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## 7151.7200 MONITORING.

Subpart 1. **Transfer.** At least one person must be present during substance loading or unloading of a tank to visually monitor and terminate the transfer. The person monitoring the substance transfer shall take immediate action to stop the flow of the substance being transferred when the capacity of the tank has been reached or in the event of an equipment failure or emergency. Tank owners and operators shall recover all contaminated soils and any substance released during transfer.

Subp. 2. Weekly monitoring. Owners or operators of tanks shall conduct visual monitoring as described in items A to C to verify that no releases have occurred from the tank system.

A. If the secondary containment area complies with the standard established in part 7151.5400, the owner or operator shall visually monitor an aboveground storage tank site at least weekly.

B. If the secondary containment area does not comply with the standard established in part 7151.5400, the owner or operator shall visually monitor an aboveground storage tank site at least every 72 hours.

C. Owners and operators of double-walled tanks need not conduct weekly monitoring of the containment area around the double-walled tanks.

Subp. 3. **Monthly monitoring.** The owner or operator shall visually inspect tank systems at least monthly, including:

A. walking through the site to identify cracks or other defects in the secondary containment area and any substance transfer area;

B. a visual examination of the exterior surfaces of tanks, piping, valves, pumps, and other equipment for cracks, corrosion, releases, and maintenance deficiencies; and

C. identification of poor maintenance, operating practices, or malfunctioning equipment.

Subp. 4. Leak detection. The owner or operator shall monitor tank systems for leaks as described in items A to C. Any suspected releases shall be investigated and resolved.

A. If a tank is designed pursuant to part 7151.5400, subpart 4, leak detection must be conducted at least monthly as follows:

(1) visual monitoring of:

(a) elevated tanks;

(b) tanks on continuous concrete slabs for Type B and Type C substances;

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(c) tanks on a continuous concrete slab treated with material that is impermeable to the substance being stored for Type A substances;

(d) tanks on containment constructed of fabricated steel; or

(e) tanks on containment constructed of fiberglass;

(2) interstitial monitoring between the tank's inner and outer shell or the tank's shell and the containment area; or

(3) vapor monitoring in the soil directly under the tank bottom or perimeter and above the water table.

B. If a tank is not designed pursuant to part 7151.5400, subpart 4, leak detection must be conducted at least monthly using one or more of the following:

(1) monthly reconciliation of substance measurements taken pursuant to the interval established in subpart 2, with dispenser meter readings, shipments, deliveries, and internal transfers; any difference of 2.0 percent or more of monthly throughput shall be investigated and resolved; or

(2) statistical inventory reconciliation as approved by the agency.

C. All underground lines must be tested for leaks at least annually using one or more of the following methods:

- (1) tracer gas;
- (2) hydrostatic;
- (3) lockdown pressure;
- (4) double-walled piping with a sump sensor connected to an audible alarm;

or

(5) other approved methods pursuant to part 7151.9400.

Subp. 5. Annual equipment check. Owners and operators shall maintain in functioning condition all equipment used for release detection, monitoring, or warning. Owners and operators shall check such equipment for proper function or calibration at least yearly or in accordance with manufacturer's guidance.

Subp. 6. **Tank inspection.** All field-erected steel tanks must be internally and externally inspected by a certified tank inspector pursuant to American Petroleum Institute standard 653. Initial inspections must be completed in accordance with the following schedule:

A. external inspections shall be conducted by November 2, 2003, or a maximum of five years after the initial construction date, whichever is later; and

B. internal inspections shall be conducted by November 2, 2008, or a maximum of ten years after the initial construction date, whichever is later.

## Subp. 7. Corrosion protection monitoring.

A. A qualified cathodic protection tester shall inspect all cathodic protection systems on steel tanks and piping as follows:

(1) all cathodic protection systems must be tested pursuant to the National Association of Corrosion Engineers RP-02-85 code of practice within six months of installation and at least every three years thereafter; and

(2) impressed current systems must be inspected for proper function every 60 days.

B. A lined tank which does not have external cathodic protection must be internally inspected within ten years after lining, and every ten years after that. The liner must be structurally sound with the lining performing pursuant to original design specifications.

C. If corrosion protection monitoring conducted in conformance with this part indicates inadequate corrosion protection, corrective measures must be taken within 180 days to ensure that the measured surface potential conforms to the requirements of this part.

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