

RULEMAKING ISSUE (Negative Consent)

May 9, 2001

SECY-01-0084

FOR: The Commissioners

FROM: William D. Travers
Executive Director for Operations

SUBJECT: RULEMAKING PLAN: FINANCIAL ASSURANCE AMENDMENTS FOR
MATERIALS LICENSEES

PURPOSE:

To request by negative consent Commission approval of the attached Rulemaking Plan for amending financial assurance requirements for materials licensees.

BACKGROUND:

The financial assurance requirements for materials licensees in 10 CFR Parts 30, 40, 70, and 72 were established in the 1988 decommissioning rulemaking. Changes in decommissioning costs since 1988 and staff experience with managing the financial assurance program have led to a recognition of the need for revisions to the financial assurance requirements. The attached draft rulemaking plan identifies certain areas of the financial assurance regulations that need to be changed. The need for a staff review of the financial assurance requirements was indicated in the staff's response to COMIS-93-02, "Reexamination of NRC Decommissioning Funding Requirements for Reactor and Major Fuel Cycle Facilities" (March 30, 1993). This review, which involved several contractor studies of decommissioning costs for various types of licensees, has now been completed. Some changes to the financial assurance regulations for materials licensees have already been made. Final rulemakings allowing self-guarantee as an additional financial assurance mechanism for qualified licensees were published in 1993 (58 FR 68726) and 1998 (63 FR 29535).

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The attached rulemaking plan would amend financial assurance requirements in Parts 30, 40, and 70 to make revisions in financial assurance coverage required of some materials licensees. The certification amounts will be adjusted to reflect current decommissioning costs. In addition, the basis for waste broker and certain sealed source licensee financial assurance requirements will be changed to provide greater assurance of financial responsibility for decommissioning costs. Because of the health and safety significance of decommissioning, Agreement States would be expected to adopt program elements that embody the objectives of this rule.

DISCUSSION:

The draft rulemaking plan on financial assurance for materials licensees was sent to the Agreement States for comment in November 1999. Three States, Colorado, Illinois, and Washington, submitted comment letters. The following is a summary of the major State comments, and staff responses.

(1) Base Financial Assurance on a Variety of Factors, not Just Possession Limits

(1) The State of Colorado commented that the financial assurance rule should base financial assurance not only on amount and type of radioactive material authorized, but also other factors, such as volume of material, size and complexity of facility, and unique characteristics of specific radionuclides that affect cleanup costs.

Response:

NRC's financial assurance regulations allow a licensee to provide financial assurance using one of two approaches for determining the amount of financial assurance required: (1) a facility-specific decommissioning plan, including a decommissioning cost estimate; or (2) a certification amount based solely on possession limits for that license.

A licensee desiring to base its financial assurance on other factors, such as area and complexity of facility, can develop a facility-specific decommissioning cost estimate that takes into account any factors that the licensee chooses.

NRC offered the certification amount method as an option for licensees that did not want to devote the significant resources needed to develop a decommissioning plan. It was designed to be a simple, straightforward way of ensuring that adequate funding would be available. NRC has used the certification amount approach successfully for approximately 10 years. For NRC to base the certification amounts on a complex formula involving a number of variables, all of which must be calculated by the licensee and reviewed by NRC, would be contrary to the purpose for which the certification amounts were developed.

(2) More Risk-Based Approach to Financial Assurance

Colorado commented that NRC should require financial assurance for all licensees except for certain defined inventories of materials. A more risk- or dose-based approach could be used; any facility where risk was determined to be sufficient to require an emergency plan would be required to have financial assurance.

Response:

NRC's policy is to make financial assurance regulations risk-informed. The current regulations recognize different levels of risk in that they require financial assurance only from licensees authorized to use relatively large amounts of radioactive materials. Smaller licensees are exempt from financial assurance regulations. NRC's emergency preparedness regulations for materials licensees require an emergency plan from only about 10 of the largest licensees. Financial assurance is required from approximately 500 NRC materials licensees out of approximately 5,000 licensees. Financial assurance requirements are needed for a greater number of licensees than emergency plans, because financial assurance primarily addresses decontamination and decommissioning costs, rather than the accident situations that are the focus of emergency plans.

