**Section 721.952 Standards: Pumps in Light Liquid Service**

a) Monitoring.

1) Each pump in light liquid service must be monitored monthly to detect leaks by the methods specified in Section 721.963(b), except as provided in subsections (d), (e), and (f).

2) Each pump in light liquid service must be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

b) Leaks.

1) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

2) If there are indications of liquids dripping from the pump seal, a leak is detected.

c) Repairs.

1) When a leak is detected, it must be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section 721.959.

2) A first attempt at repair (e.g., tightening the packing gland) must be made no later than five calendar days after each leak is detected.

d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of subsection (a), provided the following requirements are met:

1) Each dual mechanical seal system must be as follows:

A) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or

B) Equipped with a barrier fluid degassing reservoir that is connected by a closed-vent system to a control device that complies with the requirements of Section 721.960; or

C) Equipped with a system that purges the barrier fluid into a hazardous secondary material stream with no detectable emissions to the atmosphere.

2) The barrier fluid system must not be a hazardous secondary material with organic concentrations 10 percent or greater by weight.

3) Each barrier fluid system must be equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

4) Each pump must be checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

5) Alarms.

A) Each sensor as described in subsection (d)(3) must be checked daily or be equipped with an audible alarm that must be checked monthly to ensure that it is functioning properly.

B) The remanufacturer or other person that stores or treats the hazardous secondary material must determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

6) Leaks.

A) If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined in subsection (d)(5)(B), a leak is detected.

B) When a leak is detected, it must be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section 721.959.

C) A first attempt at repair (e.g., relapping the seal) must be made no later than five calendar days after each leak is detected.

e) Any pump that is designated, as described in Section 721.964(g)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of subsections (a), (c), and (d) if the pump meets the following requirements:

1) Must have no externally actuated shaft penetrating the pump housing.

2) Must operate with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in Section 721.963(c).

3) Must be tested for compliance with subsection (e)(2) initially upon designation, annually, and at other times as requested by the Agency. The Agency must request any compliance testing at times other than annually in writing to the remanufacturer or other person that stores or treats the hazardous secondary material.

f) If any pump is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a control device that complies with the requirements of Section 721.960, it is exempt from the requirements of subsections (a) through (e).

(Source: Added at 40 Ill. Reg. 11367, effective August 9, 2016)