FIRE CONSTRUCTION PERMIT SUBMITTAL CHECKLIST

SERVING THE CITIES OF LAKE STEVENS, MILL CREEK, MONROE AND SULTAN

CRYOGENIC FLUIDS STORAGE SYSTEM

PROJECT INFORMATION	
Site address:	**Associated Permits:**
Project Name / Tenant:	**Property Owner:**

Electronic file standards

File naming standard: Electronic plans and documents shall be named as specified in bold type under "permitting requirements". For example, the seating plan must be named "Seating Plan".

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

Document Orientation: All plans must be uploaded in "Landscape" format in the horizontal position. All other documents can be in "Portrait" format.

CODE EDITIONS

☐ IFC & IBC 2018 edition, Washington State IFC & IBC amended code and as applicable - Lake Stevens Municipal Code 14.84, Monroe Municipal code 15.04.110, Mill Creek Municipal Code 15.04.120, Sultan Municipal Code 15.05.

PERMITTING REQUIREMENTS

A Fire Construction Permit is required to install or alter a ***Cryogenic fluids storage system*** required by Section 105.7.5 of the 2018 Washington State Fire Code and local code amendments. **The following information is required at time of application for the Fire Construction Permit.**

- ☐ Completed Fire Construction permit submittal application
- ☐ Completed “Cryogenic Fluids Storage system submittal checklist”
- ☐ Plans
- ☐ Manufacturer’s cut sheets for equipment, piping

PLANS

The following is a list of information required on all plan submittals for review of a “Cryogenic fluids storage system” permit application. The plan shall be drawn to 1/8”=1’-0” minimum scale. The applicant is required to submit all of this information so an accurate and timely review may be done:

- ☐ Site plan indicating the location and size of the proposed tank(s) and piping system
- ☐ Floor plan indicating egress pathways, exit doors, emergency lighting, exit signs
- ☐ Type and use of container, equipment or device
- ☐ Material to be stored, used or transported
- ☐ Description showing dimensions and materials used in construction
- ☐ Design pressure, maximum operating pressure and test pressure of vessels and associated piping
- ☐ Type, size, setting and location of pressure relief devices, vents and emergency shutoff locations
- ☐ Details to show proper construction of the foundation supporting the tank

General Requirements:

- ☐ Pressure relief devices on containers shall be arranged so escaping gas will discharge to the open air and not impinge on personnel, containers, equipment and adjacent structures or enter enclosed spaces (2018 WSFC 5503.2.5).
- ☐ Pressure relief device vent piping and drains in vent lines on shall be arranged so escaping gas will discharge to the open air and not impinge on personnel, containers, equipment and adjacent structures or enter enclosed spaces. Pressure relief device vent lines shall be installed in such a manner to exclude or remove moisture and condensation and prevent malfunction of the pressure relief device because of freezing or ice accumulation (2018 WSFC 5503.3.2).
- ☐ Buildings, rooms, containers and piping systems containing cryogenic liquids shall be labeled in accordance with WSFC 5503.4, NFPA 704 and ASME Boiler and Pressure Vessel Code / DOTn 49 CFR Parts 100-185.

- ☐ Emergency shutoff valves shall be identified and the location shall be clearly visible and indicated by means of a sign. (2018 WSFC 5503.4.6)
- ☐ Cryogenic containers shall be secured against accidental dislodgement and unauthorized access in accordance with WSFC 5503.5.
- ☐ Cryogenic containers and systems in storage or use shall be separated from materials and conditions which pose exposure hazards in accordance with 2018 WSFC 5504.3.1. Stationary containers shall be separated from exposure hazards in accordance with the provisions applicable to the type of fluid contained and the separation distances indicated in WSFC Table 5504.3.1.1.
- ☐ Shutoff valves shall be provided on all container connections except for pressure relief devices. Shutoff valves shall be provided with access thereto and located as close as practical to the container (2018 WSFC 5505.1.2.3.1).
- ☐ Shutoff valves shall be installed in piping containing cryogenic fluids where needed to limit the volume of liquid discharged in the event of piping or equipment failure. Pressure relief valves shall be installed where liquid is capable of being trapped be-tween shutoff valves in the piping system (2018 WSFC 5505.1.2.3.2).
- ☐ Piping systems shall be tested and proven free of leaks after installation as required by the standards to which they were de-signed and constructed. Test pressures shall not be less than 150 percent of the maximum allowable working pressure when hydraulic testing is conducted or 110 percent when testing is conducted pneumatically (2018 WSFC 5505.1.2.6).