

known as the supply management-settlement fund. It shall deposit into the fund all amounts deducted pursuant to § 1306.3(e) of this chapter and the amount subtracted under § 1309.2(e). It shall pay from the fund all amounts due producers pursuant to § 1309.4 and the amount added pursuant to § 1309.2(c);

(b) All amounts subtracted under § 1309.2(e), including interest earned thereon, shall remain in the supply management-settlement fund as an obligated balance until it is withdrawn for the purpose of effectuating § 1309.2(c);

(c) The compact commission shall place all monies subtracted under § 1306.3(e) of this chapter and § 1309.2(e) in an interest-bearing bank account or accounts in a bank or banks duly approved as a Federal depository for such monies, or invest them in short-term U.S. Government securities.

#### § 1309.4 Payment to producers of supply management refund.

(a) All producers who are qualified pursuant to § 1309.1 shall become eligible to receive payment of the supply management refund computed pursuant to § 1309.2 by submitting to the compact commission documentation that the producer milk production during the refund year is less than or the increase is not more than 1% of the milk production of the preceding calendar year. Such documentation shall be filed with the commission not later than 45 days after the end of the calendar year.

(b) The commission will make payment to all producers qualified pursuant to § 1309.1 and eligible pursuant to paragraph (a) of this section in the following manner:

(1) A per farm payment computed by dividing the amount subtracted pursuant to § 1309.2(b) by the total eligible producers; and

(2) The value determined by multiplying the supply management refund price computed pursuant to § 1309.2(e) by the producer's reduced milk pounds.

Date: April 12, 1999.

**Kenneth M. Becker,**

*Executive Director.*

[FR Doc. 99-9521 Filed 4-16-99; 8:45 am]

BILLING CODE 1650-01-P

## NUCLEAR REGULATORY COMMISSION

### 10 CFR Part 39

RIN 3150-AG14

#### Energy Compensation Sources for Well Logging and Other Regulatory Clarifications

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Proposed rule.

**SUMMARY:** The Nuclear Regulatory Commission (NRC) is proposing to amend its regulations governing licenses and radiation safety requirements for well logging. The proposed rule would modify NRC regulations dealing with: low activity energy compensation sources; tritium neutron generator target sources; specific abandonment procedures in the event of an immediate threat; changes to requirements for inadvertent intrusion on an abandoned source; the codification of an existing generic exemption; the removal of an obsolete date; and updating regulations to be consistent with the Commission's metrication policy. The proposed amendments are necessary to reflect developments that have occurred in well logging technology since the existing regulations were adopted.

**DATES:** The comment period expires July 5, 1999. Comments received after this date will be considered if it is practical to do so, but the Commission is able to assure consideration only for comments received on or before this date.

**ADDRESSES:** Send comments by mail or addressed to the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. Attention: Rulemakings and Adjudications Staff.

Hand-deliver comments to: 11555 Rockville Pike, Rockville, Maryland, between 7:30 am and 4:15 pm on Federal workdays.

You may also provide comments via the NRC's interactive rulemaking web site through the NRC home page (<http://www.nrc.gov>). From the NRC home page, select "Rulemaking" from the tool bar. The interactive rulemaking website can then be accessed by selecting "Rulemaking Forum." This site provides the availability to upload comments as files (any format), if your web browser supports that function. For information about the interactive rulemaking site, contact Ms. Carol Gallagher, (301) 415-5905; e-mail [CAG@nrc.gov](mailto:CAG@nrc.gov).

Certain documents related to this rulemaking, including comments received and the environmental

assessment and finding of no significant impact, may be examined at the NRC Public Document Room, 2120 L Street NW., (Lower Level), Washington, DC. These same documents also may be viewed and downloaded electronically via the interactive rulemaking website established by NRC for this rulemaking.

#### FOR FURTHER INFORMATION CONTACT:

Mark Haisfield, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone (301) 415-6196, e-mail [MFH@nrc.gov](mailto:MFH@nrc.gov).

**SUPPLEMENTARY INFORMATION:** The Nuclear Regulatory Commission is proposing to amend its regulations to acknowledge and accommodate the use of well logging technology that has been developed since the NRC issued the current well logging regulations (March 17, 1987; 52 FR 8234). This new technology allows licensees to lower a logging tool down a well at the same time that the hole for the well is being drilled instead of requiring drilling to stop, removing drilling pieces, and lowering a logging tool down the well. This technology is commonly referred to as "logging while drilling." This process uses a relatively small radioactive source within the logging tool in addition to the larger radioactive sources currently used in logging a well. The existing regulations were based on the use of larger radioactive sources. These regulations include provisions which are unnecessary and potentially burdensome for the additional small sources. The proposed changes would have no significant impact on public health and safety and the environment while reducing potential burdens to licensees. Licensees would no longer need to comply with unnecessary regulatory requirements for these small sources or to request licensing exemptions from the NRC for actions dealing with these small sources. Other changes are also being proposed to improve, clarify, and update well logging regulations to reduce confusion. These changes may also reduce the need for licensees to request exemptions from unnecessary requirements.

