

Appendix 50

Fire Marshal Memorandum

Northern Pass Project -- Fire Safety Design Basis
9/14/15

Introduction

Representatives from Northern Pass have met with officials from the City of Franklin Fire Department and the New Hampshire Department of Safety. These meetings were held to identify the fire protection requirements for the Northern Pass Project and to develop the information needs for the NH SEC application. Based upon these meetings, it was determined that this document which outlines the fire protection design criteria and basis for the project be included in the SEC application. It was mutually agreed that NPT, the State Fire Marshal's office and Local Fire Departments will coordinate the specific fire system requirements of the Northern Pass facilities during the SEC application process.

Applicable Design Criteria

IBC	International Building Code, 2009 Edition with NH Amendments
Saf-C 6000	New Hampshire State Fire Code
NFPA 1	Fire Code, 2009 Edition as modified by Saf-C 6008.02
NFPA 10	Portable Fire Extinguishers, 2010 Edition
NFPA 72	National Fire Alarm and Signaling Code, 2010 Edition
NFPA 101	Life Safety Code, 2009 Edition, as modified by Saf-C 6008.05
NFPA 850	Recommended Practices for Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations

Fire Protection Goals

The fire protection goals for fire safety on this project are as follows:

- Provide life safety for the public, building occupants, and emergency responders. Minimize fire-related injuries and prevent undue loss of life.
- Protect property. Protect the building and contents from fire and exposure to and from adjacent buildings.
- Provide for continuity of operations. Minimize undue loss of operations due to fire-related damage.
- Limit the environmental impact of a fire.

Fire Department Water Supply

The fire department water supply requirements for the facility shall be determined during the NH SEC process and comply with the requirements of NFPA -1 paragraph 18.3 & 18.4.

Fire Department Access

Fire department access to the facility shall comply with requirements of NFPA -1 paragraph 18.2 and will be closely coordinated with the Local Fire Departments.

Building Construction

A building code analysis shall be provided for the facility verifying compliance with IBC construction requirements including with compliance with type of construction (IBC Table 601), building separation (IBC Table 602), building height and area limitations (IBC Table 503).

Life Safety

A life safety analysis shall be performed indicating compliance with NFPA 101 life safety requirements. This analysis, at minimum, shall verify the design complies with all occupancy separation, means of egress, protection from hazard, and interior finish requirements.

Fire Alarm Systems

The design of the fire alarm initiating devices and notification appliances shall apply with the all of the requirements of NFPA 72 requirements. Additionally the fire detection system shall apply industry best practices including the recommendations of NFPA 850. The fire alarm system shall include the use of Very Early Warning Fire Detectors (VEWFD) inside valve, reactor and halls for early detection. An emergency communication system will be provided to expedite assistance in the event of a fire.

Fire Suppression Systems

The installation of a fire suppression system shall be investigated and developed during the design process. The investigation will include the evaluation of alternative solutions utilizing performance-based design methods. An acceptable alternative solution shall have been determined to provide an equivalent level of protection for the facility as provided by the code required systems. The type and design of the suppression systems will be reviewed in consultation with the equipment manufacturer.

Portable Fire Fighting Equipment

Portable fire extinguisher of suitable type and number will be provided in accordance with applicable NFPA 10. Carbon dioxide/foam type fire extinguishers shall be use against class C electrical fires.

Emergency Action Plan

An emergency action plan shall be developed by Northern Pass and reviewed with the Local Fire Chief and Emergency Management Director before the facility goes in service. The plan shall be coordinated with existing local emergency operational plans and provide an effective response to all incidents.

Final Design Requirement

All components of the facility's fire protection and life safety design shall be developed and approved by a licensed Fire Protection Engineer registered in the State of New Hampshire.