



Operational Permit Application

Hot Work



www.cityofvancouver.us/departments/fire-department

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

Permitting Requirements

Hot work is defined in the WSFC as operations including cutting, welding, thermit welding, brazing, soldering, grinding, thermal spraying, thawing pipe, installation of torch-applied roof systems or any other similar activity. Hot work includes but is not limited to public exhibitions and demonstrations, use of portable hot work equipment inside a structure except work conducted under a construction permit, fixed-site hot work equipment such as welding booths, hot work conducted within a wildlife risk area, and application of roof coverings with the use of an open-flame device (WSFC 105.5.25).

An **operational permit** is required to carry out a hot work program. This allows approved personnel to regulate their facility's hot work operations. The approved personnel shall be trained in fire safety aspects denoted in WSFC Chapter 1 and shall be responsible for issuing permits requiring compliance with the requirements found in WSFC Chapter 35. These permits shall be issued only to their employees or hot work operations under their supervision (WSFC 105.5.25).

A separate permit is required to conduct cutting or welding operations regulated by WSFC Section 3505.

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

Description of Work

Electronic Plan Standards

File Naming Standards:

Electronic plans and documents shall be named as specified in the City of Vancouver [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 Operational Permit Application – Hot Work (this document) Check all *Permit Conditions* checkboxes that are applicable to your project
- 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* for direction on completing required HMMP and/or supplemental forms

Does your business...	If YES, please complete these pages of the HMMP (linked above):	
Conduct cutting and welding or other hot work 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 <input type="checkbox"/> Hot Work Permit Application (this document)
Have on site (for any purpose) at any one-time, hazardous materials, including hazardous waste, at or above 55 gallons for liquids, 500 pounds for solids, or 200 cubic feet for compressed gases (include liquids in ASTs and USTs)?	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> All HMMP documents
Have on site (for any purpose) at any one-time, hazardous materials, including hazardous waste, requiring a permit in accordance with Section 105.5.18 of the International Fire Code? (see <i>Permitting Requirements</i> above)	<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 <input type="checkbox"/> Flammable and Combustible Liquids Permit Application

An HMMP 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:

- Tank Plan
- Owner's Statement of Intended Use
- Multi-tenant Building Control Area Agreement

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

- Narrative of scope of work including location, times, durations, safety precautions, supervision, training, and a list of authorized personnel who will conduct and supervise hot work operations.
- Listing documents for all proposed equipment to be used.
- Maintenance and cleaning plans
- Pre-Hot-Work Checklist (see last page of document) is required on site during all hot work operations

Plan Details

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

Site plan/floor plan:

- North arrow, a measurable scale for calibration purposes, fire hydrants, emergency access lanes and doors, vehicle gates, Fire Department Connection, points of assembly for evacuees, electrical room, gas meters, fire alarm control panel location, Knox box, roof access (if provided), and any outdoor hazardous material storage locations.
- Indicate hot work locations and areas
- Setbacks from property lines, the public way and unrelated combustible exposures.
- Location of applicable signage
- Locations of nearby fire hydrants
- Fire suppression system design (if applicable)

Equipment:

- Electric or gas welding or cutting equipment.
- Spray application of molten metals equipment.
- Materials to be stored, used or trans-loaded/transported.

Extinguishment:

- Where applicable, automatic fire sprinkler protection design
- Location, size, and types of portable fire extinguishers
- Locations of nearby fire hydrants

Permit Conditions

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

Restricted Areas:

- Hot work shall only be conducted in areas designed or authorized for that purpose by the personnel responsible for a hot work program. Hot work shall not be conducted in the following areas unless approval has been obtained from the fire code official (WSFC 3501.3):
 1. Areas where the sprinkler system is impaired.
 2. Areas where there exists the potential of an explosive atmosphere, such as locations where flammable gases, liquids or vapors are present.
 3. Areas with readily ignitable materials, such as storage of large quantities of bulk sulfur, baled paper, cotton, lint, dust or loose combustible materials.
 4. On board ships at dock or ships under construction or repair.
 5. At other locations as specified by the fire code official.

Cylinders and Containers:

- Compressed gas cylinders and fuel containers shall comply with WSFC Chapter 35 and 53. An oxygen-fuel gas system with two or more manifolded cylinders of oxygen shall be in accordance with NFPA 51 (WSFC 3501.4 & 3501.5).