(3) Consult with the CRCPD in Developing the Rulemaking

Colorado stated that the Conference of Radiation Control Program Directors (CRCPD) is now developing new financial assurance regulations, and NRC should consult with CRCPD early in the development process.

Response:

The NRC staff is in contact with the Chairman of the CRCPD working group developing changes to Part S (which covers financial assurance) of the "Suggested State Regulations." The NRC staff has reviewed the current version of the amendments to the "Suggested State Regulations" in developing this rulemaking plan. The Chairman of the CRCPD working group has reviewed the NRC draft rulemaking plan. The staff plans to continue its coordination efforts with CRCPD on this rulemaking.

(4) Consider Financial Assurance for Smaller Licensees

Illinois stated that its State's experience is that smaller licensees present more of a problem in meeting decommissioning obligations. New Illinois financial assurance regulations require more entities to have financial assurance.

Response:

The rulemaking plan recognizes that some types of smaller licensees, especially in the waste broker area, may be required to be covered by financial assurance.

(5) Greater Use of Decommissioning Cost Estimates as Basis for Financial Assurance

Illinois requires large irradiators, waste processors, accelerator licensees, and "major possessors" to submit a decommissioning cost estimate and base the amount of financial assurance required on this estimate.

Response:

This rulemaking plan requires a facility-specific decommissioning cost estimate from large irradiators, and waste processors and brokers. NRC does not have accelerator licensees. NRC's current financial assurance regulations already require facility-specific decommissioning cost estimates from licensees possessing large amounts of radioactive materials.

(6) Special Requirements for Waste Brokers

Illinois noted that under its new financial assurance requirements, waste brokers must prepare a cost estimate based on the maximum amount of material allowed, and the volume and type of quantities handled.

Response:

This rulemaking plan calls for creation of a special type of financial assurance regulations just for waste brokers. The rules will be amended to require a detailed, facility-specific cost estimate from waste brokers.

(7) Eliminate the Certification Amounts as a Basis for Financial Assurance

The State of Washington recommended doing away with the certification amounts and requiring all licensees that meet the basic criteria for financial assurance to submit a facility-specific decommissioning cost estimate. The financial assurance amount required would be based on this estimate, and updated periodically. The State has used this approach successfully. Some other comments supported using a facility-specific cost estimate as a financial assurance basis for some classes of licensees, such as waste brokers.

Response:

The staff notes that this rulemaking plan does require more licensees to submit a facility-specific decommissioning cost estimate, but does not require this of all licensees. NRC has over 500 materials licensees that are required to have financial assurance. Most of these licensees use the certification amounts. Requiring all these licensees to develop and submit facility-specific decommissioning cost estimates would be an unnecessary regulatory burden on licensees and NRC.

(8) Agreement State Implementation

Washington pointed out that part of the rulemaking would change the criteria for which licensees are required to have financial assurance. This has important implications for States and the State Implementation section of the rulemaking plan does not recognize this.

Response:

The staff agrees with this comment. The text on Agreement State implementation issues has been changed.

(9) Exemption in Part 40

Colorado stated that Part 40 financial assurance requirements need to be changed to reduce the threshold for the amount of material requiring financial assurance. NRC should eliminate the exemption from financial assurance, currently in Part 40, for general licensees possessing less than 15 lbs at one time or 150 lbs over one year.

Response:

The NRC staff is currently engaged in a reevaluation of the exemptions in Part 40 as directed by the Commission in the Staff Requirements Memorandum (SRM) on SECY-99-259, "Exemption in 10 CFR Part 40 for Materials Less than 0.05% Source Material- Options and Other Issues Concerning the Control of Source Material," March 9, 2000. The need for financial assurance for general licensees is a topic that this reevaluation will address.

RESOURCES:

To complete and implement this rulemaking, 2.4 full-time equivalent positions will be required. Approximately \$115K in contractor funding has been used to develop information for this rulemaking plan. An estimated additional \$30K may be needed to complete the rulemaking. These resources are included in the current budget.

NRC STRATEGIC PLAN PERFORMANCE GOALS:

This planned rulemaking would maintain safety by enhancing financial assurance of funding for decommissioning. It would also contribute to public confidence that NRC regulations would prevent a licensee bankruptcy resulting in taxpayer expenditure for decommissioning.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objection. The Office of State and Tribal Programs has reviewed this paper for Agreement State implementation issues and concurs in it. The Offices of the Chief Financial Officer, Chief Information Officer, Administration, and Enforcement have reviewed and concurred on the draft Rulemaking Plan that went out to Agreement States for comment. Since no significant changes to the Rulemaking Plan have been made, it was not considered necessary for these Offices to concur again.

