

WAC 246-244-110 Design, performance, and certification criteria for sealed sources used in downhole operations. (1) Each sealed source, except those containing radioactive material in gaseous form, used in downhole operations shall be certified by the manufacturer, or other testing organization acceptable to the department, to meet the following minimum criteria:

(a) Be of doubly encapsulated construction;
(b) Contain radioactive material whose chemical and physical forms are as insoluble and nondispersible, respectively, as practical; and

(c) Comply with subsection (2), (3), or (4) of this section.

(2) For a sealed source manufactured on or before July 14, 1989, a licensee may use the sealed source for use in well-logging applications if it meets the requirements of USASI N5.10-1968, "Classification of Sealed Radioactive Sources," or the requirements in subsection (3) or (4) of this section.

(3) For a sealed source manufactured after July 14, 1989, a licensee may use the sealed source for use in well-logging applications if it meets the oil-well logging requirements of ANSI/HPS N43.6-1997, "Sealed Radioactive Sources—Classification."

(4) For a sealed source manufactured after July 14, 1989, a licensee may use the sealed source for use in well-logging applications, if—

The sealed source's prototype has been tested and found to maintain its integrity after each of the following tests:

(a) Temperature. The test source must be held at -40°C for twenty minutes, 600°C for one hour, and then be subject to a thermal shock test with a temperature drop from 600°C to 20°C within fifteen seconds.

(b) Impact test. A 5 kg steel hammer, 2.5 cm in diameter, must be dropped from a height of 1 m onto the test source.

(c) Vibration test. The test source must be subject to a vibration from 25 Hz to 500 Hz at 5 g amplitude for thirty minutes.

(d) Puncture test. A 1 gram hammer and pin, 0.3 cm pin diameter, must be dropped from a height of 1 m onto the test source.

(e) Pressure test. The test source must be subject to an external pressure of $1.695\text{E}7$ pascals (24,600 pounds per square inch absolute).

(5) Except those containing radioactive material in gaseous form, in the absence of a certificate from a transferor certifying that an individual sealed source meets the requirements of subsection (1) of this section, the sealed source shall not be put into use until these determinations and testings have been performed and acceptable documented results obtained.

(6) Certification documents shall be maintained for inspection by the department for a period of three years after source disposal. If a source is abandoned downhole, the certification documents shall be maintained until the department authorizes disposition.

(7) The requirements in this section do not apply to energy compensation sources (ECS). ECSs must be registered with the commission under Section 10 C.F.R. 32.210 or with an agreement state.

[Statutory Authority: RCW 70.98.050. WSR 03-12-062, § 246-244-110, filed 6/2/03, effective 7/3/03. Statutory Authority: RCW 43.70.040. WSR 91-02-049 (Order 121), recodified as § 246-244-110, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. WSR 87-01-031 (Order 2450), § 402-38-200, filed 12/11/86.]