

**2005
RATIONALE**

PART S

REQUIREMENTS FOR FINANCIAL ASSURANCE

Introduction

U.S. Nuclear Regulatory Commission (NRC) regulations in 10 CFR Parts 30, 40, and 70 set forth the criteria for financial assurance requirements for licensed non-reactor nuclear facilities. These regulations, promulgated in 1988 as part of the decommissioning rulemaking (53FR24018, June 27, 1988), are the basis of this Part S. Their intent is to ensure that sufficient financial resources are available to the cognizant government agency to ensure that reclaiming and decommissioning is performed in a safe and timely manner at all licensed nuclear facilities.

On July 26, 1995 (60 FR 38235), effective November 24, 1995, NRC clarified that financial assurance requirements must be in place during operations and updated when licensed operations cease. The intent of this requirement is to ensure that adequate funds are available to ensure that the decommissioning of licensed facilities can be accomplished.

Requirements added to 10 CFR Parts 30, 40 and 70 include those published on May 16, 1996 (61 FR 24669), effective June 17, 1996, on July 21, 1997 (62 FR 39057), effective August 20, 1997, on June 1, 1998 (63 FR 29535), effective July 1, 1998, and on October 3, 2003 (68 FR 57327), effective December 2, 2003.

The final rule on radiological criteria for license termination, published July 21, 1997 (62 FR 39068), closely relates decommissioning and financial assurance requirements.

The sections of this rationale are annotated with the U.S. NRC compatibility categories, as follows:

A = Basic radiation protection standard or related definitions, signs, labels or terms necessary for a common understanding of radiation protection principles. The State program element should be essentially identical to that of NRC.

B = Program element with significant direct transboundary implications. The State program element should be essentially identical to that of NRC.

C = Program element, the essential objectives of which should be adopted by the State to avoid conflicts, duplications or gaps. The manner in which the essential objectives are addressed need not be the same as NRC provided the essential objectives are met.

D = Not required for purposes of compatibility.

NRC = Not required for purposes of compatibility. These are NRC program element 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. The State should not adopt these program elements.

H&S = Program elements identified as H&S are not required for purposes of compatibility; however, they do have particular health and safety significance. The State should adopt the essential objectives of such program elements in order to maintain an adequate program.

Sec. S.1 and S.2 - Purpose and Scope.

Part S brings together special requirements for financial assurance related to reclaiming and decommissioning a facility or site with residual radioactivity. Part S applies to any licensed facility or site, including radioactive waste handling and disposal as well as source material milling.

Sec. S.3 - Definitions.

The definition of "decommission", which is "to remove a facility or site safely from service and reduce residual radioactivity to a level that permits release of the property for unrestricted use and termination of license", is from 10 CFR 20.1003 (62 FR 39058), and also 30.4, 40.4 and 70.4. The definition is NRC compatibility category C. This definition is found in Part O of these regulations.

The NRC definition of a "decommissioning funding plan" in 10 CFR 30.35(e), 40.36(d) and 70.25(e) is condensed. For comparison, the U.S. Nuclear Regulatory Commission definition is "a plan which includes a cost estimate for decommissioning and a description of the method of assuring funds for decommissioning, including means of adjusting cost estimates and associated funding levels periodically over the life of the facility". The definition is NRC compatibility category D.

The definition of "facility" is found in Part O of these regulations.

The definition of "financial surety" has been added.

The definition of "licensed site" may be appropriately placed in Part A of these regulations.

The definition of "reclaiming" may be appropriately placed in Part A or Part O.

Sec. S.4 - Financial Assurance Arrangements [Sureties] [Warranties] Required.

Sec. S.4a. states that the Agency may require any licensee to furnish a decommissioning financial assurance arrangement.

Sec. S.4b. identifies the specific licensees that are required to furnish decommissioning financial assurance arrangements. S.4b. is an inclusive list of all of the types of specific licensees required to furnish decommissioning financial assurance arrangements. In the 2003 revisions to 10 CFR Parts 30, 40, and 70, NRC added financial assurance requirements for large sealed source licensees and waste brokers. Waste collectors and processors have been added to the list in this section. These provisions are NRC compatibility category H&S.

