

| Nrc Section | Title | State Section | CAT | Summary of Change to CFR | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not Was a Comment Generated |
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| Energy Compensation Sources for Well Logging and Other Regulatory Clarifications – Part 39 (65 FR 20337; April 17, 2000) RATS ID 2000-1 Effective May 17, 2000 | | | | | | | |
| 39.2 | Definitions | 289.253 (c)(1) | B | <p>Section 39.2 is amended by adding definitions, energy compensation source and tritium neutron generator target source to read as follows:</p> <p>Energy compensation source (ECS) means a small sealed source, with an activity not exceeding 3.7 MBq [100 microcuries], used within a logging tool, or other tool components, to provide a reference standard to maintain the tool's calibration when in use. *****</p> <p>Tritium neutron generator target source means a tritium source used within a neutron generator tube to produce neutrons for use in well logging applications. *****</p> | Y | N | Difference is minor punctuation that does not affect the definition. TX regulation essentially identical. No comment generated. |
| 39.15 | Agreement with well owner or operator | 289.253 (cc)(4)(A)(ii) | C | <p>Section 39.15 is amended by revising paragraph (a)(5)(ii) and the introductory text of paragraph (a)(5)(iii) to read as follows:</p> <p>(a) *** (5) *** (ii) A means to prevent inadvertent intrusion on the source, unless the source is not accessible to any subsequent drilling operations; and (iii) A permanent identification plaque,</p> | N | | |

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| | | 289.253 (cc)(6)(A) | | constructed of long lasting material such as stainless steel, brass, bronze, or monel, must be mounted at the surface of the well, unless the mounting of the plaque is not practical. The size of the plaque must be at least 17 cm [7 inches] square and 3 mm [1/8-inch] thick. The plaque must contain-- ***** | Y | N | Meets the essential objective of marking the well with a plaque. |
| 39.35 | Leak testing of sealed sources | 289.201(g)(1)(H) 289.201(g)(1)(E) 289.201(g)(1)(E) 289.201(g)(3) 289.253(i) & 289.201 | C | Section 39.35 is amended by revising paragraphs (b), (c), (d)(1), (e)(1), (e)(4) and (e)(5) to read as follows: ***** (b) Method of testing. The wipe of a sealed source must be performed using a leak test kit or method approved by the Commission or an Agreement State. The wipe sample must be taken from the nearest accessible point to the sealed source where contamination might accumulate. The wipe sample must be analyzed for radioactive contamination. The analysis must be capable of detecting the presence -of 185 Bq [0.005 microcuries] of radioactive material on the test sample and must be performed by a person approved by the Commission or an Agreement State to perform the analysis. (c) Test frequency. (1) Each sealed source (except an energy compensation source (ECS)) must be tested at intervals not to exceed 6 months. In the absence of a certificate from a transferor that a test has been made within the 6 months before the transfer, the sealed source may not be used until tested. (2) Each ECS that is not exempt from | Y Y Y Y | N N N N | Meets the essential objective. Meets the essential objective. Meets the essential objective Meets the essential objective |

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| | | (g)(1) | | testing in accordance with paragraph (e) of this section must be tested at intervals not to exceed 3 years. In the absence of a certificate from a transferor that a test has been made within the 3 years before the transfer, the ECS may not be used until tested. | Y | N | Meets the essential objective |
| | | 289.253 (i)(2) & 289.201(g) | | (d) Removal of leaking source from service. (1) If the test conducted pursuant to paragraphs (a) and (b) of this section reveals the presence of 185 Bq [0.005 microcuries] or more of removable radioactive material, the licensee shall remove the sealed source from service immediately and have it decontaminated, repaired, or disposed of by an NRC or Agreement State licensee that is authorized to perform these functions. The licensee shall check the equipment associated with the leaking source for radioactive contamination and, if contaminated, have it decontaminated or disposed of by an NRC or Agreement State licensee that is authorized to perform these functions. ***** (e) *** (1) Hydrogen-3 (tritium) sources; ***** | Y | Y | ✓ Does not address the requirement to ensure that equipment associated with the use of the source are checked for contamination. Comment generated. |
| | | 289.201(g) (5) & (6) | | ✓ (4) Sources of beta- or gamma-emitting radioactive material with an activity of 3.7 MBq [100 microcuries] or less; and (5) Sources of alpha- or neutron-emitting radioactive material with an activity of 0.37 MBq [10 microcuries] or less. | | | |