#### Introduction

Oil and gas come from accumulations in the pore spaces of reservoir rocks (usually sandstone, limestone, or dolomites) and are removed via a well. Because the amount of oil and gas in these pore spaces is dependent upon the rock's characteristics, the oil and gas industry often needs to determine the characteristics of underground formations to predict the commercial viability of a new or existing well.

Licensed radioactive materials are used to obtain information on certain properties of an underground formation, such as type of rock, porosity, hydrocarbon content, and density. These properties are important in the evaluation of oil and gas reservoirs.

One method to obtain information about oil and gas reservoirs is by using well logging tools. Licensed radioactive materials (sealed radioactive sources with associated radiation detectors) are contained in well logging tools. Americium-241 and cesium-137 are the radioactive materials most frequently used for this purpose. Traditionally, these tools are lowered into a well on a wireline. The depth of the well could range from several hundred feet to greater than 30,000 feet. Information collected by the detectors is sent to the surface through the wireline and plotted on a chart as the logging tool is slowly raised from the bottom of the well. Licensed radioactive materials are also used for similar purposes in coal and mineral exploration.

The licensing and radiation safety requirements for well logging are provided in 10 CFR part 39. When the regulations for well logging were promulgated in 1987 (52 FR 8225, March 17, 1987), the well logging process required drilling to stop while parts of the drilling pieces were removed before lowering a logging tool down a well. More recent technology, referred to as logging while drilling (LWD), allows well logging to be accomplished during drilling. This technology employs an additional low activity radioactive source within the well logging tool known as an energy compensation source, or ECS. The ECS is used to calibrate the well logging tool while the well is being drilled.

LWD provides real time data during drilling operations. It has also provided the ability for improved evaluation of geologic formations and can reduce drilling costs. The real-time information can aid in decision making because formation evaluation can be planned as soon as the drill bit reaches a formation.

### Background

Based on the changing technology in the well logging industry, the NRC developed a Rulemaking Plan to consider the need to update 10 CFR part 39. On May 28, 1997, the NRC provided a draft Rulemaking Plan entitled, "Energy Compensation Sources for Well Logging and Clarifications—Changes to 10 CFR part 39" to the Agreement States for their comment. The draft Rulemaking Plan was contained in SECY-97-111, also dated May 28, 1997. Comments were received from the

States of Utah, Illinois, and Washington. These States generally supported the proposal and provided specific information and comments. Where appropriate, these comments were incorporated into the final Rulemaking Plan which was contained in SECY-98-105, dated May 12, 1998.

In the final Rulemaking Plan, the NRC proposed to modify the existing regulations in 10 CFR part 39 to account for the newer technology. The changes would reduce regulatory burden on NRC and Agreement State licensees with no significant impact to public health and safety. In addition, there are other sections within 10 CFR part 39 that should be changed to improve, clarify, and update the regulations. The final Rulemaking Plan provides the rationale used in the development of this proposed rule.

### Proposed Regulatory Action

The NRC is proposing seven specific changes to improve, clarify, and update the requirements in 10 CFR part 39.

1. The principal objective of the proposed rulemaking is to amend 10 CFR part 39 to accommodate the radioactive ECSs that are now used in some well logging applications. The ECS is a low activity source, typically less than 1.85 MBq (50 microcuries), compared to the normal 110 GBq to 740 GBq (3 to 20 curies) sources used in well logging. Because this is an emerging technology, 10 CFR part 39, originally promulgated in 1987, does not provide any specific provisions for these low activity sources. Many of the requirements in 10 CFR part 39, when applied to an ECS, are not appropriate or necessary to protect public health and safety and the environment. Therefore, the NRC believes the regulations should be changed.

Because the existing regulations do not allow for variations based on the activity of the source, licensees who use an ECS must meet all the requirements for larger sources found in 10 CFR part 39. Examples of requirements which are overly burdensome for licensees using ECSs include those addressing well abandonment (§§ 39.15 and 39.77), leak testing (§ 39.35), design and performance criteria for sealed sources (§ 39.41), and monitoring of sources lodged in a well (§ 39.69). The NRC is proposing that only those sections dealing with leak testing (a proposed revised § 39.35 specifically addresses ECSs), physical inventory (§ 39.37), and records of material use (§ 39.39) should apply to the use of an ECS.