RECOMMENDATION

This rulemaking plan will be implemented within 10 days. Action will not be taken until the SRM is received. We consider this action to be within the delegated authority of the EDO.

/RA/

William D. Travers
Executive Director
for Operations

Attachments:

1. Rulemaking Plan
2. Agreement State comment letters

Rulemaking Plan
Financial Assurance-- Materials Licensees

I. Regulatory Issue

A. Financial Assurance for Decommissioning

The NRC regulations requiring financial assurance for decommissioning are designed to assure that adequate funding will be available for timely decommissioning by licensees. The financial assurance regulations for materials licensees are part of the strategy described in the NRC strategic plan. The strategic plan states “ However, we must take the necessary regulatory actions, including financial assurance, so that remediation can be completed consistent with our regulations to assure meeting the performance goal of maintaining safety and protection of the environment.¹ “

Financial assurance is composed of several parts: (1) appropriate identification of licensees for which financial assurance should be required; (2) the amount of financial assurance required for each licensee must be adequate to fund current decommissioning costs; and (3) appropriate financial assurance mechanisms (surety bonds, escrow accounts, parent or self-guarantee, etc.) must be required.

The objective of this planned rulemaking is to maintain adequate financial assurance by addressing gaps in the current regulatory framework regarding (1) and (2) above.

B. Regulatory Problems to be Addressed by This Planned Rulemaking

Under current decommissioning regulations, materials licensees using substantial quantities of nuclear materials must provide financial assurance for decommissioning (most

¹ U.S. Nuclear Regulatory Commission Strategic Plan - Fiscal Year 2000- Fiscal Year 2005, Appendix, NUREG-1614, Vol. 2, Part 2, p.57.

materials licensees do not need to provide financial assurance because their possession limits are below the threshold for requiring financial assurance). The financial assurance requirements were promulgated in 1988 as part of the decommissioning rulemaking (53 FR 24018, June 27, 1988). Revision to some of the financial assurance requirements for materials licensees are needed because there have been changes in decommissioning costs since that time, and NRC experience has revealed that for certain types of licensees, such as waste brokers, special considerations exist which require different treatment.

1. Certification Amounts

The amount of financial assurance which must be provided can be based on either: (1) a facility-specific decommissioning cost estimate provided by the licensee in a decommissioning funding plan²; or (2), one of several dollar amounts (certification amounts) given in the regulations. Which certification amount is required of a licensee depends on the possession limits for radioactive materials applicable to that license. At present, about 60% of materials licensees required to have financial assurance use the certification amounts.

The present certification amounts are based on decommissioning cost estimates that are now more than ten years old. When the decommissioning rule was established, it was expected that periodic adjustments to the certification amounts would be needed as decommissioning costs changed over time. It is necessary to review the current decommissioning cost information, and make adjustments to the certification amounts in cases where decommissioning costs for licensees clearly exceed the certification amounts which the licensees may use. The NRC anticipates that this type of review may be needed approximately every ten years. More frequent reviews could be conducted if cost-effective, taking into consideration the cost of the reviews and the extent of increases in decommissioning costs .

2. Sealed Source Licensees

²For some types of licensees using large amounts of radioactive material, a facility specific cost estimate must be used.

The NRC has approximately 3800 sealed source licensees, of which approximately 350 require financial assurance. Decommissioning costs for sealed source licensees are greatly dependent on how the sources are disposed. Sealed source disposal costs can be extremely variable, depending on the availability of opportunities to return sources to the seller/manufacturer, or transfer the sources to another licensee. Where this is the case, disposal costs are relatively low. However, where the licensee cannot return or transfer sources and must dispose of them, this can be relatively expensive.

For some sealed source licensees, it appears that the financial assurance requirements do not provide funding sufficient to cover decommissioning costs. This is especially apparent in the case of certain large irradiators. Under current regulations, irradiators with possession limits allowing millions of curies may use the \$75K certification amount. Estimates of decommissioning costs for these large irradiators are substantially above \$75K³. The threshold possession limits triggering a requirement for financial assurance, and the adequacy of the certification amounts for financial assurance for sealed source licensees should be reviewed, and revised where needed.