Sec. S.4b.i. is drawn from 10 CFR 40.36(b). Part S simply requires a decommissioning funding plan

for any license authorizing possession and use of more than 370 MBq (10 mCi) of source material in a readily dispersible form. The option provided by 10 CFR 40.36(a) for between 37 and 370 MBq (10-100 mCi) is omitted from Part S, which requires in S.5c that the decommissioning funding plan includes certification by the licensee that funding for decommissioning activities has been provided for in the full amount of the cost estimate for decommissioning.

S.4b.ii.(1) is drawn from 10 CFR 30.35, 40.36 and 70.25.

S.4b.ii.(2) is drawn from 10 CFR 30.35, 40.36 and 70.25.

S.4b.ii(3) is added because Appendix A does not list values for certain alpha-emitting radionuclides (e.g., radium-226, thorium-230, and uranium-238). A decommissioning funding plan is explicitly required for licensees authorized to possess these materials. Under this provision, small quantities of alpha-emitting radionuclides may be licensed without requiring financial assurances or a decommissioning funding plan. This provision is consistent with the federal financial assurance requirements in 10 CFR Part 30, Appendix B.

S.4b.iv requires a decommissioning funding plan for any commercial radioactive waste handling and/or packaging licensee. This requirement was added by the 2003 revisions to the NRC regulations in Part 30, and is a compatibility category H&S.

S.4b.vi. requires a decommissioning funding plan for any radioactive waste disposal licensee.

S.4b.vii. requires a decommissioning funding plan for any source material milling licensee.

Sec. S.4c., from the State of Tennessee, and Sec. S.4d, from the State of Colorado, explain more explicitly the basis for the amount of funds required.

Sec. S.4e., from the State of Colorado, makes clear that cost estimates must be based upon the costs of hiring an independent contractor to perform decommissioning and disposal and must be sufficient to cover reasonable administration and legal costs incurred by the Agency in overseeing the activities.

Sec. S.4f. reflects state concerns that a signed original be provided. In Colorado, a decommissioning (and long-term) warranty are explicitly required for radioactive waste disposal licensees. These facilities will have authorization for large quantities of radioactive materials and will ultimately end in a permanent disposal site. The potential liability of the Agency to license a waste disposal facility would be similar to the licensure of a uranium mill facility.

Sec. S.5 - Decommissioning Funding Plan Required.

Sec. S.5a. is drawn from 10 CFR 30.35(a) and 70.25(a).

Sec. S.5b. and 5c. are drawn from the 2003 revisions to 10 CFR 30.35(a). These provisions are compatibility category H&S.

Sec. S.5d. compares to 10 CFR 30.35(e), 40.36(d) and 70.25(e). This provision is compatibility category D.

Sec. S.5e. requires the decommissioning funding plan to include a certification that funding has been provided. S.5e. also requires a copy of the financial instrument as part of certification. S.4f. requires a signed executed original copy of each financial assurance instrument be furnished to and approved by the Agency prior to the issuance of a new license, or any amendment or renewal of an existing license. Alternative (bracketed) language similar to 10 CFR 30.35(b)(2), 40.36(b)(2) and 70.25(b)(2), has been included in Part S regarding deferral of execution of the financial instrument until after the license has been issued.

Sec. S.6 - Acceptable Financial Assurance Methods.

Sec. S.6 is drawn from several parts of 10 CFR, for example 40.36(e). These provisions are NRC compatibility category D.

S.6a. clearly states the key required components.

S.6b. lists the acceptable methods by type.

S.6b.i., prepayment, is parallel to compares to 10 CFR 30.35(f)(1), 40.36(e)(1) and 70.25(f)(1).

S.6b.ii., regarding a surety method, insurance, or other guarantee method, is consistent with 10 CFR 30.35(f)(2), 40.36(e)(2) and 70.25(f)(2).

Sec. 6b.ii.(3): If a financial warranty is provided by a corporate surety, then that surety must be “ best rated AA-V” or better and listed on the U.S. Treasury’s federal register of companies holding certificates of authority as acceptable sureties on federal bonds.

