



PROPOSED RULE **PR 3240, 61 et al**
(50 FR 23960) (32)

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ATTENTION: ALL LICENSEES

SUBJECT: REQUEST FOR COMMENTS ON ADVANCE NATURE OF PROPOSED RULE MAKING

We and the Nuclear Regulatory Commission (NRC) are interested in your comments on the enclosed Advance Notice of Proposed Rulemaking on Financial Responsibility for Cleanup of Accidental Releases from Certain Material Licensees. The NRC is using this Notice to consider amending its regulations to require certain persons licensed to possess radioactive material to demonstrate that they possess sufficient resources to pay for cleanup of accidental releases of radioactive material. If this proposal is promulgated as a final NRC rule, it will be a matter of compatibility with the Agreement States, including Georgia.

Licensees under consideration in this Advanced Notice of Proposed Rule Making include certain classes of radiopharmaceutical manufacturers, industrial radiographers, users of gauging devices, gas chromatography, well-logging, nuclear medicine diagnosis, radiation therapy, and persons disposing or storing of their own waste under special license conditions.

As noted in the Federal Register Notice, comments are due by October 7, 1985. Should you comment to the NRC, we at the Radiological Health Section would appreciate a copy of your comments.

Sincerely,

Thomas E. Hill, Chief
Radioactive Materials Unit
Radiological Health Section

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TEH:dg

cc: Bobby G. Rutledge

In absence of demonstrated
need - no regulations made
rules should be made
Hillite

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NUCLEAR REGULATORY COMMISSION

10 CFR Parts 30, 40, 61, 70, and 72

Financial Responsibility Requirements Applicable to NRC Licensees for Cleanup of Accidental and Unexpected Releases of Radioactive Materials

AGENCY: Nuclear Regulatory Commission.

ACTION: Advance notice of proposed rulemaking (ANPRM).

SUMMARY: The Nuclear Regulatory Commission is considering whether to amend its regulations to require certain persons licensed to possess nuclear materials to demonstrate that they possess adequate financial means to pay for cleanup of accidental releases of radioactive materials. If licensees lack adequate financial resources and funds are not available for prompt cleanup, the consequences could be potentially significant for the public, the licensee, and the Federal government. This advance notice of proposed rulemaking is being issued to invite advice and recommendations on several questions pertaining to this proposal concerning scope of coverage, as well as the availability and cost to licensees of obtaining the various forms of financial assurance.

DATE: Comment period expires October 7, 1985. Comments received after this date will be considered if it is practical to do so, but assurance of consideration cannot be given except as to comments received before this date.

ADDRESSES: Send comments or suggestions to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Attention: Docketing and Service Branch.

Hand deliver comments to: Room 1121, 1717 H St. NW., Washington, DC between 8:15 a.m. and 5:00 p.m.

Examine copies of comments received at: The NRC Public Document Room, 1717 H Street NW., Washington, DC.

FOR FURTHER INFORMATION CONTACT: Mary Jo Seeman, Office of Nuclear Materials Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 427-4847.

SUPPLEMENTARY INFORMATION:

Background

Purpose and Scope

This ANPRM is seeking guidance on requiring certain classes of materials licensees to demonstrate evidence of financial responsibility for cleanup of accidental releases, i.e., an unauthorized release of radioactive materials due to human error, system failure, an act of God, or defective components. Licensees under consideration in this ANPRM include radiopharmaceutical manufacturers, industrial radiographers, users of gauging devices, gas chromatography, well-logging, nuclear medicine diagnosis and radiation therapy. Other NRC licensed operations covered by this ANPRM include fuel cycle activities such as uranium milling, UF₆ production, and fuel processing and fabrication. Regulated waste management activities include commercial low-level waste disposal, independent spent fuel storage facilities, and persons disposing or storing of their own waste under special license conditions.¹ If implemented, such standards would be a matter of compatibility with the Agreement States.

The financial assurance program for cleanup of accidental release being considered by the Commission in this ANPRM is separate and distinct from the compensation program mandated by the Commission regulations pursuant to the Price-Anderson Act, which does not provide funds for cleanup per se. Currently, the Price-Anderson program applies only to nuclear reactors on a mandatory basis and to plutonium processors and fuel fabricators on a discretionary basis.² These activities

¹ The proposed financial responsibility program would exempt the following Department of Energy facilities: High-level waste repositories (licensed under 10 CFR Part 60), independent spent fuel storage facilities, and monitored retrievable storage facilities (both licensed under 10 CFR Part 72). In the event of an accident, DOE has access to public funds to pay for cleanup. Additionally, DOE private contractors working at the repository can be indemnified under section 170(d) of the Atomic Energy Act.