(3) Waste Broker Licensees

Waste broker licensees are those licensees that handle radioactive waste associated with or generated under other licenses. There is no definition of "waste broker" in existing NRC regulations and the term is commonly used to describe several different activities. The NRC financial assurance regulations treat waste brokers in the same way as other materials licensees; there are no special financial assurance requirements applicable only to waste brokers. However, NRC practice has been that waste broker refers to any licensee that engages in the following activities: waste collection and consolidation; waste storage; waste processing, repackaging, or other treatment (e.g., decay in storage, compaction); or transfer to another waste broker or to a licensed low-level radioactive waste land disposal facility. The NRC has 13 waste broker licensees, of which 6 require financial assurance. Many waste broker licensees also conduct

³Technology, Safety, and Costs of Decommissioning a Reference Large Irradiator and Reference Sealed Sources, NUREG/CR-6280, Pacific Northwest National Laboratory, January, 1996, p. 4.9.

other types of licensed activities as part of their overall business.

From the viewpoint of financial assurance, waste broker activities are unique in that: (1) waste brokers are likely to have radioactive wastes generated by other licensees, and the inventory of waste a broker will have on site at any time may fluctuate considerably and be difficult to predict; and (2) waste brokers have a financial interest in maximizing the amount of radioactive waste that they handle -- waste broker revenues are directly correlated to the amount of waste accepted.

The disposal costs of waste inventories are very high - much greater than when the decommissioning regulations were promulgated. The current financial assurance regulations do not consider the costs of disposing of significant volumes of waste generated outside the decommissioning process, such as inventories of brokered waste. Waste brokers currently may be required to maintain a level of financial assurance which is inadequate for disposal of waste inventories. Charges for disposal of waste at low-level waste disposal facilities are based on the volume of waste disposed, and also on level of activity of the waste. The possession limits, that determine what level of financial assurance a waste broker licensee must have, are based on the quantity of curies of material possessed, not volume of material possessed. A waste broker that must dispose of large volumes of relatively low activity waste would be subject to substantial waste disposal charges. However, that same waste broker might be required to have an inadequate amount of financial assurance to pay these charges because the financial assurance requirements are based only on curie level. In addition, some waste brokers with low possession limits may not be subject to any financial assurance requirements, even though, by waste volume, waste inventories may be very large.

II. Current Rule Requirements

A. 10 CFR Part 30

10 CFR Part 30 requires a licensee authorized to possess large quantities of unsealed byproduct material to submit a decommissioning funding plan which includes a site-specific

decommissioning cost estimate.

Part 30 licensees authorized to possess lesser amounts of unsealed byproduct material may either submit a decommissioning funding plan, or submit a certification that financial assurance for decommissioning has been provided. Certification amounts of \$750,000, or \$150,000, depending on the quantity of material the licensee is authorized to possess, are applicable to Part 30 licensees.

Part 30 licensees authorized to possess certain quantities of byproduct material in sealed sources or plated foils may either submit a decommissioning funding plan or submit a certification that financial assurance has been provided in the amount of \$75,000.

B. 10 CFR Part 40

Part 40 financial assurance requirements are divided into two categories; one which applies to uranium mill facilities (Appendix A, Criterion nine), and another (10 CFR 40.36) which applies to all other Part 40 licensees. Uranium mill licensees must provide financial assurance based on site-specific reclamation cost estimates. This rulemaking plan does not address financial assurance requirements for uranium mill licensees.

Section 40.36 requires a licensee authorized to possess large quantities of material to submit a decommissioning funding plan which includes a site-specific decommissioning cost estimate. Section 40.36 licensees authorized to possess lesser amounts of material may either submit a decommissioning funding plan, or submit a certification that financial assurance for decommissioning has been provided in the amount of \$150,000.

C. 10 CFR Part 70

10 CFR Part 70 requires a uranium enrichment facility licensee, or a licensee authorized to possess large quantities (based on applicable quantities in Appendix B to Part 30) of unsealed special nuclear material having a half-life greater than 120 days to submit a decommissioning funding plan, which includes a site-specific decommissioning cost estimate.

