

fluid. If an instrument reading of 1,000 parts per million or greater is measured, a leak is detected and it shall be repaired using the procedures in § 65.105; or

(B) The owner or operator shall eliminate the visual indications of liquids dripping.

(vi) If indications of liquids dripping from the pump seal exceed the criteria established in paragraph (e)(1)(i) of this section, or if based on the criteria established in paragraph (e)(1)(i) of this section the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected.

(vii) Each sensor as described in paragraph (e)(1)(iv) of this section is observed daily or is equipped with an alarm unless the pump is located within the boundary of an unmanned plant site.

(viii) When a leak is detected pursuant to paragraph (e)(1)(vi) of this section, it shall be repaired as specified in § 65.105.

(2) *No external shaft.* Any pump that is designed with no externally actuated shaft penetrating the pump housing is exempt from the requirements of paragraph (b) of this section.

(3) *Routed to a process or fuel gas system or equipped with a closed vent system.* Any pump that is routed to a process or fuel gas system or equipped with a closed vent system that captures and transports leakage from the pump to a control device meeting the requirements of § 65.115 is exempt from the requirements of paragraph (b) of this section.

(4) *Unmanned plant site.* Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (b)(4) and (e)(1)(v) of this section and the daily requirements of paragraph (e)(1)(vii) of this section provided that each pump is visually inspected as often as practical and at least monthly.

(5) *Ninety percent exemption.* If more than 90 percent of the pumps at a process unit meet the criteria in either paragraph (e)(1) or (2) of this section, the process unit is exempt from the percent leaking calculation in paragraph (c) of this section.

(6) *Unsafe-to-monitor pumps.* Any pump that is designated as described in § 65.103(c)(1) as an unsafe-to-monitor pump is exempt from the requirements of paragraph (b) of this section, the monitoring and inspection requirements of paragraphs (e)(1)(v) through (viii) of this section, and the owner or operator shall monitor and repair the pump according to the written plan specified in § 65.103(c)(4).

§ 65.108 Standards: Connectors in gas/vapor service and in light liquid service.

(a) *Compliance schedule.* Except as allowed in § 65.102(b) or as specified in paragraph (e) of this section, the owner or operator shall monitor all connectors in each process unit initially for leaks by either 12 months after the implementation date as specified in § 65.1(f) or 12 months after initial start-up, whichever is later. If all connectors in each process unit have been monitored for leaks prior to the implementation date specified in § 65.1(f), no initial monitoring is required provided either no process changes have been made since the monitoring or the owner or operator can determine that the results of the monitoring, with or without adjustments, reliably demonstrate compliance despite process changes. If required to monitor because of a process change, the owner or operator is required to monitor only those connectors involved in the process change.

(b) *Leak detection.* Except as allowed in § 65.102(b) or as specified in paragraph (e) of this section, the owner or operator shall monitor all connectors in gas/vapor and light liquid service as specified in paragraphs (a) and (b)(3) of this section.

(1) *Monitoring method.* The connectors shall be monitored to detect leaks by the method specified in § 65.104(b) and (c).

(2) *Instrument reading that defines a leak.* If an instrument reading greater than or equal to 500 parts per million is measured, a leak is detected.

(3) *Monitoring periods.* The owner or operator shall perform monitoring, subsequent to the initial monitoring required in paragraph (a) of this section, as specified in paragraphs (b)(3)(i)

through (iii) of this section, and shall comply with the requirements of paragraphs (b)(3)(iv) and (v) of this section. The required period in which monitoring must be conducted shall be determined from paragraphs (b)(3)(i) through (iii) of this section using the monitoring results from the preceding monitoring period. The percent leaking connectors shall be calculated as specified in paragraph (c) of this subpart.

(i) If the percent leaking connectors in the process unit was greater than or equal to 0.5 percent, then monitor within 12 months (1 year).

(ii) If the percent leaking connectors in the process unit was greater than or equal to 0.25 percent but less than 0.5 percent, then monitor within 4 years. An owner or operator may comply with the requirements of paragraph (b)(3)(ii) of this section by monitoring at least 40 percent of the connectors within 2 years of the start of the monitoring period, provided all connectors have been monitored by the end of the 4-year monitoring period.

(iii) If the percent leaking connectors in the process unit was less than 0.25 percent, then monitor as provided in paragraph (b)(3)(iii)(A) of this section and either paragraph (b)(3)(iii)(B) or (C) of this section, as appropriate.

(A) An owner or operator shall monitor at least 50 percent of the connectors within 4 years of the start of the monitoring period.

(B) If the percent leaking connectors calculated from the monitoring results in paragraph (b)(3)(iii)(A) of this section is greater than or equal to 0.35 percent of the monitored connectors, the owner or operator shall monitor as soon as practical, but within the next 6 months, all connectors that have not yet been monitored during the monitoring period. At the conclusion of monitoring, a new monitoring period shall be started pursuant to paragraph (b)(3) of this section, based on the percent leaking connectors of the total monitored connectors.

(C) If the percent leaking connectors calculated from the monitoring results in paragraph (b)(3)(iii)(A) of this section is less than 0.35 percent of the monitored connectors, the owner or operator shall monitor all connectors that have not yet been monitored with-

in 8 years of the start of the monitoring period.