² The Commission has authority under section 170 of the Atomic Energy Act to apply Price-Anderson indemnification to any category of licensee whenever the Commission deems it advisable in the

and uses of materials would not be included in the proposed program. The program proposed in this ANPRM is not intended to provide compensation to persons for personal injury or property damage and is, therefore, not a public liability program.

Moreover, it appears that the Comprehensive Environmental Response, Compensation and Liability Act of 1980, "CERCLA" (Pub. L. 96-510) would not provide cleanup funds for releases involving NRC licensees. In a Federal Register notice issued on September 8, 1983, (48 FR 40658) EPA made the following policy statement:

EPA has also chosen not to list releases of source, byproduct, and special nuclear material from any facility with a current license issued by the Nuclear Regulatory Commission (NRC), on the grounds that the NRC has full authority to require cleanup of releases from such facilities.

This ANPRM is soliciting public comments on the advisability of having NRC require financial responsibility for prompt cleanup of radioactive materials both on-site and off-site after accidental or unexpected contamination by fuel cycle and other materials licensees. Any necessary environmental restoration would also be included.³ Accidental or unexpected contamination refers to an unauthorized release of radioactive materials in excess of NRC regulatory limits regardless of the cause of the release. Examples of causes include human error or negligence, an act of God, licensee misconduct, system failure, or defective components.

This ANPRM focuses on whether to require licensees to demonstrate financial responsibility for cleanup of accidental or unexpected releases of radioactive materials and not for authorized and predictable activities normally associated with decommissioning. The latter is being addressed in a separate ongoing Commission rulemaking on decommissioning.

Need for Action

Although there is little information available on the financial condition of NRC fuel cycle and materials licensees, the NRC staff believes most of these licensees already have some financial

exercise of its licensing authority. However, the Commission has not chosen to extend Price-Anderson indemnification to materials licensees with the single exception of those engaged in the use of plutonium in a plutonium processing and fuel fabrication plant.

³ Environmental restoration following an accidental release into or upon the land or water is intended to provide limited coverage for the damage or destruction of natural resources.

resources or insurance coverage for on-site and off-site cleanup as a prudent business practice.

However, if a licensee did not have adequate financial resources, and an accidental or unexpected contamination did occur, there could be both short and long term adverse public health and safety consequences from the radioactive contamination, as well as loss of use of contaminated property. Moreover, from an equity viewpoint, the Commission believes it appropriate that the licensee, and not the public, should assume financial responsibility for prompt cleanup of accidental releases caused by licensee activities.

The issue of licensee financial responsibility for cleanup of accidental releases of radioactive materials has also been an issue with the States; the Conference of Radiation Control Program Directors has recognized the need for Federal standards since at least 1976. In August of 1984, in order to promote intergovernment consultation at an early stage of a proposed agency action, the Commission sent a draft version of this ANPRM to officials in all fifty States, and also asked for their comments. Commission staff also discussed the issue of the ANPRM with State radiation control program officials in October, 1984. The comments generally supported the development of the rulemaking, and specific comments were incorporated into the ANPRM.

Both NRC and Agreement State licensees have had accidental or unexpected releases of radioactive materials that have been costly to cleanup. State and Federal estimates for cleanup costs have been estimated at up to \$2,000,000 for a single event. Examples of some of these cleanup costs that the NRC staff is aware of include:

- In 1983, a cesium-137 sealed source was accidentally ruptured. Workers inadvertently spread the contamination into residences and public buildings. The cost for cleanup of this contamination was estimated to be at least \$500,000.
- In 1982, an americium-241 sealed source in use in a well-logging operation was inadvertently ruptured, resulting in contamination of both on-site drilling equipment and off-site homes and commercial residences. Cleanup costs were estimated to be up to at least \$1,000,000.
- During 1979 and 1980, a tritium manufacturer's operations in Tucson, Arizona resulted in releases both on and offsite. The company was financially unable to pay for cleanup, and State officials estimated that the State spent approximately \$2,000,000

in labor and capital costs for removal and cleanup of the tritium.