Oil and gas wells use a surface casing to protect fresh water aquifers. However, if a surface casing is not used, the NRC

would retain the well abandonment requirements. Requirements established in other parts of NRC regulations (e.g., 10 CFR parts 20, 30, 40, and 70) would still apply to the possession and use of licensed material and are adequate to protect public health and safety and the environment.

Therefore, the NRC is proposing to amend 10 CFR part 39 to accommodate the use of an ECS in well logging and to provide requirements governing its use. These provisions would include radioactivity limits on the ECS and leak testing requirements. The most significant change would exclude an ECS from the costly procedures for well abandonment in the event an ECS is lost within the well. Current requirements for well abandonment, in addition to specific reporting and approval requirements, require the source to be immobilized and sealed in place with a cement plug which must be protected from inadvertent intrusion, and the mounting of a permanent plaque at the surface of the well. In the draft Regulatory Analysis (RA) conducted for this proposed rule, a survey of ECS users indicated that about eight ECSs are abandoned per year. Although estimated abandonment costs varied significantly by survey respondent, the estimated savings to the industry to avoid eight abandonments per year is \$5 million.

The NRC is proposing to establish 3.7 MBq (100 microcuries) as the limit for an ECS. Current ECSs typically use up to 1.85 MBq (50 microcuries) of americium-241 (cesium-137 sources are smaller). The 3.7 MBq (100 microcuries) limit would allow licensees flexibility in designing new sources of this kind while maintaining their radioactivity within an environmentally safe level. In addition, the sources would be required to be registered pursuant to 10 CFR 32.210 as ECSs for use in well logging applications. These sources would not be required to meet the requirements in § 39.41. However, they would be expected to meet the general requirements for calibration sources as established in American National Standard Institute (ANSI) standards.

Because ECSs are used for logging oil and gas wells, they use surface casings to protect fresh water aquifers. Hence, the only potential exposure hazard these sources would present is to workers, and worker exposure could only occur if an ECS were ruptured. If ruptured, workers could be exposed to the radionuclide through ingestion or by absorption through the skin. However, if the source were ruptured, it would be contained within hundreds to thousands of cubic feet of drilling mud

which also contains hazardous chemicals and is controlled and monitored to protect workers as part of drilling operations.

The draft Environmental Assessment (EA) conducted for this proposed rulemaking demonstrates that there would be no significant impact to public health and safety or the environment resulting from this amendment. The EA evaluated a worst case scenario of a 3.7 MBq (100 microcuries) source ruptured by a drill bit and brought to the surface in the drilling mud. The most significant exposure from this scenario would be from ingestion of the drilling mud. The most dangerous radionuclide considered for this worst case scenario was curium-250. This radionuclide was used because the rule, as proposed, does not restrict the radionuclide used for ECS sources. Also, the scenario involved a source twice as large as any in current use. For this worst case scenario, the estimated dose would be about 56 millirem, which is below the Federal annual dose limit to an individual member of the public of 0.1 rem (100 millirem) or 1 millisievert (see 10 CFR 20.1301). For a 3.7 MBq (100 microcuries) source of americium or cesium (the actual radionuclides used, but with larger activity) the estimated dose would be less than 3 millirem and 1 millirem respectively. Therefore, the NRC believes that eliminating potential costly requirements for these sources, in the event that such sources become unretrievable, would not impact public health and safety or the environment.

Section 39.35 specifies leak testing requirements for sealed sources. Because of the small amount of radioactive material in an ECS (by definition less than 3.7 MBq (100 microcuries)) less specific leak testing requirements are being proposed for ECSs. Also, the ECS is contained within a logging tool that is designed to withstand significant stress and pressure. The ECS is mounted inside a steel pressure housing in the interior of the logging tool, thereby providing additional encapsulation to protect the ECS from operational impacts. The NRC believes that it is unnecessary and overly burdensome to require that drilling operations stop because an ECS has exceeded the current 6-month time interval requirement to be leak tested. The draft Regulatory Analysis conducted for this proposed rulemaking surveyed a sample of the drilling industry to determine a normal maintenance period at which time a licensee would take a logging tool out of service for routine maintenance or other servicing. The NRC believes this maintenance period would be an

appropriate time to conduct any necessary leak testing on an ECS. Although the survey results varied, these tools generally receive some type of out-of-field servicing every 18 months.

