Seattle Fire Department
Permit Conditions

801-L

Oxidizing Compressed Gas

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)

The fire code official shall be immediately notified by calling 9-1-1 when an unauthorized discharge of a hazardous material becomes reportable under state, federal, or local regulations, or when any release inside or outside a building could present a fire or life safety hazard. (SFC 5003.3.1)

1. Hazardous materials on site shall not exceed the maximum quantities, and the types and locations of hazardous materials on site shall not differ from those specified on the face of this permit. (SFC 105.3)

2. Safety data sheets (SDS) shall be readily available for hazardous materials regulated by this permit. (SFC 5003.4)

3. Equipment, machinery, and required detection and alarm systems associated with hazardous materials shall be listed or approved, and shall be maintained in an operable condition. (SFC 5003.2.3, 5003.2.6)

4. Compressed gas containers, cylinders, tanks and systems shall be designed and constructed in accordance with nationally recognized standards and shall not be used for any purpose other than to serve as a vessel for containing the product which it is designed to contain. (SFC 5003.2.1)

5. Where the equipment, systems and devices identified below are present, they shall be tested in accordance with the following schedule unless exempted in accordance with Section 5003.2.9 of the Code:
    1) Not less than annually,
    2) In accordance with the approved manufacturers' requirements,
    3) In accordance with approved recognized industry standards, or
    4) In accordance with an approved schedule. (SFC 5003.2.9.2)

    - Gas detection systems, alarms and automatic emergency shutoff valves required for highly toxic and toxic gases.
    - Limit control systems required for liquid level, temperature and pressure.
    - Emergency alarm systems and supervision required by Chapter 50 of the Seattle Fire Code.
    - Monitoring and supervisory systems required by Section 5004.10 and 5005.1.6 of the Seattle Fire Code.
    - Manually activated shutdown controls required for compressed gas systems conveying pyrophoric gases.

6. Individuals responsible for the operation of areas in which hazardous materials are stored, dispensed, handled, or used shall be familiar with the chemical nature of the materials and the appropriate mitigating actions necessary in the event of a fire, leak, or spill. (SFC 5003.9.1)

7. Responsible persons shall be designated and trained to be liaison personnel to the fire department. These persons shall aid the fire department in preplanning emergency responses and identifying the locations where hazardous materials are located, and shall have access to the Material Safety Data Sheets and be knowledgeable in the site's emergency response procedures. (SFC 5003.9.1.1)

8. Empty containers and tanks previously used for the storage of hazardous materials shall be free from residual material and vapor as defined by DOT, the Resource Conservation and Recovery Act (RCRA) or other regulating authority or shall be maintained as specified for the storage of the hazardous material. (SFC 5003.2.5)

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9. Provisions shall be made for controlling and mitigating unauthorized discharges of hazardous materials. (SFC 5003.3.1.2)

10. The person, firm, or corporation responsible for an unauthorized discharge shall institute and complete all actions necessary to remedy the effects of such unauthorized discharges, whether sudden or gradual, at no cost to the jurisdiction. (SFC 5003.3.1.4)

11. Visible hazard identification signs as specified by NFPA 704 shall be placed on stationary containers and aboveground tanks and at entrances to locations where hazardous materials are stored, dispensed used or handled in quantities requiring a permit and at specific entrances and locations designated by the fire code official. (SFC 5003.5)

12. Smoking shall be prohibited and approved "NO SMOKING" signs shall be posted as follows:
    - In rooms or areas where hazardous materials are stored or dispensed or used in open systems in amounts requiring a permit.
    - Within 25 feet of outdoor storage, dispensing or open use areas.
    - In rooms or areas where flammable or combustible hazardous materials are stored, dispensed or used. (SFC 5003.7.1)

13. Required signs and markings shall not be obscured or removed, shall be in English as a primary language or in approved symbols, shall be durable, and the size, color and lettering shall be approved. (SFC 5003.6)

14. Areas used for the storage, use and handling of compressed gas containers, cylinders, tanks, and systems shall be secured against unauthorized entry and safeguarded in an approved manner. (SFC 5003.9.2)

15. A minimum rated 40BC fire extinguisher shall be located within 30 feet of all hazardous material storage and use. (SFC 906.3)

16. Compressed gas containers, cylinders or tanks that are not designed for refillable use shall not be refilled after use of the original contents. (SFC 5303.1)

17. Stationary compressed gas containers, cylinders and tanks shall be marked with the name of the gas and shall be labeled with visible hazard identification signs in accordance with NFPA 704. Such markings shall be visible from any direction of approach; in English as a primary language or in approved symbols; durable, and the size, color and lettering shall be approved. Such markings shall not be obscured or removed. (SFC 5303.4.1)

18. Portable containers, cylinders and tanks shall be marked in accordance with Compressed Gas Association (CGA) C-7. (SFC 5303.4.2)

19. Piping systems shall be marked in accordance with ANSI A13.1. Markings used for piping systems shall consist of the contents name and include a direction of flow. Markings shall be provided at each valve; at wall, floor and ceiling penetrations, at each change of direction, and at a minimum of every 20 feet or fraction thereof throughout the piping run. (SFC 5303.4.3)