Records:

- A permit for hot work operations shall not be issued unless the individuals in charge of performing such operations are capable of performing such operations safely. Demonstration of a working knowledge of the provisions of WSFC Section 3503.4 shall constitute acceptable evidence of compliance with this requirement (WSFC 3503.4).
- The individual responsible for the hot work area shall maintain "prework check" reports in accordance with WSFC Section 3504.3.1. Such reports shall be maintained on the premises for not less than 48 hours after work is complete (WSFC 3503.5).

Signage:

- Visible hazard identification signs shall be provided where required by WSFC Chapter 50. Where the hot work area is open to persons other than the operator of the hot work equipment, conspicuous signs shall be posted to warn others before they enter the hot work area. Such signs shall display the following warning (WSFC 3503.6):

**CAUTION
HOT WORK IN PROGRESS
STAY CLEAR**

Fire Watch:

- A fire watch shall be provided during hot work activities and shall continue for not less than 30 minutes after the conclusion of the work. The fire code official, or the responsible manager under a hot work program, is authorized to extend the fire watch based on the hazards or work being performed (WSFC 3504.2.1).
- The fire watch shall include the entire hot work area. Hot work conducted in areas with vertical or horizontal fire exposures that are not observable by a single individual shall have additional personnel assigned to fire watches to ensure that exposed areas are monitored (WSFC 3504.2.2).
- Individuals designated to fire watch duty shall have fire-extinguishing equipment readily available and shall be trained in the use of such equipment. Individuals assigned to fire watch duty shall be responsible for extinguishing spot fires and communicating an alarm (WSFC 3504.2.3).
- The individuals responsible for performing the hot work and individuals responsible for providing the fire watch shall be trained in the use of portable fire extinguishers (WSFC 3504.2.4).
- Where hose lines are required, they shall be connected, charged, and ready for operation (WSFC 3504.2.5).

- Not less than one portable fire extinguisher complying with Section 906 and with a minimum 2-A:20-B:C rating shall be provided with ready access within 30 feet of the location where hot work is performed (WSFC 3504.2.6).

Electric Arc Hot Work:

- The frame or case of electric hot work machines, except internal-combustion-engine-driven machines, shall be grounded. Ground connections shall be mechanically strong and electrically adequate for the required current (WSFC 3506.1).
- Welding current return circuits from the work to the machine shall have proper electrical contact at joints. The electrical contact shall be periodically inspected (WSFC 3506.2).
- Electrodes shall be removed from the holders when electric arc welding or cutting is discontinued for any period of 1 hour or more. The holders shall be located to prevent accidental contact and the machines shall be disconnected from the power source (WSFC 3506.3).
- A switch or circuit breaker shall be provided so that fixed electric welders and control equipment can be disconnected from the supply circuit. The disconnect shall be installed in accordance with NFPA 70 (WSFC 3506.4).
- Damaged cable shall be removed from service until properly repaired or replaced (WSFC 3506.5).

Calcium Carbide Systems:

- Storage and handling of calcium carbide shall comply with WSFC Chapter 50 and Chapter 9 of NFPA 51 (WSFC 3507.1).

Acetylene Generators: The use of acetylene generators shall comply with Chapter 15 of NFPA 55 (WSFC 3508.1).

- The minimum volume of rooms containing portable generators shall be 35 times the total gas-generating capacity per charge of all generators in the room. The gas-generating capacity in cubic feet per charge shall be assumed to be 4.5 times the weight of carbide per charge in pounds. The minimum ceiling height of rooms containing generators shall be 10 feet (3048 mm). An acetylene generator shall not be moved by derrick, crane or hoist while charged (WSFC 3508.2).
- Generators shall be located where water will not freeze. Common salt such as sodium chloride or other corrosive chemicals shall not be utilized for protection against freezing (WSFC 3508.3).

Piping Manifolds and Hose Systems for Fuel Gases and Oxygen:

The use of piping manifolds and hose systems shall be in accordance with WSFC Section 3509, WSFC Chapter 53 and Chapter 5 of NFPA 51, including but not limited to the following (WSFC 3509.1):

- Piping shall be protected against physical damage (WSFC 3509.2).
- Signage shall be provided for piping and hose systems as follows (WSFC 3509.3):
 1. Above-ground piping systems shall be marked in accordance with ASME A13.1.
 2. Station outlets shall be marked to indicate their intended usage.
 3. Signs shall be posted, indicating clearly the location and identity of section shutoff valves.
- Oxygen manifolds shall not be located in an acetylene generator room. Oxygen manifolds shall be located not less than 20 feet (6096 mm) away from combustible material such as oil or grease, and gas cylinders containing flammable gases, unless the gas cylinders are separated by a fire partition (WSFC 3509.4).
- Signs shall be posted for oxygen manifolds with service pressures not exceeding 200 psig (1379 kPa). Such signs shall include the words (WSFC 3509.5):