Part 70 licensees other than uranium enrichment facility licensees authorized to possess lesser amounts of such special nuclear material may either submit a decommissioning funding plan, or submit a certification that financial assurance for decommissioning has been provided. Certification amounts of \$750,000 or \$150,000, depending on the quantity of material the licensee is authorized to possess, are applicable to Part 70 licensees.

D. 10 CFR Part 72

10 CFR Part 72 licensees are required to provide a decommissioning funding plan which includes a site-specific cost estimate. This rulemaking plan does not address Part 72 licensees.

III. Background

In a memorandum from the Commission dated March 30, 1993, "Reexamination of NRC Decommissioning Funding Requirements for Reactors and Major Fuel Cycle Facilities" (COMIS-93-002), the staff was asked to recommend whether or not a re-examination of NRC's requirements for decommissioning funding was appropriate, and if so how such a re-examination should be carried out. As part of the staff's response (Memorandum to the Commission from James M. Taylor, May 28, 1993), the Commission was informed that a reevaluation of the certification amounts would be done.

Pacific Northwest National Laboratory (PNNL) conducted a number of studies to update decommissioning cost estimates for materials licensees over the past several years. The results of its studies; Technology, Safety, and Costs of Decommissioning a Reference Large Irradiator and Reference Sealed Sources, NUREG/CR-6280, PNNL, January, 1996, and Revised Analyses of Decommissioning Reference Non-Fuel-Cycle Facilities, draft NUREG/CR-6477, PNNL, July, 1998, provide some of the background technical information for this rulemaking. The staff will use the results of PNNL's work and other information as the basis of adjustment to the certification amounts to be done through rulemaking.

In 1996, NRC surveyed Agreement States to gather information on waste brokers licensed

by Agreement States. The survey requested information on numbers of waste brokers requiring/not requiring financial assurance, the level of financial assurance required and how the level is determined, the amount of waste authorized on site, and any special conditions applicable to waste brokers in each State.

NRC has also completed studies of financial assurance requirements for waste brokers, and of the adequacy of the current certification amounts. The studies were carried out by a contractor with extensive experience in financial assurance, ICF, Inc. The studies, "Assessment of the Financial Assurance Requirements for Waste Broker Material Licensees," ICF, Inc., December 28, 1998, and "Analysis of Decommissioning Certification Amounts for Materials Licensees- Parts 30, 40, and 70," provide information which forms a part of this rulemaking plan.

The NRC recently denied a petition for rulemaking from Mr. Charles T. Gallagher (PRM-30-64) that focused on several financial assurance issues (66 FR 20099, April 19, 2001). The NRC considered the petition and public comments received, and denied the petition because of insufficient information provided by the petitioner to support a basis for revising the financial assurance regulations. The proposed regulatory changes in this rulemaking plan are different than those advocated in the petition.

IV. How the Regulatory Problem Will be Addressed by Rulemaking

! For licensees using material in unsealed form, the dollar amounts used for certification of financial assurance will be adjusted as needed to reflect current decommissioning costs. Decommissioning costs have increased significantly since the promulgation of the 1988 decommissioning rule, and a large number of licensees using these certification amounts would now face actual decommissioning costs in excess of their required certification amount. To provide a basis for adjusting certification amounts, an analysis of current decommissioning costs for types of licensees using the \$150K and \$750K certification amounts has been conducted. This analysis identifies differences between estimated current decommissioning costs and required certification amounts for various types of

licensees. In these cases, the certification dollar amounts will be adjusted accordingly. In addition, one or more additional certification amounts may need to be established, such as an intermediate certification amount whose dollar amount would be set somewhere in between the lower and upper amounts. The 1988 decommissioning rule did not specify radiological criteria for decommissioning. Since then, the NRC has promulgated a final rule establishing such criteria (62 FR 39805, July 21, 1997) including criteria for unrestricted use as well as criteria for license termination under restricted conditions. The certification amounts are intended to be estimates of the approximate cost of decommissioning a facility to unrestricted release limits, as given in 10 CFR 20.1402. The estimates assume offsite disposal of radioactive waste.

