be 1 gallon. In other than Group H-2 occupancy, the aggregate quantities of solvents shall not exceed the maximum allowable quantity per control area for use-open system (WSFC 2106.3).
 - Spotting tables: Scouring, brushing or spotting tables on which articles are soaked in solvent shall have a liquid-tight top with a curb on all sides not less than 1-inch high. The top of the table shall be pitched to ensure thorough draining to a 1 1/2-inch drain connected to an approved container (WSFC 2106.3.1).
 - Special handling: Where approved, articles that cannot be washed in the usual washing machines are allowed to be cleaned in scrubbing tubs. Scrubbing tubs shall comply with the following (WSFC 2106.3.2):
 1. Only Class II or III liquids shall be used.
 2. The total amount of solvent used in such open containers shall not exceed 3 gallons.
 3. Scrubbing tubs shall be secured to the floor.
 4. Scrubbing tubs shall be provided with permanent 1 1/2-inch drains. Such drain shall be provided with a trap and shall be connected to an approved container.
 - Ventilation: Scrubbing tubs shall be provided with permanent 1 1/2-inch drains. Such drain shall be provided with a trap and shall be connected to an approved container (WSFC 2106.3.3).
 - Bonding and grounding: Metal scouring, brushing, and spotting tables and scrubbing tubs shall be permanently and effectively bonded and grounded (WSFC 2106.3.4).
- Flammable and combustible liquids used for spotting operations shall be stored in approved safety cans or in sealed DOT-approved shipping containers of not more than 1 gallon in capacity. Aggregate amounts shall not exceed 10 gallons (WSFC 2106.4).
- Spotting operations using flammable or combustible liquids are prohibited in Type V dry cleaning systems (WSFC 2106.5).

Dry Cleaning Systems:

- Dry-cleaning systems, including dry-cleaning units, washing machines, stills, drying cabinets, tumblers and their appurtenances, including pumps, piping, valves, filters and solvent coolers, shall be installed and maintained in accordance with NFPA 32. The construction of buildings in which such systems are located shall comply with the requirements of this section and the International Building Code (WSFC 2107.1).
- Type II dry cleaning and solvent tank storage rooms shall not be located below grade or above the lowest floor level of the building and shall comply with the following (WSFC 2107.2).

Exception: Solvent storage tanks installed underground, in vaults or in special enclosures in accordance with WSFC Chapter 57.

 - Firefighting access: Type II dry-cleaning plants shall be located so that access is provided and maintained from one side for firefighting and fire control purposes in accordance with WSFC 503 (WSFC 2107.2.1).
 - Number of means of egress: Type II dry-cleaning rooms shall have not less than two means of egress doors located at opposite ends of the room, not less than one of which shall lead directly to the outside (WSFC 2107.2.2).

- Spill control and secondary containment: Curbs, drains or other provisions for spill control and secondary containment shall be provided in accordance with WSFC 5004.2 to collect solvent leakage and fire protection water and direct it to a safe location (WSFC 2107.2.3).
- Solvent storage tanks for Class II, IIIA and IIIB liquids shall conform to the requirements of WSFC Chapter 57 and be located underground or outside, above ground. (WSFC 2107.3).
Exception: As provided in NFPA 32 for inside storage or treatment tanks.
- Method of storage and disposal of used solvents.

Fire Protection:

- Where required, fire protection systems, devices and equipment shall be installed, inspected, tested and maintained in accordance with WSFC Chapter 9 (WSFC 2108.1).
- An automatic sprinkler system shall be installed in accordance with WSFC 903.3.1.1 throughout the dry-cleaning plants containing Type II, Type III-A or Type III-B dry-cleaning systems (WSFC 2108.2).
Exceptions:
 1. An automatic sprinkler system shall not be required in Type III-A dry-cleaning plants where the aggregate quantity of Class III-A solvent in dry-cleaning machines and storage does not exceed 330 gallons and dry-cleaning machines are equipped with a feature that will accomplish any one of the following:
 - o Prevent oxygen concentrations from reaching 8 percent or more by volume.
 - o Keep the temperature of the solvent not less than 30°F (16.7°C) below the flash point.
 - o Maintain the solvent vapor concentration at a level lower than 25 percent of the lower explosive limit.
 - o Utilize equipment approved for use in Class I, Division 2, hazardous locations in accordance with NFPA 70.
 - o Utilize an integrated dry-chemical, clean-agent or water-mist automatic fire-extinguishing system designed in accordance with WSFC Chapter 9.
 2. An automatic sprinkler system shall not be required in Type III-B dry-cleaning plants where the aggregate quantity of Class III-B solvent in dry-cleaning machines and storage does not exceed 3,300 gallons.
- Type II dry-cleaning units, washer-extractors, and drying tumblers in Type II dry-cleaning plants shall be provided with an approved fire-extinguishing systems and maintained in accordance with WSFC Chapter 9.
Exception: Where approved, a manual steam jet not less than 3/4 inch with a continuously available steam supply at a pressure not less than 15 pounds per square inch gauge is allowed to be substituted for the automatic fire-extinguishing system (WSFC 2108.3).
- Portable fire extinguishers shall be selected, installed, and maintained in accordance with this section and WSFC 906. Not fewer than two 2-A:10-B:C portable fire extinguishers shall be provided near the doors inside dry-cleaning rooms containing Type II, Type III-A and Type III-B dry-cleaning systems (WSFC 2108.4).

NOTE: *This is not intended to be an all-inclusive list. The WSFC requirements listed are intended to ensure that we have adequate information to begin a review of the application. Additional information may be required.*

I understand that all applicable codes apply and that other regulatory codes may also apply. Errors and/or omissions on the plans and corrections from field inspections are the responsibility of the owner/contractor. All work is subject to compliance with City of Vancouver ordinances and laws of the State of Washington.

APPLICANT NAME: _____ APPLICATION DATE: _____

APPLICANT SIGNATURE: _____