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December 28, 2001

Annette L. Vietti-Cook, Secretary  
U.S. Nuclear Regulatory Commission  
Mail Stop O-16 C1  
Washington, DC 20555-0001

ATTN: Rulemakings and Adjudications Staff

Response to  
Advance Notice of Proposed Rulemaking  
Entombment Options for Power Reactors  
(66 Federal Register 52551 dated October 16, 2001)

Dear Ms. Vietti-Cook:

Southern Nuclear Operating Company (SNC), the licensed operator for the Joseph M. Farley Nuclear Plant, the Edwin I. Hatch Nuclear Plant and the Vogtle Electric Generating Plant, has reviewed the Advance Notice of Proposed Rulemaking (ANPR) regarding the entombment options for power reactors. The following comments are provided in support of the Nuclear Regulatory Commission's (NRC) efforts to establish an additional safe and effective decommissioning option for power reactors.

Current decommissioning regulations (10CFR50.75, 50.82, 10CFR20 Subpart E, etc.) are based on assumptions that disposal of low-level radioactive waste (LLRW) will be available and that the cost associated with that disposal will be equivalent to current disposal rates plus escalation. Experience with LLRW disposal during the last 25 years indicates that the validity of such assumptions may be tenuous, particularly when projecting forty to one hundred years or more into the future. The entombment option described in the ANPR would provide a regulatory structure that ensures that power reactors can safely be decommissioned even if access to LLRW facilities is not available. In addition, the entombment option could provide a decommissioning approach that would significantly reduce radiological exposure and industrial safety risk.

This regulatory initiative of the NRC is greatly needed and its success or failure will depend in large measure on the success of communicating to the public the technical and regulatory process, the principles and the safety of the proposed option. In that context, SNC suggests that consideration be given to the appropriateness of the term "entombment." The term has already been used by the Department of Energy for decommissioning some of its reactors, without NRC regulatory oversight and without the performance criteria or other details that would be developed in the proposed rulemaking. The term "entombment" has been used by SNC in providing these comments, but the term itself is not descriptive of the scope, technology, and oversight of the decommissioning option being proposed by the NRC. A term or phrase that communicates the full decommissioning concept

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(for example, licensed isolation for decay) would be a better choice for communicating this option to the public during the rest of the rulemaking and regulatory process.

In response to the opportunity for public comment, SNC supports the development of a decommissioning option similar to option 2 in the ANPR and based on the principles delineated below:

1. The rule should be simple and performance-based. In essence, the principal regulatory change required is to remove the 60-year limitation on safestor. The licensee should be required to maintain its 10CFR50 license (with an appropriately reduced scope) until the 10CFR20, Subpart E standard can be met. Prior to license termination under Subpart E, the Part 50 license would provide federal oversight of the licensee and continue NRC inspection and enforcement authority. License termination would be allowed under Subpart E when the licensee demonstrates it can meet the performance-based license termination rule standard for restricted or unrestricted release.
2. To appropriately focus and conserve licensee and NRC resources during the entombment period, the entombment rulemaking should identify the reduced scope of the 10CFR50 license that would be necessary to protect public health and safety during entombment. Security, insurance, monitoring and active maintenance requirements all need to be specified in the rule.
3. Beyond license termination under Subpart E, institutional controls should be relied upon only if the licensee chooses to terminate the license under the restricted release criteria of 10CFR20.1403.

SNC is in total agreement with the comments that are to be provided to the NRC by the Nuclear Energy Institute. In addition to a strong general endorsement of the NEI comments, SNC offers, in the attachment to this letter, supplemental responses to some of the specific questions contained in the ANPR.

SNC urges the NRC to proceed with the rulemaking process associated with this decommissioning option.

Respectfully submitted,

  
D. N. Morey

DNM/JMG

Attachment

cc: Southern Nuclear Operating Company  
Mr. J. B. Beasley, Vice President - Vogtle  
Mr. H. L. Sumner, Jr., Vice President - Hatch

## Attachment

### SNC Response to Specific Questions Contained in the Entombment ANPR.

**A.1.** Does the existing 10 CFR 50.82(a)(3) provide an adequate basis to allow periods of entombment beyond 60 years. If not, in what way should the regulations be changed?