! For sealed source licensees, the rulemaking will address the threshold possession limit triggering the requirement for financial assurance. The threshold possession limit may need to be lowered. In addition, the rulemaking will address the possession limits under which sealed source licensees may use a certification amount. In cases where certain types of sealed source licensees, such as large irradiators, have decommissioning costs greatly exceeding their applicable certification amount (\$75K), possession limits under which these licensees can use a certification amount will be adjusted. The certification amount is intended to be an estimate of the approximate cost of decommissioning a facility to unrestricted release limits, and disposing of radioactive waste offsite. At present, there is no upper bound to possession limits under which a sealed source licensee may use the \$75K certification amount. An upper bound will be established by this rulemaking; licensees exceeding this limit would have to base financial assurance on a facility-specific decommissioning cost estimate.

! A separate section of the financial assurance regulations will be established for waste brokers. Financial assurance will be adequate to cover the costs of decommissioning the facility to meet the criteria for unrestricted use and disposal of radioactive waste offsite. The amount of financial assurance required for waste brokers will be made directly proportional to the volume of waste inventories in the possession of the licensee. For waste brokers, volume of waste inventory is the best indicator of decommissioning

obligations. Each waste broker would be required to maintain financial assurance based on a site-specific inventory of waste. Volume of waste held in a licensee's inventory is a readily available, easily verified number for both licensee and NRC. A waste broker licensee would continue to have the option of basing financial assurance on a decommissioning plan.

In some cases, it may be that facility specific factors would enable a licensee to complete decommissioning and license termination at a lower cost than specified by the certification amount. In such cases, a licensee has the flexibility to submit a decommissioning funding plan (DFP) containing a cost estimate that takes facility specific factors into account. The facility specific cost estimate may be lower than the certification amount. The licensee must provide financial assurance sufficient to cover its cost estimate, so a DFP may result in providing a lower amount of financial assurance than specified by the applicable certification amount. However, current regulations do not specify the license termination criteria that must be used as the basis of the cost estimate contained in the DFP, nor do they specify whether onsite disposal of radioactive material may be used in the cost basis. The cost of decommissioning can vary significantly with changes in the license termination criteria or disposal of radioactive materials. Therefore, the rulemaking will consider whether or not to specify that a DFP must use unrestricted use criteria and offsite disposal of waste as the cost basis in order to justify a lower amount of financial assurance than the certification amount applicable to the licensee's authorized possession limits.

V. Preliminary Regulatory Analysis Information

A. Alternatives

The two alternatives considered here are (1) no action, and (2) carrying out the rulemaking described in this plan.

(1) No Action

Under this alternative, no rulemaking would be done. The amount of financial assurance

required would not be adequate to fully fund decommissioning activities for a large number of licensees. This gap in funding would increase the likelihood that decommissioning of some facilities would not be carried out in a timely manner. It would also increase the likelihood that State or local governments and/or the general public would have to bear the costs of decommissioning.

(2) Rulemaking to Revise the Financial Assurance Requirements for Materials Licensees

A rulemaking to revise the financial assurance requirements for materials licensees would increase the assurance of adequate funding for decommissioning activities. This increased assurance would make timely decommissioning more likely, contributing to maintaining public health and safety. This action would also decrease the likelihood that State and local governments and/or the general public would have to bear the costs of decommissioning.

B. Basis for Cost/Effectiveness of Planned Rulemaking

The benefit of the planned rulemaking is the continuation of assurance of adequate funding for timely decommissioning. As stated above, there are gaps in the current financial assurance regulations, mainly due to large increases in decommissioning costs since the financial assurance regulations were put in place. Allowing these gaps to remain could increase the likelihood of inadequate funding for timely decommissioning.

The effect of inadequate/untimely funding of decommissioning may have adverse impacts on public health and safety. If a site is not decommissioned due to insufficient funds there is an increased likelihood of contamination and/or exposure of members of the public. The changes to the regulations proposed by this plan are concentrated in areas where the likelihood of inadequate funding relative to decommissioning costs appear to be relatively high. Firstly, the financial assurance requirements are imposed only on those licensees having the highest possession limits, and thus the potential for highest doses. Only about ten percent of materials licensees must provide financial assurance. Secondly, the changes proposed in this plan mostly

address situations where risk of inadequate funding of decommissioning obligations is greatest -- where required amounts of financial assurance appear to be substantially less than decommissioning costs.

Failure to provide adequate financial assurance for decommissioning also has equity considerations. The potential public costs involved in cleanup of contaminated facilities where financial assurance is inadequate must be considered. Equity considerations call for adequate financial assurance so that a licensee's decommissioning costs are borne by the licensee.

