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Submitter Information

Name: Earl Fordham
Address:
309 Bradley Blvd
Suite 201
Richland, 99352
Email: earl.fordham@doh.wa.gov

General Comment

Comments are attached in two files: (1) Answers to the eight questions and (2) Suggested Criteria for Requiring Financial Surety.

Attachments

STC-15-065 NRC Financial Scoping Study Questions_Washington

New Criteria for financial surety DRAFT 7-13-15

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Add= R. Whited (ARW2)
J. Shaffner (JAS11)

STC-15-065, NRC Financial Scoping Study Questions

Ryan Whited
James Shaffner

Thank you for the opportunity to answer your questions and provide comments.

Question 1: What disposition pathways are available to various licensee types beyond the traditional disposal pathway and should be considered in any potential new financial planning requirements?

Recycle and reuse
More options:
Innovative opportunities and solutions from business and industry:
Perhaps a manufacturer and distributor/vendor will consider the option of leasing a source (much like the auto industry) for cat 1-3 sources with a half-life over 120 days. Part of the fee might cover the cost of insurance to cover any damage, loss or theft, return of device to M&D. The manufacturer and distributor maintains ownership and therefore disposal responsibility. This should require little or no financial surety for licensees other than transportation costs back to the manufacturer/distributor. The manufacturer and distributor would require financial surety for eventual source disposal , possibly a form of insurance or one of the standard mechanisms.

Additional ideas include:

Perhaps the insurance industry or private bonding agencies will step up and provide bonding or insurance policies.

Perhaps the device or source manufacturers and distributors will add bonding/insurance services.

Encourage source recycling/transfers preferably an "exchange" program using the CRCPD as the clearinghouse. This doesn't relieve financial surety, but offers options for transfer/disposal.

Ensure that there are adequate numbers of licensed certificated US Department of Transportation approved transport casks for **ALL** sources on the market so that these transfers back to the manufacturer/distributor can be accomplished by ANY licensee. One method to ensure transport casks are available is to require (via rulemaking) that manufacturers always have a valid certificated cask/transport package for their sealed source or device.

Sealed sources/devices should require a modified decommissioning funding plan that would list the source identity, a method of disposal/transfer and a vendor quote for the cost of transport and disposal. Surety should also include the 25% contingency in between 3- year updates for the plan.

Nuclear Regulatory Commission should not impose financial surety without a plan. The plan verifies the surety amount is adequate.

Question 2: What should be the primary considerations in establishing and imposing appropriate and equitable financial planning requirements on radioactive sealed sources?

A level playing field. Licensees established surety only for their licensed material that requires surety. The state or federal government isn't the "collector" of any pooled or other funding. The **least** impact on licensees and regulators is best.

Greater Simplicity to determine what sources must have surety. There is a precedent for bonding, insurance, and/or financial surety in many industries. A construction job must post a bond – a form of insurance that they will complete their job, on time and within budget. All drivers are required to have insurance. Perhaps the business community will see this as an opportunity to provide a service to insure proper eventual disposal for all radioactive materials. Regulators would only need to verify proof of current bonding /insurance and beneficiary, instead of having to process complex financial paperwork for which we receive no training.

The state of Washington paid a contractor to build a decommissioning funding plan and Decommissioning Cost Estimate training class given in 2009, to train their own staff and invited neighboring states and the NRC to attend. Washington also created a DFP template and DCE Spreadsheet to guide and assist licensees. They are available to anyone from our web site. [http://www.doh.wa.gov/CommunityandEnvironment/Radiation/RadioactiveMaterials/Licensing/Laboratory/AmendmentsForms].

Question 3: Should licensees be required to specifically declare disused sources? If so, how long after a source is disused must a licensee declare it as disused?

Ideally yes, licensees need to declare disused sources. However, this is not an easily enforceable requirement. There is already a regulation requiring that the licensee begin decommissioning and termination within two years of declaration. Issues with this regulation include:
1. It often takes longer than the 2 years to complete the process,
2. The licensee changes their mind, or
3. The licensee doesn't declare.

A curfew on disused sources would be more important for general license sources, because even if they are registered; there is usually no compliance/inspection program.

The requirement for financial surety on all sealed, electro-plated and foil sources as described in *Question 4* below, could provide the incentive to retire dis-used sources.

Question 4: How should source characteristics be factored into establishing equitable financial planning requirements for end-of-life management?

There should be a requirement for financial surety on all sealed, electro-plated and foil sources of nuclides with a **half-life greater than or equal to 120 days**, and aggregate values greater than:

10 mCi for alpha.
≥100 mCi for non-portable/mobile Beta/gamma Sources. Includes Generally Licensed sources and devices.
All portable and mobile sources.
Category 1, 2 and 3 sources.

From the *"New Criteria for Financial Surety by Half-Life, Activity, and Type of Material" (attached):* all of these characteristics should be considered.

Question 5: If NRC rulemaking is initiated as a result of this scoping study, how should NRC engage with and consider the impact on Agreement States? What would be the primary considerations in establishing compatibility levels for rule requirements?

The NRC should use the current method of including Agreement State members on the working group for impact considerations. Where allowed, CRCPD members should be allowed to join the working group.

Compatibility criteria – Washington Department of Health and Conference of Radiation Control Program Directors (CRCPD) Committee for Suggested Regulations for Bonding and Surety (SR-S) recommends Compatibility C. It is important that all states meet basic criteria, however, the wording may differ and States could be more conservative and impose additional requirements, but not less.