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| | | ✓ 289.201(g) (2) | | | Y | N | Meets the essential objective |
| 39.41 | Design and performance criteria for sources | 289.253(l)(1)(A) 289.253(l)(1)(B) 289.253(l) 289.253(l)(1)(C)(i) 289.253(l)(| B | <p>Section 39.41 is revised to read as follows:</p> <p>(a) A licensee may use a sealed source for use in well logging applications if --</p> <p>(1) The sealed source is doubly encapsulated;</p> <p>(2) The sealed source contains licensed material whose chemical and physical forms are as insoluble and nondispersible as practical; and</p> <p>(3) Meets the requirements of paragraph (b), (c), or (d) of this section.</p> <p>(b) 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 paragraph (c) or (d) of this section.</p> <p>(c) 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."</p> <p>(d) For a sealed source manufactured after July 14, 1989, a licensee may use</p> | Y Y Y Y Y | N N N N N | <p>✓ Added the word "construction". Essentially identical</p> <p>Uses the word "radioactive" instead of "licensed". Essentially identical</p> <p>TX regulations list the criteria for well logging sources. Essentially identical.</p> <p>Meets the objective of requiring sources to meet the standard</p> <p>Meets the objective of requiring sources to meet the standard</p> |

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| | | 1)(C)(ii) | | the sealed source, for use in well logging applications, if-- | | | |
| | | 289.253(l)(1)(C)(iii) | | (1) The sealed source's prototype has been tested and found to maintain its integrity after each of the following tests: (i) Temperature. The test source must be held at -40 deg. C for 20 minutes, 600 deg. C for 1 hour, and then be subject to a thermal shock test with a temperature drop from 600 deg. C to 20 deg. C within 15 seconds. | Y | N | Meets the objective of testing the prototype |
| | | 289.253(l)(1)(C)(iii)(I) | | (ii) 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. | Y | N | Uses "shall" instead of "must". Essentially identical |
| | | 289.253(l)(1)(C)(iii)(II) | | (iii) Vibration test. The test source must be subject to a vibration from 25 Hz to 500 Hz at 5 g amplitude for 30 minutes. | Y | N | Uses "shall" instead of "must". Essentially identical |
| | | 289.253(l)(1)(C)(iii)(III) | | (iv) 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. | Y | N | 5 g amplitude equals five times the acceleration of gravity. Essentially identical. |
| | | 289.253(l)(1)(C)(iii)(IV) | | (v) Pressure test. The test source must be subject to an external pressure of 1.695×10^7 pascals [24,600 pounds per square inch absolute]. | Y | N | Uses "shall" instead of "must". Essentially identical |
| | | | | (e) The requirements in paragraphs (a), (b), (c), and (d) of this section do not apply to sealed sources that contain licensed material in gaseous form. | Y | N | Uses "shall" instead of "must" and added words "without leakage". Essentially identical |
| | | | | (f) The requirements in paragraphs (a), (b), (c), and (d) of this section do not apply to energy compensation sources (ECS). ECSs must be registered with the Commission under Sec. 32.210 of this chapter or with an Agreement State. | Y | N | Meet the objective by |


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| | | 289.253(l)(1)(C)(iii)(V) | | | Y | N | exempting gaseous form. |
| | | 289.253(l)(2) | | | Y | Y | Does not include requirement that ECS be registered. Comment generated. |
| | | 289.253(l)(3) | | | | | |
| 39.49 | Uranium sinker bars | 289.253(x) | C | <p>Section 39.49 is revised to read as follows:</p> <p>The licensee may use a uranium sinker bar in well logging applications only if it is legibly impressed with the words "CAUTION--RADIOACTIVE-DEPLETED URANIUM" and "NOTIFY CIVIL AUTHORITIES (or COMPANY NAME) IF FOUND."</p> | Y | N | Meets essential objective |
| 39.53 | Energy compensation source | 289.253(y) | C | <p>Section 39.53 is added to read as follows:</p> <p>The licensee may use an energy compensation source (ECS) which is contained within a logging tool, or other tool components, only if the ECS contains quantities of licensed material not exceeding 3.7 MBq [100 microcuries].</p> <p>(a) For well logging applications with a surface casing for protecting fresh water aquifers, use of the ECS is only subject to the requirements of Secs. 39.35, 39.37 and 39.39.</p> <p>(b) For well logging applications</p> | Y | Y | <p>289.253(c)(1) limits the activity in an ECS by definition.</p> <p>289.253(dd)(4)(A) requires licensees to have procedures for the handling and use of sources in wells without surface casing for protecting fresh water aquifers. However, the TX regulations do not address requirements based on whether surface casing is used or not. Comment generated.</p> |

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| | | | <p>(ii) That the licensee implemented abandonment before receiving NRC approval because the licensee believed there was an immediate threat to public health and safety; and *****</p> <p>(d) ***</p> <p>(9) The immediate threat to public health and safety justification for implementing abandonment if prior NRC approval was not obtained in accordance with paragraph (c)(1)(ii) of this section; *****</p> | | | |