In addition, public confidence in NRC regulation is an issue. A default/bankruptcy by an NRC licensee which resulted in cleanup costs being born by a State or local government could result in serious adverse impacts on public confidence.

C. Potential Impacts on Licensees

Approximately 300 NRC materials licensees required to have financial assurance use the certification amounts rather than a facility-specific decommissioning funding plan. These licensees could face increased costs of obtaining financial assurance if an increase in certification amounts resulted from this proposed rulemaking. Changes in possession limits for use of certification amounts could subject some licensees to increased costs. All licensees using the certification amounts would continue to have the option of submitting a facility-specific decommissioning funding plan. If a licensee believed that the certification amounts were excessive for its decommissioning obligations, it could use the alternative of a facility-specific decommissioning funding plan. The facility-specific cost estimate should provide a more accurate estimate of decommissioning costs, but would involve more effort on the part of licensees to prepare such an estimate.

Some additional sealed source licensees would be required to have financial assurance if the threshold possession limits were lowered. Revision of the possession limits under which a sealed source licensee may use the \$75K certification amount would make some licensees base financial assurance on the alternative of a site-specific decommissioning funding plan cost

estimate. This facility-specific cost estimate is likely to be higher than \$75K, and the licensee would incur higher financial assurance costs. The facility-specific cost estimate should provide a more accurate estimate of decommissioning costs, but would involve more effort on the part of licensees to prepare such an estimate.

Creation of a new section of the financial assurance regulations for waste brokers, with the amount of financial assurance required dependent on waste inventories, would make some additional waste broker licensees provide financial assurance. Some other waste broker licensees already providing financial assurance would have to provide an increased amount of financial assurance. The current number of NRC waste broker licensees which could be affected is 13.

D. Resource Cost to NRC of Planned Rulemaking

NRC resources to accomplish the rulemaking are estimated at 2.4 Full Time Equivalent Staff Years (FTE's) for NRC staff time. At current NRC labor rates, this represents approximately \$300K. Direct contractor support for the rulemaking is estimated at approximately \$115K. The total NRC resource commitment is thus approximately \$415K. (Some part of the costs of the background studies of decommissioning costs done by Pacific Northwest National Laboratory can also be considered an indirect cost.)

VI. Office of the General Counsel Legal Analysis

The proposed rule would amend the Commission's requirements for financial assurance to better reflect current decommissioning costs. The amendments to 10 CFR Parts 30, 40, and 70 would address (1) certification amounts, i.e., the fixed amounts of financial assurance certain licensees need in the absence of a specific decommission cost estimate (e.g. \$75,000, \$150,000, \$750,000), (2) threshold levels for submitting cost estimates for sealed sources, and (3) definition of "waste brokers" and associated financial assurance requirements. As to waste brokers, it appears that the amendments may base financial assurance requirements only on volume. Consideration of the quantity of curies and type of material may also be relevant.

The rulemaking plan appropriately addresses backfit requirements and Agreement State compatibility and coordination. It recognizes the need to perform an environmental assessment and addresses the Paperwork Reduction Act, the Small Business Regulatory Flexibility Act, and the Regulatory Flexibility Act.

In conclusion, OGC has determined that there are no known bases for legal objection to the contemplated rulemaking.

VII. Backfit Analysis

The rulemaking actions discussed in this plan would not affect power reactors, or impose backfits as defined in 10 CFR 70.76, or 10 CFR 72.62(a), and no backfit analysis is necessary.

VIII. Agreement State Implementation Issues

Under the “Policy Statement on Adequacy and Compatibility of Agreement State Programs” which became effective on September 3, 1997 (62 FR 46517), NRC program elements (including regulations) can be placed into four compatibility categories. In addition, NRC program elements also can be identified as having particular health and safety significance or as being reserved solely to the NRC.

Compatibility Category A are those program elements that are basic radiation protection standards and scientific terms and definitions that are necessary to understand radiation protection concepts. An Agreement State should adopt Category A program elements in an essentially identical manner in order to provide uniformity in the regulation of agreement material on a nationwide basis.

Compatibility Category B are those program elements that apply to activities that have direct and significant effects in multiple jurisdictions. An Agreement State should adopt Category B program elements in an essentially identical manner.

