

(3) An explosion suppression system acceptable to the Commandant (G-MSO).

(b) If a reciprocating or screw-type compressor handles vapor in the vapor collection system, it must be provided with indicators and audible and visible alarms to warn against the following conditions:

(1) Excessive discharge gas temperature at each compressor chamber or cylinder;

(2) Excessive cooling water temperature;

(3) Excessive vibration;

(4) Low lube oil level;

(5) Low lube oil pressure; and

(6) Excessive shaft bearing temperatures.

(c) If a liquid ring-type compressor handles vapor in the vapor collection system, it must be provided with indicators and audible and visible alarms to warn against the following conditions:

(1) Low level of liquid sealing medium;

(2) Lack of flow of liquid sealing medium;

(3) Excessive temperature of the liquid sealing medium;

(4) Low lube oil level;

(5) Low lube oil pressure, if pressurized lubricating system; and

(6) Excessive shaft bearing temperature.

(d) If a centrifugal compressor, fan, or lobe blower handles vapor in the vapor collection system, construction of the blades and/or housing must meet one of the following:

(1) Blades or housing of nonmetallic construction;

(2) Blades and housing of nonferrous material;

(3) Blades and housing of corrosion resistant steel;

(4) Ferrous blades and housing with one-half inch or more design tip clearance; or

(5) Blades of aluminum or magnesium alloy and a ferrous housing with a nonferrous insert sleeve at the periphery of the impeller.

[CGD 88-102, 55 FR 25429, June 21, 1990, as amended by CGD 96-026, 61 FR 33666, June 28, 1996]

#### § 154.828 Vapor recovery and vapor destruction units.

(a) The inlet to a vapor recovery unit which receives cargo vapor that has not been inerted, enriched, or diluted in accordance with § 154.824 of this subpart must be fitted with one of the following:

(1) A detonation arrester;

(2) A flame arrester; or

(3) An explosion suppression system acceptable to the Commandant (G-MSO).

(b) The inlet to a vapor destruction unit must:

(1) Have a liquid seal; and

(2) Have two quick-closing stop valves installed in the vapor line.

(c) A vapor destruction unit must:

(1) Not be within 30 meters (98.8 ft.) of any tank vessel berth or mooring at the facility;

(2) Have a flame arrester or detonation arrester fitted in the vapor line; and

(3) Alarm and shut down when a flame is detected on the flame arrester or detonation arrester.

(d) When a vapor destruction unit shuts down or has a flame-out condition the vapor destruction unit control system must:

(1) Close the quick-closing stop valves required by paragraph (b)(2) of this section; and

(2) Close the remotely operated cargo vapor shutoff valve required by § 154.810(a) of this subpart.

[CGD 88-102, 55 FR 25429, June 21, 1990, as amended by CGD 96-026, 61 FR 33666, June 28, 1996]

#### § 154.840 Personnel training.

(a) A person in charge of a transfer operation utilizing a vapor control system must have completed a training program covering the particular system installed at the facility. Training must include drills or demonstrations using the installed vapor control system covering normal operations and emergency procedures.

(b) The training program required by paragraph (a) of this section must cover the following subjects:

(1) Purpose of a vapor control system;

(2) Principles of the vapor control system;

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- (3) Components of the vapor control system;
- (4) Hazards associated with the vapor control system;
- (5) Coast Guard regulations in this subpart;
- (6) Operating procedures, including:
  - (i) Testing and inspection requirements,
  - (ii) Pre-transfer procedures,
  - (iii) Connection sequence,
  - (iv) Start-up procedures, and
  - (v) Normal operations; and
- (7) Emergency procedures.

### § 154.850 Operational requirements.

(a) A facility must receive vapors only from a vessel which has its certificate of inspection or certificate of compliance endorsed in accordance with 46 CFR 39.10-13(e).

(b) The following must be performed not more than 24 hours prior to each transfer operation:

(1) All alarms and automatic shutdown systems required by this part must be tested; and

(2) The analyzers required by § 154.820(a), § 154.824 (d) and (e) of this subpart must be checked for calibration by use of a span gas.

(c) The position of all valves in the vapor line between the vessel's tanks and the facility vapor collection system must be verified prior to the start of the transfer operation.

(d) A tank barge overfill control system that meets the requirements of 46 CFR 39.20-9(b) must not be connected to an overfill sensor circuit that exceeds the system's rated cable length, inductance, and capacitance.

(e) When vapor is being received from a vessel with inerted cargo tanks, the remotely operated cargo vapor shutoff valve required by § 154.810(a) of this subpart must not be opened until the pressure at the facility vapor connection exceeds the pressure on the downstream side of the remotely operated cargo vapor shutoff valve.

(f) The initial cargo transfer rate must not exceed the rate agreed upon at the pre-transfer conference required by § 156.120(w) of this chapter and 46 CFR 39.30-1(h).

(g) The cargo transfer rate must not exceed the maximum allowable trans-

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fer rate as determined by the lesser of the following:

(1) A transfer rate corresponding to the maximum vapor processing rate for the vapor control system, as specified in the facility operations manual required by § 154.300 of this chapter; or

(2) The vessel's maximum transfer rate determined in accordance with 46 CFR 39.30-1(d).

(h) While transferring cargo to a vessel connected to a vapor control system, compressed air or gas may be used to clear cargo hoses and loading arms, but must not be used to clear cargo lines.

(i) If one of the two analyzers required by § 154.824(d) of this subpart becomes inoperable during a transfer operation, the operation may continue provided the remaining analyzer remains operational; however, no further transfer operations may be started until the inoperable analyzer is replaced or repaired.

(j) Whenever a condition results in a shutdown of the vapor control system, the person in charge shall immediately terminate cargo loading.

(k) If it is suspected that a flare in the vapor control system has had a flare-back, or if a flame is detected on the flame arrester required by § 154.828(c)(2) of this subpart, the transfer operation must be stopped and not be restarted until the flame arrester has been inspected and found to be in satisfactory condition.

### Subpart F—Response Plans for Oil Facilities

SOURCE: CGD 91-036, 61 FR 7917, Feb. 29, 1996, unless otherwise noted.

#### § 154.1010 Purpose.

This subpart establishes oil spill response plan requirements for all marine transportation-related (MTR) facilities (hereafter also referred to as facilities) that could reasonably be expected to cause substantial harm or significant and substantial harm to the environment by discharging oil into or on the navigable waters, adjoining shorelines, or exclusive economic zone. The development of a response plan prepares the facility owner or operator