

Seattle Fire Department

Permit Conditions

3202

Site Address: _____

Inspector: _____

Lithium Battery Storage (Over 15 cu ft)

NOTICE

This permit shall be kept on the premises designated herein at all times and shall be readily available for inspection by the fire code official. (SFC 105.3.5)

Indoor Storage

1. Storage in containers shall be limited to no more than 7.5 cubic feet per container. (SFC 322.4.1)
2. Containers shall be open-top and constructed of noncombustible materials or shall be of an approved type for battery collection. (SFC 322.4.1)
3. Containers shall be separated by not less than 3 feet from other containers. (SFC 322.4.1)
4. Containers shall be located a minimum of 10 feet from combustible materials. (SFC 322.4.1)
5. Containers shall be located a minimum of 5 feet from exits or exit access doors. (SFC 322.4.1)

Indoor Storage-(When not complying with conditions 1 through 5 above)

1. A technical opinion and report per SFC 104.8.2 shall be prepared at the applicant's expense and submitted to SFD. The technical opinion and report shall require approval from the fire code official prior to the storage occurring. The technical opinion and report shall specifically evaluate the following:
 1. The potential for deflagration of flammable gases released during a thermal runaway event. (SFC 322.4.2.1)
 2. The basis of design for an automatic sprinkler system or other approved fire suppression system. Such design basis shall reference relevant full-scale fire testing or another approved method of demonstrating sufficiency of the recommended design. (SFC 322.4.2.1)
2. The indoor storage area shall be separated from the remainder of the building with 2-hour rated fire barriers or horizontal assemblies. (SFC 322.4.2.2)
Exceptions:
 1. Where approved prefabricated portable structures with a two-hour fire resistance rated enclosure are provided.
 2. Where battery storage is limited to new batteries in packaging that has been demonstrated to and approved by the fire code official as sufficient to isolate a fire in the packaging to the package interior.
3. The indoor storage shall be protected by an approved automatic sprinkler system complying with NFPA 13 or an approved alternative fire suppression system. The design of the system shall be based on the technical opinion and report. (SFC 322.4.2.3)
4. The indoor storage shall be provided with an approved automatic fire detection and alarm system. This system shall use air-aspirating smoke detections, radiant energy-sensing fire detection or both. (SFC 322.4.2.4)

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5. Explosion control shall be installed per Section 911 of the SFC when the technical opinion and report requires it to be installed. (SFC 322.4.2.5)

Indoor Storage-(When the state of charge of the batteries is not exceeding 30 percent)

1. Procedures for limiting and verifying the state of charge shall be approved by the fire code official. (SFC 322.4.2.6)
2. The indoor storage shall be protected by an approved automatic sprinkler system complying with NFPA 13 or an approved alternative fire suppression system. (SFC 322.4.2.6)
3. The indoor storage shall be provided with an approved automatic fire detection and alarm system. This system shall use air-aspirating smoke detections, radiant energy-sensing fire detection or both. (SFC 322.4.2.6)

Outdoor Storage

1. Battery storage shall be located not less than 20 feet from any building, lot line, public street, public alley, public way, or means of egress unless the battery storage is separated by a 2-hour fire resistance rated assembly without openings or penetrations and extending 5 feet above and to the sides of the battery storage area, then the distance may be reduced to not less than 3 feet. (SFC 322.4.3.1)
2. Individual storage areas shall not exceed 900 square feet and the height of the batteries in storage shall not exceed 10 feet in height. Multiple storage areas shall be separated by not less than 10 feet of open space. (SFC 322.4.3.2)
3. An approved radiant energy-sensing fire detection system shall be provided. (SFC 322.4.3.3)