Based on this information and the NRC's belief that ECSs should normally only be leak tested during normal maintenance or when a logging tool is out of service for other repairs, the NRC is requiring that a leak test be performed at a minimum of every three years. This requirement should not be a burden for licensees if the logging tool is being properly maintained and, in fact, should provide licensees some flexibility. This is also consistent with an extended leak test frequency that has been established by license conditions for certain other sealed sources and devices.

Many ECSs are already exempt from all leak testing requirements. Section 39.35 exempts all beta or gamma emitting radioactive material with an activity of 3.7 MBq (100 microcuries) or less. Because cesium-137 is a beta/gamma emitter, all of these types of ECSs are already exempt from the existing leak testing requirements in § 39.35.

2. The NRC is proposing to revise 10 CFR part 39 requirements for tritium neutron generator target sources. Tritium neutron generators help determine the porosity of the reservoir rock formation, which indicates the amount of liquid in the reservoir and the reservoir's permeability. Tritium neutron generator target sources are not used in logging while drilling tools. These sources are used in the more traditional well logging procedure where drilling is stopped and the tool is lowered downhole. Because tritium neutron generator target sources produce a significant neutron stream only when a voltage is applied, tritium neutron generator target sources are less hazardous than the typical americium or cesium sources currently being used in well logging applications.

For well logging applications, the NRC is proposing that tritium neutron generator target sources be subject to the requirements of 10 CFR part 39 except for the sealed source design and performance criteria (§ 39.41), and the well abandonment procedures (§§ 39.15 and 39.77) when a surface casing is used to protect fresh water aquifers, a practice that is standard for oil and gas wells. The potential hazard of these sources when a surface casing is used does not warrant the existing requirements for well abandonment in the event that the source becomes lost. The design and performance criteria associated with sealed sources for well

logging were not intended for tritium neutron generator target sources. However, 10 CFR part 39 does not make this intent or distinction clear.

The NRC is proposing to establish 1,110 GBq (30 curies) of tritium as the limit for a tritium neutron generator target source. Current tritium neutron generator target sources typically contain less than 740 GBq (20 curies) of tritium. The 1,110 GBq (30 curies) limit would allow licensees flexibility in designing new sources of this type while maintaining their radioactivity within an environmentally safe level.

When these sources are used for logging oil and gas wells, a surface casing is used to protect fresh water aquifers. The only exposure hazard these sources present are to workers and worker exposure could only occur if such sources were ruptured and the tritium was ingested. If a tritium source were ruptured, it would be contained within hundreds to thousands of cubic feet of drilling mud. As mentioned, this drilling mud contains hazardous chemicals and is controlled and monitored as part of drilling operations.

The draft EA conducted for this proposed rulemaking demonstrates that there would be no significant impact to public health and safety or the environment resulting from this change. The draft EA evaluated the worst case scenario of a 1,110 GBq (30 curies) tritium source ruptured by a drill bit and brought to the surface in the drilling mud. The most significant exposure would be through ingestion of this drilling mud. For this worst case scenario, the estimated dose would be 14 millirem, which is well below the Federal annual dose limit to an individual member of the public of 100 millirem or 1 millisievert (see 10 CFR 20.1301). Therefore, the NRC believes that eliminating potential costly requirements for these sources, in the event that such sources become unretrievable, would not impact public health and safety or the environment.

3. Section 39.77 provides the requirements for notification and procedures for abandoning irretrievable well logging sources. This section specifies that the NRC must approve implementation of abandonment procedures before abandonment. In some circumstances, such as high well pressures that could lead to fires or explosions, the delay required to notify NRC could cause an immediate threat to public health and safety. The NRC believes that this section should be modified to allow licensees to use their judgement to abandon a well immediately, without prior NRC approval, if the licensee believes a delay

could cause such a non-radiological threat. This modification would allow licensees greater procedural latitude. In the proposed rule, the language has been modified to allow licensees to notify the NRC and justify the need for an immediate abandonment after the fact.

4. Section 39.15 provides requirements for abandoning irretrievable sealed sources. The NRC believes that this section should be modified to provide performance-based criteria for inadvertent intrusion on the source. This modification would allow licensees greater procedural latitude while continuing to ensure source integrity. The current requirements may be more restrictive than is necessary to protect an abandoned source, depending upon the individual well abandonment. For example, if a significant amount of drilling equipment is abandoned with the well, the equipment itself may be effective in preventing inadvertent intrusion on the source. However, the abandoned equipment would not meet the current requirements of § 39.15. Paragraph (a)(5)(ii) of § 39.15 has prescriptive requirements for irretrievable well logging sources, specifying the use of a mechanical device to prevent inadvertent intrusion on the source, at a specific location within the abandoned well.