**LOW-PRESSURE MANIFOLD
DO NOT CONNECT HIGH-PRESSURE CYLINDERS
MAXIMUM PRESSURE 250 PSIG**

- Hose connections shall be clamped or otherwise securely fastened (WSFC 3509.6).
- Hoses shall be inspected frequently for leaks, burns, wear, loose connections or other defects rendering the hose unfit for service (WSFC 3509.7).

Flammable and Combustible Liquid Storage Tanks:

- Hot work performed on the interior or exterior of tanks that hold or have held flammable or combustible liquids shall be in accordance with WSFC Chapters 4, 5, 6, 7 and 10 of NFPA 326 (WSFC 3510.1).
- The following steps shall be taken to minimize hazards where hot work must be performed on a flammable or combustible liquid storage container (WSFC 3510.2):
 1. Use alternative methods to avoid hot work where possible.
 2. Analyze the hazards prior to performing hot work, identify the potential hazards and the methods of hazard control.
 3. Hot work shall conform to the requirements of the code or standard to which the container was originally fabricated.
 4. Test the immediate and surrounding work area with a combustible gas detector and provide for a means of continuing monitoring while conducting the hot work.
 5. Qualified employees and contractors performing hot work shall use an industry-approved hot work permit system to control the work.
 6. Personnel shall be properly trained on hot work policies and procedures regarding equipment, safety, hazard controls and job-specific requirements.
 7. On-site safety supervision shall be present where hot work is in progress to protect the personnel conducting the hot work and provide additional overview of site-specific hazards.

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: _____

(This section is intentionally blank)

PRE-HOT-WORK CHECKLIST

A pre-hot-work check shall be conducted prior to work to ensure that all equipment is safe, and hazards are recognized and protected. A report of the check shall be kept at the work site during the work and available upon request. The pre-hot-work check shall determine all of the following:

Business Name:	Mailing Address:
Applicant Name:	Location Address:
Phone:	Email:

Please place a check mark if the following items have been completed.

Hot work equipment to be used shall be in satisfactory operating condition and in good repair.	
Hot work site is clear of combustibles or combustibles are protected.	
Exposed construction is of noncombustible materials or, if combustible, then protected.	
Openings or cracks in walls, floors, ducts or shafts within the hot work area shall be tightly covered to prevent the passage of sparks to adjacent combustible areas, or shielded by metal fire-resistant guards, or curtains shall be provided to prevent passage of sparks or slag.	
Floors are kept clean and free from combustibles	
No exposed combustibles are located on the opposite side of partitions, walls, ceilings or floors.	
Conveyer systems that are capable of carrying sparks to distant combustibles shall be shielded or shut down.	
<p>Fire watches, where required, are assigned.</p> <ul style="list-style-type: none"> • A fire watch shall be provided during hot work activities and shall continue for not less than 30 minutes after the conclusion of the work. • Individuals designated to fire watch duty shall have fire-extinguishing equipment readily available and shall be trained to the use of such equipment. • Individuals assigned to fire watch duty shall be responsible for extinguishing spot fires and communicating an alarm. 	
<p>Approved actions have been taken to prevent accidental activation of suppression and detection equipment.</p> <ul style="list-style-type: none"> • Automatic sprinkler protection shall not be shut off while hot work is performed. Where hot work is performed close to automatic sprinklers, noncombustible barriers or damp cloth guards shall shield the individual sprinkler heads and shall be removed when the work is completed. • Approved special precautions shall be taken to avoid accidental operation of automatic fire detection systems. Fire alarms will not be taken out of service while work is being performed. 	
Hot work areas that are accessible to persons other than the operator.	

<ul style="list-style-type: none">• A conspicuous sign shall be posted to warn others before they enter the hot work area, such signs shall display the following warning: CAUTION HOT WORK IN PROGRESS STAY CLEAR	
Printed Name:	Signature:
	Date:

Failure to have this form on site during hot-work operations or failure to follow Fire Code requirements shall subject the offenders to a Fire Code Citation in accordance with Vancouver Municipal Code Title 22.