welding, burning, or like fire-producing actions shall be made:

- (1) Within or on the boundaries of cargo tanks which have been used to carry flammable or combustible liquid or chemicals in bulk, or within spaces adjacent to such cargo tanks; or
- (2) Within or on the boundaries of fuel tanks: or
- (3) To pipe lines, heating coils, pumps, fittings, or other appurtenances connected to such cargo or fuel tanks.
- (c) Such inspections shall be made and evidenced as follows:
- (1) In ports or places in the United States or its territories and possessions the inspection shall be made by a Marine Chemist certificated by the National Fire Protection Association; however, if the services of such certified Marine Chemist are not reasonably available, the Officer in Charge, Marine Inspection, upon the recommendation of the vessel owner and his contractor or their representative, shall select a person who, in the case of an individual vessel, shall be authorized to make such inspection. If the inspection indicated that such operations can be undertaken with safety, a certificate setting forth the fact in writing and qualified as may be required, shall be issued by the certified Marine Chemist or the authorized person before the work is started. Such qualifications shall include any requirements as may be deemed necessary to maintain, insofar as can reasonably be done, the safe conditions in the spaces certified throughout the operation and shall include such additional tests and certifications as considered required. Such qualifications and requirements shall include precautions necessary to eliminate or minimize hazards that may be present from protective coatings or residues from cargoes.
- 3. Title 46 CFR 91.50-1(c)(1) covering hot work on cargo and miscellaneous vessels as follows:
- (a) The provisions of "Standard for the Control of Gas Hazards on Vessels to be Repaired," NFPA No. 306, published by National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269, shall be used as a guide in conducting the inspections and issuance of certificates required by this section.
- (b) Until an inspection has been made to determine that such operation can be undertaken with safety, no alterations, repairs, or other such operations involving riveting, welding, burning, or like fire-producing actions shall be made:
- (1) Within or on the boundaries of cargo tanks which have been used to carry flammable or combustible liquid or chemicals in bulk, or within spaces adjacent to such cargo tanks; or.
- (2) Within or on the boundaries of fuel tanks; or,

- (3) To pipe lines, heating coils, pumps, fittings, or other appurtenances connected to such cargo or fuel tanks.
- (c) Such inspections shall be made and evidenced as follows:
- (1) In ports or places in the United States or its territories and possessions the inspection shall be made by a Marine Chemist certificated by the National Fire Protection Association; however, if the services of such certified Marine Chemist are not reasonably available, the Officer in Charge, Marine Inspection, upon the recommendation of the vessel owner and his contractor or their representative, shall select a person who, in the case of an individual vessel, shall be authorized to make such inspection. If the inspection indicated that such operations can be undertaken with safety, a certificate setting forth the fact in writing and qualified as may be required, shall be issued by the certified Marine Chemist or the authorized person before the work is started. Such qualifications shall include any requirements as may be deemed necessary to maintain, insofar as can reasonably be done, the safe conditions in the spaces certified throughout the operation and shall include such additional tests and certifications as considered required. Such qualifications and requirements shall include precautions necessary to eliminate or minimize hazards that may be present from protective coatings or residues from cargoes.

## Subpart C—Surface Preparation and Preservation

## § 1915.31 Scope and application of subpart.

The standards contained in this subpart shall apply to ship repairing and shipbuilding and shall not apply to shipbreaking.

## § 1915.32 Toxic cleaning solvents.

- (a) When toxic solvents are used, the employer shall employ one or more of the following measures to safeguard the health of employees exposed to these solvents.
- (1) The cleaning operation shall be completely enclosed to prevent the escape of vapor into the working space.
- (2) Either natural ventilation or mechanical exhaust ventilation shall be used to remove the vapor at the source and to dilute the concentration of vapors in the working space to a concentration which is safe for the entire work period.