Relatively little data on cleanup costs for accidental releases of licensees is available in NRC records, mainly because this type of information is not required to be submitted to the agency. However, a recent review of NRC unusual events reports for radioactive releases by materials and fuel cycle licensees indicates that from 1980 to 1983, accidental or unexpected releases from licensees' operations believed to involve significant cleanup costs (more than a few thousand dollars) involved fewer than one percent annually of the total fuel cycle and materials licensees authorized to possess and use byproduct, source and special materials.

Besides lacking a comprehensive data base for licensee cleanup costs for accidental releases, the Commission also has no available records to determine if licensees lack (or previously lacked) adequate funds to provide for prompt cleanup of accidental releases. Accordingly, the Commission is using this ANPRM to solicit public and industry input on the scope and magnitude of the problem. However, even given this lack of a strong data base, the NRC staff does not believe it is prudent for the Commission to wait until an event occurs which requires expensive cleanup to consider the development of a regulation. Other agencies, such as the U.S. Environmental Protection Agency, have gone forward with financial responsibility requirements in the absence of a large documented data base.

In addition, several NRC-funded studies have presented cost estimates for cleanup of NRC-licensed fuel cycle facilities related to emergency planning issues and the Price-Anderson Act.⁴ Since these studies were prepared for different purposes and assumptions, it is difficult to compare the results or to use their conclusions as the basis for estimating cleanup costs for the vast majority of fuel cycle and material licensees. Therefore, the NRC staff is proposing to use the limited, but actual,

⁴ See J. P. McBride, "Economic Consequences of Accidental Releases from Fuel Fabrication and Radioisotope Processing Plants," prepared by Oak Ridge National Laboratories for the U.S. Nuclear Regulatory Commission, 1979 (NUREG/CR-0222); the results of the study were discussed in a U.S. Nuclear Regulatory Commission Information Report, "Extension of Indemnity Coverage To Materials Licensees Other Than Those Processing And Using Plutonium," (SECY-80-467), October 10, 1980. See also H. K. Elder, Working Paper, "Technology, Safety and Costs of Decommissioning Reference Nuclear Fuel Cycle and Non-Fuel Cycle Facilities Following Postulated Accidents," Pacific Northwest Laboratory, NUREG/CR-3293, August, 1983.

past cleanup cost experience (discussed previously) as the basis for setting the amount of financial responsibility coverage in this ANPRM. The NRC staff will consider, at a later date, the issue of financial responsibilities for the small number of licensees who have the potential to be involved in the significantly more costly cleanups postulated in the NRC-funded studies.

Regulatory Precedents

A variety of State and Federal agencies have enacted financial responsibility requirements to provide assurance that funds are available for cleanup of accidental releases of various substances. Federal agencies have enacted requirements pursuant to the Motor Carrier Act, (Pub. L. 96-296), the Resource Conservation and Recovery Act, (Pub. L. 94-580), the Federal Water Pollution Control Act of 1972, (Pub. L. 92-500), Surface Mining Control and Reclamation Act of 1977 (Pub. L. 95-87), Outer Continental Shelf Lands Act, (Pub. L. 95-372), the Trans-Alaska Pipeline Authorization Act of 1973 (Pub. L. 93-153), and the Deep-Water Port Act of 1974 (Pub. L. 93-627).

The stipulated dollar requirements vary from \$10,000 to over \$5,000,000 for these different programs. As an example, the 1984 minimum levels of financial responsibility for motor carriers transporting hazardous substances ranges from between \$1,000,000 to \$5,000,000 (Motor Carrier Act of 1980). The EPA regulations for financial responsibility for owners and operators of hazardous waste facilities (40 CFR Parts 264 and 265, Subpart H) require coverage of \$1,000,000 dollars for each sudden occurrence, with an annual aggregate of at least \$2,000,000, and \$3,000,000 for each nonsudden occurrence, with an annual aggregate of at least \$8,000,000 (Subtitle C—Hazardous Waste Management, Resource Conservation and Recovery Act).

Impacts

The Commission is aware that, if promulgated, the potential rule could impact a variety of parties. Before the Commission would implement the financial responsibility requirement, it would assure itself, on the basis of the information gathered from the public comments as well as additional study by the NRC staff, that the health and safety benefits of such a requirement would outweigh the costs imposed on licensees and the public.

If licensee funds are not promptly available for cleanup, public funds might have to be directly expended by State

and Federal agencies. Even without a bankrupt licensee, there could be significant public impacts if cleanup is delayed by ensuing litigation over the responsibility and cost.