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| <p>New Dosimetry Technology – Parts 34, 36, 39 (65 FR 63749, October 24, 2000; 66 FR 1573, January 9, 2001) RATS ID 2000-2 Effective January 8, 2001</p> | | | | | | | |
| 34.47 | Personnel monitoring | 289.255(q)(2)(A)(i) and 289.202(p)(3) | C | <p>In Sec. 34.47, the introductory text of paragraph (a), and paragraphs (a)(2), (a)(3), (a)(4), (d), (e), and (f) are revised to read as follows:</p> <p>(a) The licensee may not permit any individual to act as a radiographer or a radiographer's assistant unless, at all times during radiographic operations, each individual wears, on the trunk of the body, a direct reading dosimeter, an operating alarm ratemeter, and a personnel dosimeter that is processed and evaluated by an accredited National Voluntary Laboratory Accreditation Program (NVLAP) processor. At permanent radiography installations where other appropriate alarming or warning devices are in routine use, the wearing of an alarming ratemeter is not required. *****</p> <p>(2) Each personnel dosimeter must be assigned to and worn only by one individual.</p> <p>(3) Film badges must be replaced at periods not to exceed one month and other personnel dosimeters processed and evaluated by an accredited NVLAP processor must be replaced at periods not to exceed three months.</p> <p>(4) After replacement, each personnel dosimeter must be processed as soon as possible *****</p> <p>(d) If an individual's pocket chamber is</p> | Y | N | Meets the essential objectives. |

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| 34.47 (cont'd) | | | | <p>found to be off-scale, or if his or her electronic personal dosimeter reads greater than 2 millisieverts (200 millirems), and the possibility of radiation exposure cannot be ruled out as the cause, the individual's personnel dosimeter must be sent for processing within 24 hours. In addition, the individual may not resume work associated with licensed material use until a determination of the individual's radiation exposure has been made. This determination must be made by the RSO or the RSO's designee. The results of this determination must be included in the records maintained in accordance with Sec. 34.83.</p> <p>(e) If the personnel dosimeter that is required by paragraph (a) of this section is lost or damaged, the worker shall cease work immediately until a replacement personnel dosimeter meeting the requirements in paragraph (a) is provided and the exposure is calculated for the time period from issuance to loss or damage of the personnel dosimeter. The results of the calculated exposure and the ime period for which the personnel dosimeter was lost or damaged must be included in the records maintained in accordance with Sec. 34.83.</p> <p>(f) Dosimetry reports received from the accredited NVLAP personnel dosimeter processor must be retained in accordance with Sec. 34.83.</p> <p>*****</p> | | | |
| 34.83 | Records of personnel | 289.255(q) (6)(B) and | C | <p>*****</p> <p>(c) Personnel dosimeter results</p> | Y | N | Meets the essential objectives |

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| | monitoring procedures | 289.255(w) (8)(D) | | <p>received from the accredited NVLAP processor until the Commission terminates the license.</p> <p>(d) Records of estimates of exposures as a result of: off-scale personal direct reading dosimeters, or lost or damaged personnel dosimeters until the Commission terminates the license.</p> | | | |
| 36.55 | Personnel monitoring | | D | <p>In Sec. 36.55, paragraph (a) is revised to read as follows:</p> <p>(a) Irradiator operators shall wear a personnel dosimeter that is processed and evaluated by an accredited National Voluntary Laboratory Accreditation Program (NVLAP) processor while operating a panoramic irradiator or while in the area around the pool of an underwater irradiator. The personnel dosimeter processor must be accredited for high energy photons in the normal and accident dose ranges (see 10 CFR 20.1501(c)). Each personnel dosimeter must be assigned to and worn by only one individual. Film badges must be processed at least monthly, and other personnel dosimeters must be processed at least quarterly.</p> <p>*****</p> | N/A | | Not reviewed |
| 36.81 | Records and retention periods. | | D | <p>In Sec. 36.81, paragraph (e) is revised to read as follows:</p> <p>*****</p> <p>(e) Evaluations of personnel dosimeters required by Sec. 36.55</p> | N/A | | Not included in the State's proposed rulemaking package. |

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| | | | | until the Commission terminates the license. ***** | | | |
| 39.65 | Personnel monitoring | 289.253(q) 289.253(q)(1) 289.253(q)(2) | Category C for paragraph (a) and Category D for paragraph (c) (2) | <p>In Sec. 39.65, paragraphs (a) and (c) are revised to read as follows:</p> <p>(a) The licensee may not permit an individual to act as a logging supervisor or logging assistant unless that person wears, at all times during the handling of licensed radioactive materials, a personnel dosimeter that is processed and evaluated by an accredited National Voluntary Laboratory Accreditation Program (NVLAP) processor. Each personnel dosimeter must be assigned to and worn by only one individual. Film badges must be replaced at least monthly and other personnel dosimeters replaced at least quarterly. After replacement, each personnel dosimeter must be promptly processed. *****</p> <p>(c) The licensee shall retain records of personnel dosimeters required by paragraph (a) of this section and bioassay results for inspection until the Commission authorizes disposition of the records.</p> | Y | N |  <p>Uses the term "individual monitoring device" in place of "personnel dosimeter." Specifies a time when personnel dosimeters are to be processed. Meets the essential objectives.</p> |