The NRC is proposing that licensees "prevent inadvertent intrusion on the source." This would require that the source be protected but allow licensees the flexibility to determine the best method. The proposed change would not affect the requirement in § 39.15(a)(5)(i) that a well logging source be immobilized with a cement plug or the requirement in § 39.15(a)(5)(iii) that a permanent identification plaque be mounted at the surface of the well.

5. Two changes are being proposed for § 39.41, "Design and performance criteria for sealed sources." The first would incorporate within NRC regulations an existing generic exemption for sealed sources that were manufactured before 1989 and met older standards. The second would add an optional acceptable standard by referencing oil-well logging requirements in ANSI/HPS N43.6-1997. The existing requirements would also remain as an option within this section.

The NRC issued a generic exemption from the current design and performance criteria for sealed sources in 1989. This exemption allows the use of older sealed sources which were not tested against the current criteria, but which were tested in accordance with an earlier standard used for well logging sources. This exemption is currently in

practice, but is not included in 10 CFR part 39. The NRC is proposing to modify the regulations to include this existing generic exemption within 10 CFR part 39.

Sealed sources that were manufactured before July 14, 1989, may use design and performance criteria from the United States of America Standards Institute (USASI) N5.10-1968, "Classification of Sealed Radioactive Sources" or the criteria in § 39.41. The use of the USASI standard is based on an NRC Notice of Generic Exemption published on July 25, 1989 (54 FR 30883). NRC regulations have not incorporated the USASI N5.10-1968 requirements for older sealed sources. The primary difference between the USASI standard and the existing requirements is that the existing requirements includes a vibration test that is consistent with current national standards. The USASI standard considered a vibration test and concluded that, to pass the other requirements, the source would be so rugged there was no reason to include a vibration test.

The exemption allowing the use of the USASI standard was intended to avoid a situation in which well logging licensees might be unnecessarily forced out of business and have to dispose of their sources. This situation could arise because the original source manufacturers tested against the USASI standard, but did not retest these sources against the standards that became effective in 1989. The NRC determined that those sealed source models meeting the USASI standard would not adversely affect public health and safety. These sources had been used for years in operational situations and had demonstrated through actual use that vibration from drilling operations had not caused failure. The survey of licensees conducted for the RA and EA for this proposed rulemaking confirmed that these older sources have not presented a problem during actual use. Therefore, the NRC is proposing to codify within this section the existing practice to use, as an option, the USASI standards for sealed sources that were manufactured before July 14, 1989. Because many of these older sealed sources contain radioactive material with half-lives that allow their continued use (i.e., americium-241 and cesium-137 have half-lives of 458 and 30 years respectively), this modification to the regulations is appropriate.

However, a vibration test has been included in ANSI standards since 1977, and by existing NRC regulations which were promulgated in 1987. Based on survey information done for this

rulemaking, it is estimated that the cost to test a source to see if it meets the vibration requirement in § 39.41 is \$2,400. Only the prototype for each design requires testing. The number of prototype designs each year is small. The only survey respondent on this topic indicated that they produce, at most, one new prototype per year and they did not indicate that vibration testing is burdensome. The NRC believes that the cost for vibration testing is not overly burdensome and is consistent with (1) ANSI N542-1977, "Sealed Radioactive Sources, Classification," published by the National Bureau of Standards [(NBS) currently the National Institute of Standards and Technology] in the 1978 NBS Handbook 126 and (2) ANSI/HPS N43.6-1997, "Sealed Radioactive Sources—Classification" approved in November 1997. ANSI/HPS N43.6-1997 is the revised update to ANSI N542-1977. However, the oil-well logging requirements have not changed between the two ANSI standards and the NRC has decided to retain the current requirements for vibration testing.

The second proposed change to this section is to meet Public Law 104-113, "National Technology and Transfer Act of 1995" and Office of Management and Budget Circular A-119, "Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities." This law encourages agencies to use "voluntary consensus standards" (i.e., standards developed by a voluntary consensus body and made available to all interested parties). The existing NRC requirements are based on the older ANSI N542-1977 standard, and allow licensees flexibility in determining how to conduct testing and ensuring integrity of the source. The NRC is proposing to add an optional method of meeting the design requirements by referencing the newer, current ANSI standard (ANSI/HPS N43.6-1997) within 10 CFR part 39. Although the current NRC requirements and ANSI/HPS N43.6-1997 are quite similar, the NRC does not want to eliminate the ability to meet the existing NRC regulatory requirements; that could result in a problem similar to that experienced in 1989. That is, existing approved sealed sources might not have been tested or evaluated exactly as specified in ANSI/HPS N43.6-1997, which could result in well logging licensees having to dispose of acceptable sealed sources.