Basic Criteria: This states the criteria for who and what radioactive materials require financial assurance. Conference of Radiation Control Program Directors (CRCPD) Committee for Suggested Regulations for Bonding and Surety (SR-S) recommends their *New Criteria for Financial Surety by Half-Life, Activity, and Type of Material as that basic criteria.*

NUREG 1757 is a huge document and onerous. It is difficult for the licensee to understand what is actually needed. Even the current regulations for surety are not clear on whether or not a plan is required.

Additionally, via several public meetings around the country, bring stakeholders to the table – and business leaders in areas not covered by licensees, such as insurance, finance and banking. Look for innovative ideas and their implementation that may reduce the need for prescriptive rulemaking.

Question 6: When necessary, what mechanism should be used to administer financial planning requirements on general licensees?

Nuclear Regulatory Commission should undertake rulemaking to **revoke general licenses** (GL). All material should either be specifically licensed or exempt from regulation! Given the current regulatory environment, any GL sources or devices meeting the basic criteria should at least be under license or registration by an Agreement State or NRC in order to determine and oversee adequate financial surety.

Generally, allowable financial surety mechanisms should be left up to each Agreement State, Compatibility D.

Question 7: What are the ideal characteristics and qualifications for an entity that will act as the custodian for any funds earmarked for long-term management of disused sealed sources? For instance, what characteristics and qualifications should be taken into consideration regarding the custodian's relationship to the licensee (*e.g.,* the ability of the custodian to access the funds, or the custodian's independent financial viability)? In the event that there is a residual amount remaining in the fund following payment of disposition cost, what should be the fate of the residual funds?

A preferable approach is for a "trustworthy and reliable" third party bank, insurance provider, bonding agent, or other financial services organization willing to underwrite the surety or oversee the safekeeping of the funds. The custodian needs to be financially stable. Such stability needs to be verified each year by regulators.

If a joint fund, it must be a third party (not licensee) capable of providing the services required by the agreement. A plan something like the Price-Anderson Nuclear Industries Indemnity Act, which governs liability-related issues for all non-military nuclear power facilities constructed in the United States before 2026, establishes a no fault insurance-type system into which each facility/company pays a certain amount per plant ($$ >100 million). The fund is refreshed when there is need for a pay-out. This could work if a bank or financial institution were to oversee it. To maintain the level playing field, each contributor would never pay more than their appropriate share based on the amount of licensed material (via approved plan and cost estimate). The joint fund could be implemented on a federal or state by state level.

Alternately, a commercial (not a licensee) company or corporation could administer a plan like this.

Question 8: What are the key characteristics of a tracking system for byproduct material (sealed sources) subject to financial planning requirements? Which of these characteristics are not available as part of the NSTS?

Key characteristics of a tracking system for radioactive materials is its cybersecurity, accuracy of data, and database-generated prompts for updates based upon time since last update. If surety shifts from flat fees after exceeding a threshold to an amount based upon a decommissioning funding plan, NSTS will not need anything further. These DFP's would be available for review at IMPEP.

NSTS is limited to quantities of concern (risk significant). The Criteria contains sources that would not currently be tracked in NSTS.

DRAFT 7-8-15: New Criteria for Financial Surety by Half-Life, Activity, and Type of Material (SR-S)

Criteria	Activity*	Form	Financial Surety
NRC Exempt sources (manufactured as exempt)	Any	Any	Exempt
Noble gases in sealed sources with no radioactive daughter product	< 1 Ci	Sealed and Electroplated or Foil Sources	Exempt
DU Shielding or counterweights No machining, grinding or alterations	Any	Solid	Exempt
T ½ <120 days	Any	Any	Exempt
Criteria:	**Activity***	**Form**	**Financial Surety**
Nuclides T ½ ≥120 days	≥0.5 mCi*	Unsealed Alpha	Decommissioning funding plan
	≥1 Ci of C-14 ≥ 10 Ci of H-3 ≥ 100 mCi* all others	Unsealed Beta/gamma	Decommissioning funding plan
	≥ 10 mCi*	Sealed and Electroplated or Foil Alpha Sources	Simple decommissioning funding plan
	≥100 mCi* Except	Sealed and Electroplated or Foil Beta/gamma Sources **Includes Generally Licensed sources.**	Simple decommissioning funding plan
Nuclides T ½ ≥120 days	All **portable** gauges	**Any:** Specifically or Generally Licensed sources	Simple decommissioning funding plan
Fixed gauges	≥100 mCi*	Sealed source	Simple decommissioning funding plan
Category 1, 2, and 3 Sources and Nuclides T ½ ≥120 days **(Note: does not include Ir-192 Industrial Radiography sources)**	ALL*	Any	Decommissioning funding plan: Must provide for financial surety for security in the interim of decommissioning, as well as all aspects of decommissioning.

***Aggregate quantities per license**

- **All Plans must have enough detail for the regulator to determine if the cost estimate is sufficient to satisfy all costs of decommission and implementation of license termination.**
- A **"Simple decommissioning funding plan"** includes at least a check off list, plans and costs for return or disposal, leak test history, and a quote from the vendor for each gauge.
- Simple plans are not appropriate for Cat 1&2 Sources.
- **"Decommissioning funding plan"** means a written document that contains a cost estimate for decommissioning and a description of the method for assuring for decommissioning, including means of adjusting cost estimates and associated funding levels periodically over the life of the facility.
- Government Agencies and State Educational Facilities may be exempted from posting financial surety but must prepare decommissioning funding plan and must provide administrative concurrence.