(iv) If, during the monitoring conducted pursuant to paragraphs (b)(3)(i) through (iii) of this section, a connector is found to be leaking, it shall be re-monitored once within 90 days after repair to confirm that it is not leaking.

(v) The owner or operator shall keep a record of the start date and end date of each monitoring period under this section for each process unit.

(c) *Percent leaking connectors calculation.* For use in determining the monitoring frequency as specified in paragraphs (a) and (b)(3) of this section, the percent leaking connectors as used in paragraphs (a) and (b)(3) of this section shall be calculated by using Equation 108-1 of this section:

$$\%C_L = C_L / C_t * 100 \quad (\text{Eq. 108-1})$$

Where:

$\%C_L$ = Percent leaking connectors as determined through periodic monitoring required in paragraphs (a) and (b)(3)(i) through (b)(3)(iii) of this section.

C_L = Number of connectors measured at 500 parts per million or greater by the method specified in §65.104(b).

C_t = Total number of monitored connectors in the process unit.

(d) *Leak repair.* If a leak is detected pursuant to paragraphs (a) and (b) of this section, then the leak shall be repaired using the procedures in §65.105, as applicable.

(e) *Special provisions for connectors.*—

(1) *Unsafe-to-monitor connectors.* Any connector that is designated, as described in §65.103(c)(1), as an unsafe-to-monitor connector is exempt from the requirements of paragraphs (a) and (b) of this section and the owner or operator shall monitor according to the written plan specified in §65.103(c)(4).

(2) *Inaccessible, ceramic, or ceramic-lined connectors.* (i) Any connector that is inaccessible or that is ceramic or ceramic-lined (for example, porcelain, glass, or glass-lined), is exempt from the monitoring requirements of paragraphs (a) and (b) of this section and from the recordkeeping and reporting requirements of §§65.119 and 65.120. An inaccessible connector is one that meets any of the following provisions, as applicable:

§ 65.109

40 CFR Ch. I (7-1-03 Edition)

- (A) Buried;
 - (B) Insulated in a manner that prevents access to the connector by a monitor probe;
 - (C) Obstructed by equipment or piping that prevents access to the connector by a monitor probe;
 - (D) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold that would allow access to connectors up to 7.6 meters (25 feet) above the ground;
 - (E) Inaccessible because it would require elevating the monitoring personnel more than 2 meters (7 feet) above a permanent support surface or would require the erection of scaffold;
 - (F) Not able to be accessed at any time in a safe manner to perform monitoring. Unsafe access includes, but is not limited to, the use of a wheeled scissor-lift on unstable or uneven terrain, the use of a motorized man-lift basket in areas where an ignition potential exists, or access would require near proximity to hazards such as electrical lines or would risk damage to equipment.
 - (ii) If any inaccessible, ceramic, or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the visual, audible, olfactory, or other indications of a leak to the atmosphere shall be eliminated as soon as practical.
- (3) *Connectors referenced from 40 CFR part 60, subpart VV or 40 CFR part 61, subpart V.* For sources referenced to this part from 40 CFR part 61, subpart VV, or from 40 CFR part 61, subpart V, connectors are exempt from the requirements of paragraphs (a) through (d) of this section and the owner or operator shall comply with the following paragraphs:
- (i) Connectors shall be monitored within 5 days by the method specified in § 65.104(b) and (c) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method.
 - (ii) If an instrument reading of 500 parts per million or greater is measured, a leak is detected.
 - (iii) When a leak is detected, it shall be repaired using the procedures in § 65.105, as applicable.

§ 65.109 Standards: Agitators in gas/vapor service and in light liquid service.

- (a) *Compliance schedule.* The owner or operator shall comply with this section no later than the implementation date specified in § 65.1(f).
- (b) *Leak detection.* (1) *Monitoring method.* Each agitator seal shall be monitored monthly to detect leaks by the methods specified in § 65.104(b) and (c), except as provided in § 65.102(b) or paragraph (e) of this section.
 - (2) *Instrument reading that defines a leak.* If an instrument reading of 10,000 parts per million or greater is measured, a leak is detected.
 - (3) *Visual inspection.* Each agitator seal shall be checked by visual inspection each calendar week for indications of liquids dripping from the agitator seal. The owner or operator shall document that the inspection was conducted and the date of the inspection. If there are indications of liquids dripping from the agitator seal, the owner or operator shall comply with either of the following procedures prior to the next required inspection:
 - (i) The owner or operator shall monitor the agitator seal as specified in § 65.104(b) and (c) to determine if there is a leak of regulated material. If an instrument reading of 10,000 parts per million or greater is measured, a leak is detected, and it shall be repaired according to paragraph (d) of this section.
 - (ii) The owner or operator shall eliminate the indications of liquids dripping from the agitator seal.
- (c) [Reserved]
- (d) *Leak repair.* If a leak is detected, then the leak shall be repaired using the procedures in § 65.105(a).
- (e) *Special provisions for agitators.* (1) *Dual mechanical seal.* Each agitator equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (b) of this section provided the requirements specified in paragraphs (e)(1)(i) through (vi) of this section are met.
 - (i) Each dual mechanical seal system shall meet any one of the following requirements:
 - (A) Operated with the barrier fluid at a pressure that is at all times (except