

NFPA® 1500

Standard on Fire Department Occupational Safety and Health Program 2013

Chapter 9 Facility Safety

9.1 Safety Standards.

9.1.1* All fire department facilities shall comply with all legally applicable health, safety, building, and fire code requirements.

9.1.2 Fire departments shall provide facilities for disinfecting, cleaning, and storage in accordance with NFPA 1581, *Standard on Fire Department Infection Control Program*.

9.1.3* All fire stations and fire department facilities shall comply with NFPA 101, *Life Safety Code*.

9.1.3.1 Approved smoke detectors shall be installed outside every sleeping area in the immediate vicinity of the bedrooms and on all levels of the station, including basements.

9.1.3.2 In buildings other than those protected throughout by an approved, supervised automatic sprinkler system installed in accordance with 30.3.5 of NFPA 101, *Life Safety Code*, approved smoke detectors shall be installed in every sleeping room.

9.1.3.3 When smoke detectors activate, the general evacuation alarm signal shall operate throughout the entire building.

9.1.3.4 All existing and new fire department facilities shall have carbon monoxide detectors installed in locations in sleeping and living areas, such that any source of carbon monoxide would be detected before endangering the members.

9.1.3.5 Areas not subject to occupancy by persons who are hearing impaired shall not be required to comply with the provisions for visible signals.

9.1.4 New buildings housing emergency fire, rescue, or ambulance services shall be protected throughout by approved automatic sprinkler systems. [1:13:3.2.3]

9.1.5* The fire department shall prevent exposure to firefighters and contamination of living and sleeping areas to exhaust emissions.

9.1.6 Any components of the protective ensemble that are contaminated shall not be allowed in sleeping and living areas.

9.1.7 All fire department facilities shall be designated smoke free.

9.1.8* Stations utilizing poles to provide rapid access to lower floors shall ensure that the area around the pole hole is secured by means of a cover, enclosure, or other means to prevent someone from accidentally falling through the pole hole.

9.2 Inspections.

9.2.1 All fire department facilities shall be inspected at least annually to provide for compliance with Section 9.1. (See Annex F.)

9.2.2 Inspections shall be documented and recorded.

9.2.3 All fire department facilities shall be inspected at least monthly to identify and provide correction of any safety or health hazards.

9.3* Maintenance and Repairs. The fire department shall have an established system to maintain all facilities and to provide prompt correction of any safety or health hazard or code violation.

ANNEX A

A.9.1.1 Where health, safety, building, and fire codes are not legally applicable to fire department facilities, steps should be taken to ensure that equivalent standards are applied and enforced. In the absence of local requirements, the provisions of NFPA 1, *Fire Code*; NFPA 70, *National Electrical Code*; NFPA 101, *Life Safety Code*; NFPA 5000, *Building Construction and Safety Code*; the *Uniform Plumbing Code*; and the *Uniform Mechanical Code* should be applied. In addition, the workplace safety standards specified in 29 CFR 1910, *Occupational Safety and Health Standards*, or an equivalent standard should be applied. Applicable requirements of the Americans with Disabilities Act should be met.

A.9.1.3 As new stations are constructed or existing stations are renovated, a separation between the apparatus floor and living quarters should be provided.

A.9.1.5 The operation of a fire department requires the storage and indoor operation of fire apparatus that are generally housed in an enclosed building. The need to keep the apparatus and other vehicles ready for immediate service and in good operating condition, which requires the indoor running of vehicles for response and routine service/pump checks, makes storage in an enclosed area, such as an apparatus bay, necessary. The exhaust from all internal combustion engines, including diesel and gasoline-powered engines, contains over 100 individual hazardous chemical components that, when combined, can result in as many as 10,000 chemical compounds. A large majority of these compounds are today listed by state and federal regulatory agencies as being cancer causing or suspected carcinogens. **The target components listed by NIOSH/OSHA consist of both hydrocarbon carbon components and compounds, which are produced as both gas-phase and particulate-phase compounds. The gases and particulates, which are viewed by NIOSH and OSHA as life threatening, consist of a cancer-causing substance known as polynuclear aromatic hydrocarbons (PAHs). Gases in diesel exhaust, such as nitrous oxide, nitrogen dioxide, formaldehyde, benzene, sulfur dioxide, hydrogen sulfide, carbon dioxide, and carbon monoxide, can also create health problems. According to NIOSH, human and animal studies show that diesel exhaust should be treated as a human carcinogen (cancer-causing substance).**

In accordance with the NIOSH *Pocket Guide to Chemical Hazards*, as it pertains to diesel exhaust, NIOSH recommends that occupational exposure to carcinogens be limited to the lowest feasible concentration. NIOSH uses OSHA's classification, outlined in 29 CFR 1990.103, *Definitions*, which states in part, **"Potential occupational carcinogen means any substance, or combination or mixture of substances, which causes an increased incidence of benign and/or malignant neoplasm, or a substantial decrease in the latency period between exposure and onset of neoplasm in humans or in one or more experimental mammalian species as the result of any oral, respiratory or dermal exposure, or any other exposure which results in the induction of tumors at a site other than the site of administration."** This definition also includes any substance that is metabolized into one or more potential occupational carcinogen by mammals.