

STATE OF COLORADO

Bill Owens, Governor
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Colorado Department
of Public Health
and Environment

January 6, 2000

Clark Prichard,
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555

RE: COMMENTS OF DRAFT FINANCIAL ASSURANCE AMENDMENTS FOR MATERIALS
 LICENSEES

The State of Colorado agrees that the financial assurance provisions in the NRC regulations are in need of revisions. We concur that the current dollar amounts for financial warranties as specified in 10 CFR Part 30 are, for most licensees, insufficient to assure adequate decommissioning of the facility in the event that the licensee should default or abandon a licensed site. We also concur that the amount of material requiring a surety should be lowered.

The following are specific comments we ask you consider when developing modifications to the financial assurance rules.

SURETY AMMOUNTS

Rather than basing the financial assurance requirement solely upon the amount of materials authorized and its form, the rule should address several key factors that greatly impact potential costs for decommissioning of a licensed facility. These are:

- a) the specific radionuclides authorized on the license;
- b) the maximum quantity and form of the material authorized;
- c) the total volume of radioactive materials authorized on the license.
- d) the size and complexity of the facility impacted by licensed activities; and
- e) the unique characteristics of specific radioactive materials which make decommissioning surveys more costly and time consuming.

We also suggest that a provision be included in the regulations that cover the agency's administrative and legal costs for the government agency overseeing the decommissioning activities.

A formula or matrix could be included in the regulations to determine the warranty dollar amounts for those licensees who do not want to perform a more detailed site-specific determination. A Base Value could be established using the current method which evaluates the total amount of authorized radioactive materials. For example:

BASE VALUE:

- \$250,000 radioactive material authorization in the range of 10^3 to 10^4 times Schedule B
- \$500,000 radioactive material authorization in the range of 10^4 to 10^5 times Schedule B

That base amount could then be modified by factors that would increase the surety. These factors might include:

AREA FACTOR (A) – As the area that could potentially contaminated increases, the cost of D & D will also increase, from the cost for decontaminating larger areas and/or the disposal of larger volumes of contaminated material. The specific Area Factor applied would be based on experience for clean up of similar sized facilities. The formula or matrix would then list different Area Factors as the area increase. For example:

A = Area Factor	= 0	if impacted area is less than 1,000 sq ft.
	= 0.2	if impacted area is between 1,000 and 2,000 sq ft.
	= 0.4	if impacted area is between 2,000 and 10,000 sq ft.
	-	
	-	
	-	
	X	if impacted area is greater than Y sq. ft.

VOLUME FACTOR (V) - The volume factor will be related to the volume of radioactive material authorized under the license. The disposal costs will of course be more for licensees that are authorized tons of radioactive material than for licensees that are authorized grams quantities of materials. The Volume Factor as used in a formula for the calculation could be:

V = Volume Factor	= 0	if authorized material volume does not exceed 100 cubic ft.
	= 0.2	if authorized material volume is between 100 and 200 cubic ft.
	= 0.4	if authorized material volume is between 200 and 400 cubic ft.
	-	
	-	
	-	
	X	if authorized material volume is greater than Y cubic ft.

COMPLEXITY FACTOR (C) - The complexity factor is an adjustment that increases the surety for authorized radioactive materials that are more difficult to identify. The Complexity Factor as used in a formula used for the calculation could be:

C = Complexity Factor	= 0	if authorized materials are easily detected (Cs-137, Co-60, etc)
	= 0.2	if authorized materials requires liquid scintillation for wipe analysis
	= 0.4	if authorized materials include a broad mixture of radionuclides (i.e. atomic numbers 1 through 95)

Administrative and Legal Costs : The administrative and legal costs are somewhat independent of the other factors. For example, if a licensed facility is part of an EPA clean up action, the administrative and legal costs will likely be greater. A fixed amount, determined from experience should be used.

With the above factors identified, the formula might look something like the following example.

$$\text{Warranty Amount} = (\text{base value}) * (1 + A + V + C) + (\text{admin and legal costs})$$

When setting new surety values, the NRC should not base them on the average cost per clean up action. This would mean that half of all sureties are inadequate. Likewise, it is not appropriate to base costs on the most expensive clean up action evaluated. We believe that setting the above factors at the 98th percentile would be reasonable.

SURETY SCOPE

Perhaps NRC should reverse its approach. The rule could require a surety except for certain defined inventories.

The basis for needing or not needing financial assurances could more appropriately be more risk- or dose-based. For example, commentors on CRCPD Part P, now before the CRCPD Board for approval, suggested that contingency plans should be required for any facility or site where a limit on annual dose to an individual member of the public 1mSv (100 mrem) could be exceeded in an accident. Any facility requiring consideration of the need for an emergency plan could be required to have financial assurance.

Requiring such facilities to have a surety could serve two functions. First, should an accident requiring agency support occur, funds would be available to cover the agency's cost. Secondly, a licensee that had an incident requiring off-site response by the licensing agency is less likely to be capable of completing its own decontamination and decommissioning, especially if the d&d required off-site actions.

10 CFR 40

10 CFR 40 needs to be modified to reduce the amount of material that requires a surety. Currently, source material general licensees (possession of less than 15 pounds at any one time or 150 pounds in one year) are exempt from surety requirements. One of Colorado's source material general licensees vacated a facility that was contaminated beyond the free release limits. While the final cost of the remediation is not yet available, it is expected that the clean up cost will exceed \$200,000.

CRCPD INVOLVEMENT

CRCPD has a committee that is developing regulations for financial assurance, Part S. As the Conference and the OAS are to have early and substantive involvement in the development of regulations, has the Conference and/or the OAS been consulted in the preparation of this pre-decisional draft?