Compatibility Category C are those program elements that do not meet the criteria of Category A or B, but the essential objectives of which an Agreement State should adopt to avoid conflict, duplication, gaps, or other conditions that would jeopardize an orderly pattern in the regulation of agreement material on a nationwide basis. An Agreement State should adopt the essential objectives of the Category C program elements.

Compatibility Category D are those program elements that do not meet any of the criteria of Category A, B, or C, above, and, thus, do not need to be adopted by Agreement States for purposes of compatibility.

Health and Safety (H&S) are program elements that are not required for compatibility (i.e., Category D), but have been identified as having a particular health and safety role (i.e., adequacy) in the regulation of agreement material within the State. Because of their health and

safety significance, the State should adopt program elements in this category based on those of NRC that embody the essential objectives of the NRC program elements.

Compatibility Category NRC are those program elements that address areas of regulation that cannot be relinquished to Agreement States pursuant to the AEA or provisions of Title 10 of the Code of Federal Regulations. These program elements should not be adopted by Agreement States.

This Rulemaking Plan will make adjustments to the sealed sources threshold possession limits for triggering the requirement for financial assurance and to the certification amounts in cases where decommissioning costs for licensees clearly exceed the certification amounts which the licensees may use. Because the sealed sources threshold possession limits and certification amounts are of health and safety significance (i.e., designated as H&S), any changes made to these limits or amounts would need to be adopted by the Agreement States.

The draft Rulemaking Plan has been provided to the Agreement States for a period of 45 days to obtain their input. Three comment letters were received, from Colorado, Illinois, and Washington.

IX. Public Participation

There is no need for formal enhanced public participation, with public meetings, for this rulemaking. The staff proposes to get early stakeholder input by placing the proposed rule on the technical conference forum, subject to Commission approval. The proposed rule and accompanying documents will be placed on the NRC rulemaking forum in addition to publication.

X. Supporting Documents Needed

An environmental assessment will be prepared. Since the rule provides for submittal of information by certain licensees, the information collection burden under the Paperwork Reduction Act will need to be addressed. Based upon its Regulatory Analysis, the NRC will also need to prepare

a certification that the proposed rule would not, if promulgated, have a significant economic impact on a substantial number of small entities. (Regulatory Flexibility Act of 1980 (5 U.S.C. 605(b)), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996, Pub. L. No. 104-121 (March 29, 1996) (SBREFA). The staff will also need to prepare in support of the final rule a report to be submitted to the Congress and GAO in accordance with the provisions of SBREFA. The staff will follow the procedures set forth in the Executive Director for Operations memorandum to Office Directors, dated June 25, 1996. The Regulatory Guide on financial assurance for materials licensees, Reg. Guide 3.66, "Standard Format and Content of Financial Assurance Mechanisms Required for Decommissioning under 10 CFR Parts 30, 40, 70, and 72," will need to be updated.

XI. Issuance

This planned rulemaking represents a significant policy issue and it is recommended that the Commission issue this rule, if approved.

XII. Resources Needed to Complete Rulemaking

Lead Office: NMSS

IMNS, NMSS	1.6 FTE	(write rulemaking documents)
DWM, NMSS	0.5 FTE	(provide technical input, review documents)
OGC	0.15 FTE	(provide legal input, review documents)
other (Admin., OSTP, CFO, CIO)	review documents	0.15 FTE

Total NRC 2.4 FTE

Approximately \$115K in contractor funding has been used to develop information for this rulemaking. Additional contractor support for rulemaking development, such as support for public comment analysis, may be needed (estimated \$30K).

XIII. Management Steering Group

Not needed for this rulemaking.

XIV. Staff Working Group

Concurring Official

C. Prichard, NMSS, IMNS

M. Virgilio

T. Fredrichs, NMSS, DWM

M. Virgilio

S. Lewis, OGC

S. Treby

T. O'Brien, OSTP

P. Lohaus

XV. Schedule

Final Draft Rulemaking plan to EDO

4/30/01

Proposed rule to EDO 9 months after approval of rulemaking plan

Final rule to EDO

6 months after close of public comment period

STATE OF COLORADO

Bill Owens, Governor
Jane E. Norton, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

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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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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
-  Alternative
-  Promising
-  Practice
-  Question
-  Answer

Message *Use Carriage Returns to make your message readable*

this reply