As previously mentioned, the NRC staff believes that most materials licensees have adequate financial resources for prompt cleanup of accidental releases as a matter of prudent business practice. This proposed rulemaking would have the most significant impact on those licensees who may not be able to provide adequate financial assurances. Accordingly, the staff is especially interested in hearing from those licensees who feel they cannot demonstrate that they have sufficient resources to assure cleanup of accidental releases.

The cost to NRC licensees for meeting the financial requirements for prompt cleanup would vary, depending on the level of funding and on the type of financial assurance mechanism selected. There are a variety of possible legal instruments and arrangements that could be used to demonstrate that a licensee possesses adequate resources to provide funds for prompt cleanup of accidental releases of radioactive materials. They include insurance, trust funds, surety or performance bonds, escrow accounts, certificates of deposits, deposits of securities, letters of credit, a parent company guarantee, and an analysis of the licensee's financial condition.

The most expensive approach would require that a licensee put aside 100% of the estimated cost of cleanup. Examples of this approach include cash deposits, or deposits of securities. Less expensive approaches involve purchasing an insurance policy or financial instrument from a third party, such as an insurance company, bank, or financial institution with a face amount equal to the estimated costs of cleanup. Specific costs of the various financial mechanisms are not easily obtained from licensees or from the financial and insurance institutions. Accordingly, the NRC is specifically interested in obtaining comments on the costs of these types of financial instruments in this ANPRM.

The proposed regulatory requirement would also impact NRC resources. The logistics and resource costs for amending thousands of materials licensees would be significant. The requirement would also entail an agency administrative effort for recordkeeping, auditing, and enforcement. However, the proposed financial assurance requirement could also avert substantial NRC costs resulting from lengthy

enforcement proceedings and/or litigation against licensees unable to assure prompt cleanup.

Summary of Features Being Considered for Proposed Rule

The Commission is seeking comments in this ANPRM on a proposal that would require certain fuel cycle and materials licensees to demonstrate adequate financial resources for cleanup of accidental releases of radioactive materials on-site and off-site. Financial responsibility would cover cleanup for both property and environmental restoration (see footnote 3). For purposes of initial discussion, the Commission is considering a \$2,000,000 baseline as the required maximum amount of financial responsibility for materials and fuel cycle facilities. This figure was chosen because it is in the range of known cleanup costs for NRC licensees and of other stated dollar amounts of State and Federal financial responsibility requirements for cleanup of accidental releases (See "Regulatory Precedents"). The amount would be adjusted to reflect changes in inflation and technology.

The Commission will consider, at a later date, the issue of financial responsibility for the small number of licensees who have the potential to be involved in the significantly more costly cleanups postulated in the NRC funded studies referenced in footnote 4.

The proposed rule would have the following features:

1. The transporting of radioactive material by common and contract carriers covered by the financial responsibility requirements of the Motor Carrier Act of 1980 (Pub. L. 96-296) would be excluded.
2. Financial responsibility would cover both sudden and nonsudden accidental releases and would exclude authorized and predictable activities normally associated with decommissioning. Additionally, if a licensee were required to demonstrate financial responsibility for both decommissioning and cleanup of accidental releases, he could not use the same financial assurance to guarantee both commitments. The latter is being covered by the Commission's decontamination and decommissioning rulemaking.
3. Financial responsibility would cover on-site and off-site cleanup for private and public property, as well as environmental restoration of natural resources.
4. Licensed State, Federal government, or other self-insured public authorities would be excluded.

5. Types of possible acceptable financial assurances that the Commission staff is considering include:

- a. Standard comprehensive general liability insurance.
- b. Environmental impairment liability insurance.
- c. Conventional property insurance.
- d. Non-Price Anderson nuclear liability and property insurance.
- e. Cash or negotiable securities held by a third party, such as a trust, or escrow account.
- f. A financial test.
- g. A surety or performance bond.
- h. A corporate guarantee from a parent company.

Specific Considerations

Advice and recommendations on the Commission's proposed action are invited from all interested persons, and specifically, from licensees, State officials, and representatives of the finance and insurance industry. Comment is also invited on which licensees should be considered for exemption from this proposed requirement, as well as the availability, cost, and applicability of the various financial assurance mechanisms to provide adequate financial assurances for cleanup of accidental releases.

1. Describe the extent and nature of financial responsibility problems, if any, for the cleanup of accidental releases by materials licensees.