If you have any questions, please contact Jake Jacobi at (303) 692-303.



Robert M. Quillin, Director
Laboratory and Radiation Services Division

RQ:wj

From: "Frazee, Terry" <Terry.Frazee@DOH.WA.GOV>
To: "cwp@nrc.gov" <cwp@nrc.gov>
Date: Tue, Dec 21, 1999 8:47 PM
Subject: SP-99-078

Comments on Draft Financial Assurance amendments per Technical Conference Forum (TCF). I will also try to upload these to the TCF as well as on RADRAP.

These are a few comments on the Draft Rulemaking Plan on Financial Assurance for Materials Licensees:

1) We recommend doing away with the specific certification amounts and requiring all licensees that meet the basic criteria for required financial assurance to submit facility-specific decommissioning cost estimates. We have successfully used this approach (including required periodic reassessment) ever since we implemented this rule. This avoids the problem of fixed certification amounts becoming outdated as noted in this rulemaking.

2) There appears to be a discrepancy in the data presented: "At present, about 60% of materials licensees required to have financial assurance use the certification amounts." (I.B.1.) "The NRC has approximately 3800 sealed source licensees, of which approximately 350 require financial assurance." (I.B.2.) "Less than one-half of materials licensees must provide financial assurance." (V.A.) "Approximately 300 NRC materials licensees required to have financial assurance use the certification amounts rather than a facility-specific decommissioning funding plan." (V.B.) Obviously, some of this is an "apples versus oranges" issue. However, using "60% of materials licensees" and "300 NRC materials licensees" as representing the same group (those who use the certification amounts), this should indicate there are about 500 total materials licensees required to provide financial assurance. This is MUCH "less than one-half of materials licensees", assuming you meant "total" licensees. Since there are 3800 sealed source licenses alone and the total is closer to 6500, the fraction is actually less than "one-twelfth". At least one of the referenced sentences appears to be wrong and should be corrected. Additional explanation in the text may also be helpful.

3) The statement under VIII. "Agreement State Implementation Issues", is true as far as it goes. However, it is misleading in that part of the rulemaking would change the criteria for which licensees are required to address financial assurance. The NRC rule in that regard is a "D-H&S" which does require Agreement States consideration. As worded, the NRC analysis could cause an Agreement State to place a low priority on review of this document and thus be caught blind-sided.

Thank you for the opportunity to comment.

This message from Terry C. Frazee
e-mail terry.frazee@doh.wa.gov

Quick ways to reach me:



Draft Rulemaking Plan - Financial Assurance - Materials Licensees

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1/1/99 Comments on Draft

From: Thomas Ortziger ortziger@idns.state.il.us
Date: 12/22/99 8:17:40
Thread ID: 2

Illinois has drafted a whole new Part to its regulations for financial assurance. Our proposed rule takes quite a different direction from NRC's rules by requiring more entities to address financial assurance. Our experience has been that it is not the large licensees that do not meet their obligation to properly dispose of material, but the smaller licensees. In fact, NRC's documents from financial assurance workshops indicate that the likelihood of abandonment decreases with increasing size of the company/licensee. NRC's rules require financial assurance only from very large licensees.

The first portion of our comprehensive program has most licensees paying \$300 for a period of two years (for a total of \$600 each). This money is called the "Recovery and Remediation" or "R&R" fee, and is billed annually with other licensing fees. The money collected under R&R will be used only for the costs of recovery and remediation of radioactive material when such costs cannot be recovered in a timely manner from a responsible person or an available surety. Any money subsequently recouped from a responsible party will be put back into the R&R "fund." Because licensees pay these R&R fees, certain types and quantities of radioactive material are exempt from additional financial assurance requirements.

Certain categories of licensees are required to establish additional financial assurance in addition to paying R&R fees. For example, some sealed source licensees (including certain general licensees) will be required to secure financial assurance arrangements in an amount of at least \$25,000. Others, such as category III or IV irradiators, persons possessing large quantities of radioactive material with intermediate half-lives in unsealed form, waste processors, accelerator licensees, and persons considered "major possessors" will be required to submit a cost estimate for approval, and then establish additional financial assurance arrangements.

Our table for "major possessor" is similar to the table referenced in 30.35(d), although some of the values will be different because we started with a different table. NRC's financial assurance quantities are in 10 CFR 30, Appendix B, and our rules started with 10 CFR 20, Appendix C values from January 1994 (which is what we currently reference). We started with the Appendix C

numbers and used 103 for unsealed material and 1010 for sealed sources. We then rounded any sealed source values greater than 1000 down to 1000 and printed the actual numerical values, rather than reference a multiplication factor. Our tables also do not contain any nuclides with half-lives less than 275 days, since those nuclides are addressed in Sections 326.50(c), 326.50(d) and 326.70(b).

Waste brokers will be required to prepare a decommissioning cost estimate based on the maximum amount of material they are authorized to possess. This is partly based on volume, but can also take into account the types and quantities of material handled. For example, does the licensee do decay-in-storage? or do they repackage or compact and have other potentially contaminated equipment?

Thank you for the opportunity to comment. For information, we will send an electronic copy of the proposed rule to Mr. Clark Pritchard.

(Posted by Kathy Allen. k_allen@idns.state.il.us)

Name:

Reply To: Comments on Draft

Date: 1/14/100 10:14:55

Position: *Please indicate your the position of your reply*

-  Agree
-  Disagree
-  Qualify
-  Issue
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Message *Use Carriage Returns to make your message readable*

this reply