20. Compressed gas containers, cylinders, tanks and systems which could be exposed to physical damage shall be protected by the use of approved guard posts per SFC Section 312 or other approved means. (SFC 5303.5.2)

21. Compressed gas containers, cylinders, tanks and systems shall be secured to prevent falling by one of the following methods:
    - Securing to a fixed object with one or more restraints,
    - Securing on a cart or other mobile device designed for movement,
    - Nesting at container filling or servicing facilities or in seller's warehouses not accessible to the public,
    - Securing to or within a rack, framework, cabinet or similar assembly. (SFC 5303.5.3)

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22. Compressed gas container, cylinder and tanks shall have protective caps, collars or other protective devices in place except when the containers, cylinders or tanks are in use or being serviced or filled. (SFC 5303.6.1)

23. Compressed gas containers, cylinders and tanks shall be separated from each other based on the hazard class of their contents. Incompatible materials shall be separated by one of the following methods:
    - Segregating by a distance of not less than 20 feet.
    - Isolating by a noncombustible partition extending not less than 18 inches above and to the sides of the stored material.
    - Storing in approved gas cabinets or exhausted enclosures. Materials that are incompatible shall not be stored in the same cabinet or exhausted enclosure. (SFC 5303.7)

24. Combustible waste, vegetation and similar materials shall be kept a minimum of 10 feet from compressed gas containers, cylinders, tanks and systems. (SFC 5303.7.2)

25. Compressed gas containers, cylinders and tanks shall not be placed near elevators, unprotected platform ledges or other areas where falling would result in compressed gas containers, cylinders or tanks being allowed to drop distances exceeding one-half the height of the container, cylinder or tank. (SFC 5303.7.3)

26. Compressed gas containers, cylinders and tanks, whether full or partially full, shall not be exposed to artificially-created high temperatures exceeding 125 degrees F or subambient (low) temperatures unless designed for use under the exposed conditions. (SFC 5303.7.4)

27. Compressed gas containers, cylinders and tanks shall not be placed in areas where they are capable of being damaged by falling objects. (SFC 5303.7.5)

28. Compressed gas containers, cylinders and tanks, whether full or partially full, shall not be heated by devices which could raise the surface temperature of the container, cylinder or tank to above 125 degrees F. (SFC 5303.7.6)

29. Open flames and high temperature devices shall not be used in a manner which creates a hazardous condition. (SFC 5303.7.7)

30. Compressed gas containers, cylinders, tanks and systems shall not be exposed to corrosive chemicals or fumes which could damage containers, cylinders, tanks, valves or valve-protective caps. (SFC 5303.7.8)

31. Service, repair modification or removal of valves, pressure-relief devices or other compressed gas container, cylinder or tank appurtenances shall be performed by trained personnel. (SFC 5303.9)

32. Leaking, damaged or corroded compressed gas containers, cylinders and tanks shall be removed from service. Leaking, damaged or corroded compressed gas cylinders and tanks shall be replaced, or repaired in accordance with the following:
    1) Compressed gas containers, cylinders and tanks which have been removed from service shall be handled in an approved manner.
    2) Compressed gas systems which are determined to be leaking, damaged or corroded shall be repaired to a serviceable condition or removed from service. (SFC 5303.12)

33. To prevent bottom corrosion, containers, cylinders and tanks shall be protected from direct contact with soil or unimproved surfaces. (SFC 5303.13)

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34. Compressed gas containers, cylinders and tanks, except those designed for use in a horizontal position, and all compressed gas containers, cylinders and tanks containing nonliquefied gases, shall be stored in an upright position with the valve end up. An upright position shall include conditions where the container, cylinder or tank axis is inclined as much as 45 degrees from the vertical.

    Exceptions:

    1) Compressed gas containers with a water volume less than 1.3 gallons (5L) are allowed to be stored in a horizontal position.

    2) Compressed gas containers, cylinders and tanks containing nonflammable gases or cylinders, containers and tanks containing nonliquefied flammable gases, which have been secured to a pallet for transportation purposes. (SFC 5304.1)

35. Compressed gas equipment, machinery and processes shall be listed or approved. (SFC 5305.1)

36. Valve handles or operators for required shutoff valves shall not be removed or otherwise altered to prevent access. (SFC 5305.4)

37. Transfer of gases between containers, cylinders and tanks shall be performed by qualified personnel. (SFC 5305.7)

38. Where containers, cylinders and tanks are moved by hand cart, hand truck or other mobile device, such carts, trucks or devices shall be designed for the secure movement of containers, cylinders and tanks and shall protect containers, cylinders and tanks against dropping or otherwise striking against each other or other surfaces. (SFC 5305.10.1)

39. Ropes, chains or slings shall not be used to suspend compressed gas containers, cylinders and tanks unless provisions at time of manufacture have been made on the container, cylinder or tank for appropriate lifting attachments, such as lugs. (SFC 5305.10.2)

40. Compressed gas containers, cylinders, tanks and systems shall not be used for electrical grounding and shall not be located where they could become part of an electrical circuit. (SFC 5303.8)