The NRC is inviting public comment on whether adding this voluntary consensus standard (ANSI/HPS N43.6-1997) to 10 CFR part 39 is appropriate

for use by manufacturers of sealed sources for use in well logging.

6. For clarity and to avoid confusion, the NRC is proposing to update § 39.49 because it contains a date that has passed and is no longer appropriate. This section would be amended to remove the obsolete date.

7. The NRC is proposing to update §§ 39.15, 39.35, and 39.41 to conform with the agency's metrification policy published on June 19, 1996 (61 FR 31169) by stating parameter values in dual units with International System of Units (SI) first and with English units in brackets.

#### Specific Changes in Regulatory Text

The following section is provided to assist the reader regarding the specific changes made to each section or paragraph in 10 CFR part 39. For clarity and content, a substantial portion of a particular section or paragraph may be repeated, while only a minor change is being made. This approach will allow the reader to effectively review the specific changes without cross-reference to existing material that has been included for content, but has not been significantly changed.

Section 39.2: Two new definitions are being added for ECS and tritium neutron generator target source.

Section 39.15(a)(5)(ii): This is being revised to allow a more performance-based approach to prevent inadvertent intrusion on an abandoned source.

Section 39.15(a)(5)(iii): This is being revised to meet the NRC's metrification policy.

Section 39.35(b): This is being revised to meet the NRC's metrification policy.

Section 39.35(c)(1): This essentially repeats the existing paragraph on leak testing frequency, but notes that ECSs are not included in this paragraph.

Section 39.35(c)(2): This is a new paragraph allowing a 3 year leak testing interval for ECSs.

Section 39.35(d): This is being revised to meet the NRC's metrification policy.

Section 39.35(e)(1): This is an editorial change to indicate that hydrogen-3 and tritium are the same.

Sections 39.35(e)(4) and (5): This is being revised to meet the NRC's metrification policy.

Section 39.41 has been significantly revised as described below:

Section 39.41(a): This is a new paragraph describing the applicable requirements for a sealed source which includes requirements from the existing § 39.41(a)(1) and (2).

Section 39.41(b): This is a new paragraph to allow pre-1989 sources to meet USASI standards.

Section 39.41(c): This is a new paragraph providing for the use of current ANSI standards.

Section 39.41(d): This is the existing § 39.41(a)(3).

Section 39.41(d)(1)(v): This is being revised to meet the NRC's metrification policy (the old § 39.41(a)(3)(v)).

Section 39.41(e): This is the old § 39.41(b) and is edited to be consistent with the above changes.

Section 39.41(f): This is a new paragraph clarifying that this section does not apply to ECSs.

Section 39.49: This is being revised to eliminate an obsolete date.

Section 39.53: This is a new section providing requirements for ECSs.

Section 39.55: This is a new section providing requirements for tritium neutron generator target sources.

Sections 39.77(c)(1)(i) and (ii): This is being revised to allow an option to immediately abandoning a well without receiving prior NRC approval when the licensee believes there is an immediate threat to public health and safety.

Section 39.77(d)(9): This is a new paragraph requiring the licensee to justify in writing why it was necessary to immediately abandon a well without prior NRC approval.

#### Compatibility of Agreement State Regulations

The compatibility of the provisions in 10 CFR part 39 have been determined in accordance with the NRC's "Statement of Principle and Policy for the Agreement State Program; Policy Statement on Adequacy and Compatibility of Agreement State Programs" that was published on September 3, 1997 (62 FR 46517). The NRC is adding definitions for an "Energy compensation source" and a "Tritium neutron generator target source" to § 39.2 and adding two new sections to 10 CFR part 39. The definitions for an ECS and a tritium neutron generator target source are assigned Compatibility Category B. The new § 39.53, *Energy compensation source*, and § 39.55, *Tritium neutron generator target source*, are assigned Compatibility Category C. The NRC is not proposing compatibility changes for those sections of 10 CFR Part 39 that are being modified. The present Compatibility Categories for the modified sections are: Section 39.41, Compatibility Category B; §§ 39.15, 39.35, 39.49, 39.77(c) and (d), Compatibility Category C.