2. Assuming the need for the resolution of financial responsibility problems for the cleanup of accidental releases, the Commission is seeking comments and supporting reasons on the following questions:

- a. What criteria (such as half-life, physical form, type of encapsulation, and amount of radioactive material) should NRC use for determining the amount of coverage to be required for different classes of licensees?
- b. What effect would the cost of this coverage have on licensee operations?
- c. How large should the financial responsibility requirement be? Should there be a uniform minimum amount, or a "sliding scale" requirement, to match the financial requirements to the actual risks of various types and quantities of materials possessed, or the financial size of the licensee? If so, what criteria are suggested in this regard?
- d. One basis for determining the amount of coverage being considered under the Commission's proposed rulemaking would be the characteristics of the licensed material. Should the Commission exempt licensees with certain types or quantities of radioactive materials, such as those with short half-

lives with low activities? If so, what cutoff criteria should be applied?

e. Should the Commission consider increasing the amount of coverage for licensees whose facilities have poor safety and/or inspection histories?

f. What criteria (such as ensuring that the funds will be promptly available when needed) should NRC use in evaluating financial assurance mechanisms?

g. How should the financial protection be provided to ensure that it will be available if needed?

h. With regard to comprehensive general liability and environmental impairment liability policies, the Commission staff is especially interested in hearing from offerors of these policies regarding the availability of their insurance for specified nuclear risks, as well as the terms and conditions of these types of insurance. What is the availability and premium cost of these types of policies (as well as facility form liability coverage from the nuclear insurance pools) to provide cleanup coverage for off-site sudden and nonsudden accidental or unexpected releases of radioactive materials from licensee operations, including damage to natural resources? Are the terms and conditions of these existing types of policies appropriate for covering the risks of accidental nuclear releases? If not, would the insurance industry provide this type of coverage?

i. What is the cost and availability of property insurance from the conventional insurance market and the nuclear insurance pools to provide cleanup coverage for sudden and nonsudden on-site accidental or unexpected releases of radioactive materials from materials licensees? Are the terms and conditions of these existing types of policies appropriate for covering the risks of accidental nuclear releases? If not, would the insurance industry provide this type of coverage?

j. Are there financial assurance mechanisms and insurance policies currently available to provide coverage for environmental restoration of natural resources?

k. How can the Commission ensure that funds for cleanup are promptly available when an accidental release occurs, while still preserving the rights of guarantors to evaluate whether such claims for cleanup are legitimate?

The Commission is particularly interested in hearing from both regulatory agencies with a history of administering financial responsibility programs, as well as financial and insurance institutions on this issue. Furthermore, if it appears that there is going to be a delay before the guarantor

will provide funds for cleanup, and prompt cleanup is necessary for health and safety reasons, are there other avenues for cleanup funds available to the Commission or other responsible State or Federal agency?

l. Should the Commission also consider requiring licensees to provide evidence of financial responsibility for the non-radiological component of cleanup of an accidental release?

m. How should the Commission consider setting up such a program so that it is promptly notified when there is a change in the financial status of the licensee?

n. Should the Commission consider differentiating between intentional and accidental releases?

o. What amount of coverage would be appropriate for those fuel fabrication and radioisotope processing plants which have the potential for accidents resulting in cleanup costs significantly higher than \$2 million?

List of Subjects

10 CFR Part 30

Byproduct material, Government contracts, Intergovernmental relations, Isotopes, Nuclear materials, Penalty, Radiation protection, Reporting and recordkeeping requirements.

10 CFR Part 40

Government contracts, Hazardous materials—transportation, Nuclear materials, Penalty, Reporting and recordkeeping requirements, Source material, Uranium.

10 CFR Part 61

Low-level waste, Nuclear materials, Penalty, Waste treatment and disposal.

10 CFR Part 70

Hazardous materials—transportation, Nuclear materials, Packaging and containers, Penalty, Radiation protection, Reporting and recordkeeping requirements, Scientific equipment, Security measures, Special nuclear material.

10 CFR Part 72

Manpower training programs, Nuclear materials, Occupational safety and health, Security measures, Spent fuel, Reporting and recordkeeping requirements.

The authority citation for this document is:

Authority: Sec. 161, Pub. L. 83-703, 68 Stat. 948 as amended (42 U.S.C. 2201).

Dated at Washington, D.C., this 4th day of June, 1985.

For the Nuclear Regulatory Commission
Samuel J. Chilk,
Secretary of the Commission.
[FR Doc. 85-13775 Filed 6-6-85; 8:45 am]
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