

fire over the impounding spaces does not cause structural damage to an LNG vessel moored or berthed at the waterfront facility handling LNG.

(b) Each LNG loading flange must be located at least 300 meters (984.3 feet) from the following which are primarily intended for the use of the general public or railways:

(1) Each bridge crossing a navigable waterway.

(2) Each entrance to any tunnel under a navigable waterway.

[CGD 78-038, 53 FR 3376, Feb. 7, 1988, as amended by CGD 88-049, 60 FR 39796, Aug. 3, 1995]

#### § 127.107 Electrical power systems.

(a) The electrical power system must have a power source and a separate emergency power source, so that failure of one source does not affect the capability of the other source. The system must meet the National Electrical Code, NFPA 70.

(b) The emergency power source must provide enough power for the operation of the—

- (1) Emergency shutdown system;
- (2) Communications equipment;
- (3) Firefighting equipment; and
- (4) Emergency lighting.

(c) If an auxiliary generator is used as an emergency power source, it must meet Section 700-12 of NFPA 70.

#### § 127.109 Lighting systems.

(a) The marine transfer area for LNG must have a lighting system and separate emergency lighting.

(b) All outdoor lighting must be located or shielded so that it is not confused with any aids to navigation and does not interfere with navigation on the adjacent waterways.

(c) The lighting system must provide an average illumination on a horizontal plane one meter (3.3 feet) above the deck that is—

- (1) 54 lux (five foot-candles) at any loading flange; and
- (2) 11 lux (one foot-candle) at each work area.

(d) The emergency lighting must provide lighting for the operation of the—

- (1) Emergency shutdown system;
- (2) Communications equipment; and

(3) Firefighting equipment.

[CGD 78-038, 53 FR 3376, Feb. 7, 1988, as amended by CGD 88-049, 60 FR 39796, Aug. 3, 1995]

#### § 127.111 Communications systems.

(a) The marine transfer area for LNG must have a ship-to-shore communication system and a separate emergency ship-to-shore communication system.

(b) Each ship-to-shore communication system must be a dedicated system that allows voice communication between the person in charge of transfer operations on the vessel, the person in charge of shoreside transfer operations, and personnel in the control room.

[CGD 78-038, 53 FR 3376, Feb. 7, 1988, as amended by CGD 88-049, 60 FR 39796, Aug. 3, 1995]

#### § 127.113 Warning signs.

(a) The marine transfer area for LNG must have warning signs that—

- (1) Meet paragraph (b) of this section;
- (2) Can be seen from the shore and the water; and
- (3) Have the following text:

Warning  
Dangerous Cargo  
No Visitors  
No Smoking  
No Open Lights

(b) Each letter in the words on the sign must be—

- (1) Block style;
- (2) Black on a white background; and
- (3) 7.6 centimeters (3 inches) high.

[CGD 78-038, 53 FR 3376, Feb. 7, 1988, as amended by CGD 88-049, 60 FR 39796, Aug. 3, 1995]

### EQUIPMENT

#### § 127.201 Sensing and alarm systems.

(a) Fixed sensors must have audio and visual alarms in the control room and audio alarms nearby.

(b) Fixed sensors that continuously monitor for LNG vapors must—

- (1) Be in each enclosed area where vapor or gas may accumulate; and
- (2) Meet Section 9-4 of NFPA 59A.

(c) Fixed sensors that continuously monitor for flame, heat, or products of combustion must—