Specific information about the NRC's Compatibility Policy and the levels of compatibility assigned to the present rule may be found at the Special Documents area of the Office of State

Program's Web site, <http://www.hsrc.ornl.gov/nrc/home.html>.

#### Plain Language

The Presidential Memorandum dated June 1, 1998, entitled, "Plain Language in Government Writing," directed that the Federal government's writing be in plain language. The NRC requests comments on the proposed rule specifically with respect to the clarity and effectiveness of the language used. Comments should be sent to the address listed above.

#### Finding of No Significant Environmental Impact: Availability

The Commission has determined under the National Environmental Policy Act of 1969, as amended, and the Commission's regulations in subpart A of 10 CFR part 51, that this rule, if adopted, would not be a major Federal action significantly affecting the quality of the human environment, and therefore, an environmental impact statement is not required. The proposed rule would modify NRC regulations dealing with: (1) Low activity energy compensation sources; (2) tritium neutron generator target sources; (3) specific abandonment procedures in the event of an immediate threat; (4) changes to requirements for inadvertent intrusion on an abandoned source; (5) the codification of an existing generic exemption; (6) the removal of an obsolete date; and (7) updating 10 CFR Part 39 to be consistent with the Commission's metrification policy. The draft environmental assessment evaluated the maximum annual public health risk to members of the public as a result of these proposed changes and determined that there is no significant environmental impact as a result of the proposed changes.

The NRC has sent a copy of the environmental assessment and this proposed rule to every State Liaison Officer and requested their comments. The environmental assessment and finding of no significant impact on which this determination is based are available for inspection at the NRC Public Document Room, 2120 L Street NW. (Lower Level), Washington, DC. Single copies of the environmental assessment and the finding of no significant impact are available from Mark Haisfield, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone (301) 415-6196.

#### Paperwork Reduction Act Statement

This proposed rule increases the burden on licensees to justify in writing

the immediate threat to public health and safety that resulted in the implementation of abandonment procedures prior to NRC approval. The burden to include the justification in the existing report required in 10 CFR 39.77(d) will increase from 4 hours to 4.25 hours per impacted report. Because the burden for this information collection requirement is insignificant, Office of Management and Budget (OMB) clearance is not required. Existing requirements were approved by the OMB, approval number 3150-0130.

#### Public Protection Notification

If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

#### Regulatory Analysis

The Commission has prepared a draft regulatory analysis on this proposed regulation. The analysis examines the costs and benefits of the alternatives considered by the Commission. The draft analysis is available for inspection in the NRC Public Document Room, 2120 L Street NW. (Lower Level), Washington, DC. Single copies of the draft analysis may be obtained from Mark Haisfield, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone (301) 415-6196.

The Commission requests public comment on the draft regulatory analysis. Comments on the draft analysis may be submitted to the NRC as indicated under the ADDRESSES heading.

#### Regulatory Flexibility Certification

As required by the Regulatory Flexibility Act of 1980 (5 U.S.C. 605(b)), the Commission certifies that this rule, if adopted, will not have a significant economic impact upon a substantial number of small entities. All of the proposed amendments are to 10 CFR part 39 and are intended to either reduce regulatory burdens from unnecessary requirements or to clarify and update regulations to reduce confusion. Therefore, any economic impact to a small entity using 10 CFR part 39 should be either neutral or positive.

Any small entity subject to this regulation which determines that, because of its size, it is likely to bear a disproportionate adverse economic impact should notify the Commission of this in a comment that indicates the following:

(a) The licensee's size and how the proposed regulation would result in a significant economic burden upon the licensee as compared to the economic burden on a larger licensee.

(b) How the proposed regulations could be modified to take into account the licensee's differing needs or capabilities.

(c) The benefits that would accrue, or the detriments that would be avoided, if the proposed regulations were modified as suggested by the licensee.

(d) How the proposed regulation, as modified, would more closely equalize the impact of regulations or create more equal access to the benefits of Federal programs as opposed to providing special advantages to any individual or group.

(e) How the proposed regulation, as modified, would still adequately protect public health and safety.

#### Backfit Analysis

The NRC has determined that the backfit rule, 10 CFR 50.109, does not apply to this proposed rule, and therefore, a backfit analysis is not required because these amendments do not involve any provisions that would impose backfits as defined in 10 CFR 50.109(a)(1).

#### List of Subjects in 10 CFR Part 39

Byproduct material, Criminal penalties, Nuclear material, Oil and gas exploration—well logging, Reporting and recordkeeping requirements, Scientific equipment, Security measures, Source material, Special nuclear material.

