

**§ 194.15-3**

**46 CFR Ch. I (10-1-11 Edition)**

**§ 194.15-3 Responsibility.**

(a) With the knowledge and approval of the master, the senior member of the scientific party embarked may supervise the safety and operation of the chemical laboratory.

(b) The laboratory supervisor shall:

(1) Maintain the highest standards of safe working conditions.

(2) Provide safeguards against hazardous undertakings.

(3) Educate personnel working in the laboratory spaces to be alert for hazards.

**§ 194.15-5 Ventilation.**

(a) Operations, reactions or experiments which produce toxic, noxious or corrosive vapors shall be conducted under a suitably installed fume hood. The fume hood shall be equipped with an independent power exhaust ventilation system which terminates so as to prevent fumes from entering other portions of the vessel. The exhaust system of the fume hood shall be compatible with the ventilation system of the laboratory to prevent fumes from backing-up within the fume hood system. The terminals shall be equipped with acceptable flame screens.

(b) Chemical laboratories shall be equipped with power ventilation system of the exhaust type serving the entire laboratory for use in the event of spills or other emergencies. The system shall have a capacity sufficient to effect a complete change of air in not more than 4 minutes based upon the volume of the compartment.

(1) Power ventilation units shall have nonsparking impellers and shall not produce a source of vapor ignition in either the compartment or the ventilation system associated with the compartment.

(2) The power ventilation system shall be interlocked with any other ventilation or air-conditioning system serving the laboratory in a manner to prevent the circulation of vapors to other spaces.

(3) This ventilation system shall be independent of any other ventilation system in the vessel. It shall serve no other space. It shall be of watertight construction.

(4) Ventilation exhaust outlets shall terminate more than 6 feet from any

opening to the interior part of the vessel and from any possible source of vapor ignition.

(5) The control for the power ventilation system shall be conveniently located and marked in a manner to clearly identify the purpose of the control.

(c) Ventilation of air conditioning systems serving the chemical laboratory shall be designed so that air cannot be recirculated into an accommodation space.

**§ 194.15-7 Fire protection.**

(a) If a fixed or semiportable fire-fighting system is installed, it shall meet the applicable requirements in part 193 of this subchapter. Other fire-fighting systems will be given special consideration by the Commandant.

(b) Portable fire extinguishers are required in accordance with Table 193.50-10(a) of this subchapter.

**§ 194.15-9 Storage.**

(a) Chemical stores mentioned in § 194.05-3 may be stored in small working quantities in the laboratory provided their containers are labeled in accordance with § 194.05-5(a).

(b) Chemical stores in greater than small laboratory working quantities shall be stored in approved containers in the chemical storeroom as prescribed in § 194.05-1(b).

(c) All material stored in any laboratory shall be securely stowed for sea with due consideration for chemical compatibility and safety standards.

**§ 194.15-11 Flushing systems.**

(a) Working spaces in which chemical stores are used shall be equipped with a fresh water supply shower.

(b) There shall be a provision for flushing away chemical spills.

**§ 194.15-15 Chemicals other than compressed gases.**

Chemicals, including those listed in 49 CFR part 172, may be stored in small working quantities in the chemical laboratory.

[CGD 86-033, 53 FR 36027, Sept. 16, 1988]

**§ 194.15-17 Compressed gases other than inert gases.**

(a) When, in consideration for a particular operation, compressed gases are

needed within the laboratory, the cylinders may be temporarily installed in the laboratory, provided no more than one (1) cylinder of each gas is in the laboratory simultaneously. When transporting compressed gas cylinders to, from, or within the vessel, the cylinder valves shall be capped or otherwise protected in accordance with 49 CFR 173.301(g).

(b) Cylinders temporarily installed in the laboratory shall be securely stowed for sea. Appropriate safety signs shall be displayed and safety precautions observed.

(c) Oxygen and acetylene cylinders for use in ship's maintenance shall not be stored in the laboratory.

(d) Systems providing gas for bunsen burners or similar semipermanent/permanent installations shall be installed in accordance with subpart 195.03 of part 195.

[CGFR 67-83, 33 FR 1151, Jan. 27, 1968, as amended by CGD 86-033, 53 FR 36027, Sept. 16, 1988]

#### § 194.15-19 Electrical.

(a) All electrical equipment located within 18 inches of the deck of the chemical laboratory shall be in accordance with the applicable requirements of Subchapter J (Electrical Engineering) of this chapter for Class I, Division 2, hazardous locations. Electrical equipment located 18 inches or more above the deck may be of a type suitable for wet or dry locations in accordance with Subchapter J.

### Subpart 194.20—Chemical Stores and/or Storerooms

#### § 194.20-1 General.

(a) The chemical storerooms shall be considered to be service areas and as such shall be subject to the applicable requirements of § 190.07-10(d).

(1) Installed equipment, such as shelves and cabinets, shall be constructed of incombustible materials.

(2) The access doors to the storeroom shall bear the inscription "Chemical Storeroom."

(b) Storage and cleanliness shall be consistent with good chemical stowage practices.

(c) The deck of the chemical storeroom shall be of a nonskid material suitably resistant to chemical spills. Provision shall be made for the containment and removal of chemical spills.

(d) Chemical reactions and experiments shall not be conducted in the chemical storeroom.

(e) A storeroom, when used as a chemical storeroom, shall be exclusively for the stowage of chemical stores.

(f) All doors shall open in the direction of escape.

(g) Movement of chemical stores to, or from, the storeroom shall be accomplished utilizing suitable, portable containers. In no event shall piping systems, or similar arrangements, be permitted for transfer of chemical stores between the storeroom and the area in which the chemical stores are to be used.

#### § 194.20-3 Responsibility.

(a) With the knowledge and approval of the master the senior member of the scientific party embarked may supervise the safety and operation of the chemical storerooms.

(b) The chemical storeroom supervisor shall:

(1) Maintain the highest standards of safe working conditions.

(2) Provide safeguards against hazardous undertakings.

(3) Educate personnel working in, and near, the storeroom to be alert for hazards.

#### § 194.20-5 Ventilation.

(a) Chemical storerooms shall be equipped with a power ventilation system of exhaust type. The system shall have a capacity sufficient to effect a complete change of air in not more than 4 minutes based upon the volume of the compartment.

(1) Power ventilation units shall have nonsparking impellers and shall not produce a source of vapor ignition in either the compartment or the ventilation system associated with the compartment.

(2) This ventilation system shall be independent of any other ventilation system. It shall serve no other space in