Sec. 6b.ii.(3)(c) is added based on NRC rulemaking effective July 1, 1998, modifying 10 CFR 30.35(f)(2), 40.36(e)(2) and 70.25(f)(2) to provide for self-guarantee of decommissioning funding for commercial companies that do not issue bonds.

Sec. 6b.ii.(3)(d) is added based on NRC rulemaking effective July 1, 1998, modifying 10 CFR 30.35(f)(2), 40.36(e)(2) and 70.25(f)(2) to provide for self-guarantee of decommissioning funding for nonprofit entities, such as colleges, universities, and nonprofit hospitals.

S.6b.iii., regarding an external sinking fund, is parallel to 10 CFR 30.35(f)(3), 40.36(e)(3) and 70.25(f)(3).

S.6b.iv., regarding government licensees, is parallel to 10 CFR 30.35(f)(4), 40.36(e)(4) and 70.25(f)(4).

S.6b.v., regarding government entity assuming custody and ownership of a site, is parallel to 10 CFR 30.35(f)(5), 40.36(e)(5) and 70.25(f)(5).

Sec. S.7 - Periodic Review of Financial Assurances.

Sec. S.7 provides for all financial assurances the kind of periodic review of financial assurances require for source material mills and extraction facilities.

Sec. S.8 - Financial Assurances Recordkeeping.

The provisions of S.8 are comparable to 10 CFR 30.35(g), 40.36(f) and 70.25(g). They incorporate modified requirements for disposition of records were added to 10 CFR Parts 30, 40 and 70 on May 16, 1996 (61 FR 24669), effective June 17, 1996 and again July 21, 1997 (62 FR 39057), effective August 20, 1997. These provisions are NRC compatibility category H&S.

Sec. S.9 - Minimum Financial Assurance Amount.

Sec. S.9 is comparable to 10 CFR 30.35(d) and 70.25(d), except that Part S explicitly requires full cost decommissioning funding rather than the amounts. Amounts listed in S.9 are listed as a minimum required amount of financial assurance and reflect revisions in NRC regulations in 2003. These provisions are NRC compatibility category H&S.

Sec. S.10 - Long-Term Care Financial Assurance Requirements.

This provision requires licensees to provide a long-term care warranty if the facility will be decommissioned and the license terminated under conditions of restricted use or using alternate dose criteria. This requirement was derived from the provisions of 10 CFR 20.1403(c).

S.10 makes explicit that, in addition to the decommissioning warranty required by S.4, the Agency may require any licensee to provide a long-term care warranty if the licensed facility will remain a disposal site for radioactive materials subsequent to the termination of the license, or the license will be terminated using criteria in Parts O.10 or O.11. Part O.10a. is based on the NRC 10 CFR 20.1403 criteria for a site to be considered acceptable for restricted use. Part O.10b. is the same as 10 CFR 20.1403(b). O.10c. of these regulations refers to NRC financial assurance criteria which are incorporated into this Part S.

Sec. S.11 - Exemption from Financial Assurance Requirements.

S.11 provides for certain exemptions from financial assurances.

Sec. S.12 - Timely Instatement of Financial Assurance Arrangements.

Similar to 10 CFR 30.35(c), 40.36(c) and 70.25(c), Sec. S.12 enables the Agency to bootstrap existing licensees from whom financial assurances are required. Similarly, O.11 of these regulations is based on the U.S. NRC 10 CFR 20.1404 mechanism for license termination in the very rare case when dose criteria are difficult to meet directly. Agreement states may not wish to include these provisions. These provisions are NRC compatibility category D.

Appendix A. Two isotopes used in medical and biochemical research were added to Part S that are not included in 10 CFR Part 30 Appendix C. P-33 has a half-life of 25 days, and Na-22 a half-life of 2.6

years.

Matters for Future Consideration

These matters for future consideration came from state radiation control agency comments and from federal and state agency documents used by the working group.

1. Consider extending the reach of licensee financial assurance to certain transportation accident decontamination situations.