For the reasons set out in the preamble and under the authority of the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and 5 U.S.C. 553, the NRC is proposing to adopt the following amendments to 10 CFR part 39.

#### PART 39—LICENSES AND RADIATION SAFETY REQUIREMENTS FOR WELL LOGGING

1. The authority citation for part 39 continues to read as follows:

**Authority:** Secs. 53, 57, 62, 63, 65, 69, 81, 82, 161, 182, 183, 186, 68 Stat. 929, 930, 932, 933, 934, 935, 948, 953, 954, 955, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2073, 2077, 2092, 2093, 2095, 2099, 2111, 2112, 2201, 2232, 2233, 2236, 2282); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846).

2. Section 39.2 is amended by adding definitions, in their proper alphabetic order, of the terms *energy compensation source* and *tritium neutron generator target source* to read as follows:

#### § 39.2 Definitions.

*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.

\* \* \* \* \*

*Tritium neutron generator target source* means a tritium source used within a neutron generator tube to produce neutrons for use in well logging applications.

\* \* \* \* \*

3. Section 39.15 is amended by revising paragraph (a)(5)(ii) and the introductory text of paragraph (a)(5)(iii) to read as follows:

#### § 39.15 Agreement with well owner or operator.

(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, 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 [ $\frac{1}{8}$ -inch] thick. The plaque must contain—

\* \* \* \* \*

4. Section 39.35 is amended by revising paragraphs (b), (c), (d)(1), (e)(1), (e)(4) and (e)(5) to read as follows:

#### § 39.35 Leak testing of sealed sources.

\* \* \* \* \*

(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 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.

(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;

\* \* \* \* \*

(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.

5. Section 39.41 is revised to read as follows:

**§ 39.41 Design and performance criteria for sources.**

(a) A licensee may use a sealed source for use in well logging applications if—

(1) The sealed source is doubly encapsulated;

(2) The sealed source contains licensed material whose chemical and physical forms are as insoluble and nondispersible as practical; and

(3) Meets the requirements of paragraph (b), (c), or (d) of this section.

(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.

(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."

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

(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  $-40^{\circ}\text{C}$  for 20 minutes,  $600^{\circ}\text{C}$  for 1 hour, and then be subject to a thermal shock test with a temperature drop from  $600^{\circ}\text{C}$  to  $20^{\circ}\text{C}$  within 15 seconds.

(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.

(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.

(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.

(v) *Pressure test.* The test source must be subject to an external pressure of  $1.695 \times 10^7$  pascals [24,600 pounds per square inch absolute].

(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.

(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 § 32.210 of this chapter or with an Agreement State.

6. Section 39.49 is revised to read as follows:

**§ 39.49 Uranium sinker bars.**

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."

7. Section 39.53 is added to read as follows:

**§ 39.53 Energy compensation source.**

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).

(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 §§ 39.35, 39.37 and 39.39.

(b) For well logging applications without a surface casing for protecting fresh water aquifers, use of the ECS is only subject to the requirements of §§ 39.15, 39.35, 39.37, 39.39, 39.51, and 39.77.

8. Section 39.55 is added to read as follows:

**§ 39.55 Tritium neutron generator target source.**

(a) Use of a tritium neutron generator target source, containing quantities not exceeding 1,110 MBq [30 curies] and in a well with a surface casing to protect fresh water aquifers, is subject to the requirements of this part except §§ 39.15, 39.41, and 39.77.

(b) Use of a tritium neutron generator target source, containing quantities exceeding 1,110 MBq [30 curies] or in a well without a surface casing to protect fresh water aquifers, is subject to the requirements of this Part except § 39.41.

9. Section 39.77 is amended by revising paragraph (c)(1), redesignating paragraphs (d)(9) and (d)(10) as paragraphs (d)(10) and (d)(11), and adding a new paragraph (d)(9) to read as follows:

**§ 39.77 Notification of incidents and lost sources; abandonment procedures for irretrievable sources.**

\* \* \* \* \*

(c) \* \* \*

(1) Notify the appropriate NRC Regional Office by telephone of the circumstances that resulted in the inability to retrieve the source and—

(i) Obtain NRC approval to implement abandonment procedures; or

(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

\* \* \* \* \*

(d) \* \* \*

(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;

\* \* \* \* \*

Dated at Rockville, MD., this 31st day of March, 1999.

For the Nuclear Regulatory Commission.

**Frank J. Miraglia, Jr.,**

*Acting Executive Director for Operations.*

[FR Doc. 99-9746 Filed 4-16-99; 8:45 am]

BILLING CODE 7590-01-P