**Comment:** 10CFR50.82(a)(3) should be changed to remove reference to a 60-year decommissioning deadline.

**A.2.** Is 10 CFR part 20, subpart E, adequate to achieve license termination using an entombment approach? If not, how and why should this rule be modified?

**Comment:** Yes, Subpart E is adequate as written for terminating the license of an entombed facility. However, there should be additional guidance developed regarding what credit can be taken for engineered barriers when analyzing intruder scenarios or releases to demonstrate compliance with Subpart E.

**A.3.** Should entombed facilities be required to maintain some type of NRC license after the facility meets the dose criteria of part 20, subpart E? If so, what conditions need to prevail before the license may be terminated? What alternatives might exist for adequately managing the radioactive materials left in the entombed structure?

**Comment:** No. Once Subpart E criteria are met, the license should be terminated and there should be no continuing requirement for a license.

**A.4.** A new part is being considered in the regulations to establish performance objectives and requirements for licensing an entombed disposal facility. Should this option replace Subpart E for purposes of entombment or should a licensee have a choice between using Subpart E approach or the entombed facility license approach? Should the dose-based criteria for the entombed facility license be based on subpart E dose limits? If not, what should be the basis for those limits?

**Response:** 10CFR20, Subpart E criteria (with guidance to establish the intruder exposure scenarios which must be evaluated in order to demonstrate compliance with the license termination rule) are appropriate for termination of a Part 50 license that has been extended to allow for entombment, but the question is posed as "requirements for licensing an entombed disposal facility." 10CFR50.82[a][3], after removal of the existing 60-year limit, should be adequate for protecting public health and safety during the entombment period since the facility will continue to be under the institutional and regulatory controls associated with extension of the Part 50 license. Since entombment would simply be an extension of the existing 60-year deadline for site decommissioning, there should be no significant change from the performance criteria applicable during the currently allowed decommissioning period. As stated in the NEI comments, an entombed facility, released under Subpart E, should not be considered or referred to as a "disposal facility" but rather as a "decommissioned reactor site."

**A.6.** Are there other options that the Commission should consider in developing an approach to entombment that will provide for its viability while maintaining the public health and safety?

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**Comment:** If the Commission continues to apply 10CFR20 dose limits and 10CFR50, Appendix I (ALARA) requirements during the licensed entombment period and if it follows the current Subpart E performance-based dose criteria when allowing post-entombment Part 50 license termination and site release, public health and safety will be protected. No other approach is needed.

**E.1.** Please provide any other considerations or rule changes that the Commission should consider to facilitate license termination based on an entombment approach, while maintaining the requisite protection of the public health and safety?

**Comment:** To appropriately focus and conserve licensee and NRC resources during the entombment period, the entombment rulemaking should identify the reduced 10CFR50 license scope that would be necessary to protect public health and safety during entombment. Security, insurance, monitoring and active maintenance requirements all need to be specified in the rule.

**E.2.** The NRC is interested in the likelihood that licensees would pursue entombment to assist it in formulating its decision regarding the entombment options. Please provide your assessment as to the number of licensees likely to pursue entombment as an option. Specifically, it is requested that reactor licensees indicate their potential interest in choosing the entombment option. The preliminary views expressed in this document may change in light of comments received. If the proposed rule is developed by the Commission, there will be another opportunity for additional public comment in connection with that proposed rule.

**Response:** SNC desires for entombment to be available and viable as an option for decommissioning. It is important for planning purposes to have at least one option that is not dependent on resolution of long-term low-level radioactive waste (LLRW) disposal availability or on predictable LLRW disposal pricing. To make the option viable, the requirements and performance criteria that must be met need to be clearly defined. The decision on using the entombment option will not be made until our units are much closer to decommissioning. Conditions that would influence the outcome of that decision process could change significantly during that time. Factors that will be considered in deciding on what decommissioning option will be used will likely include the availability of LLRW disposal options, the desired future use of the facility site, and the economics of the various decommissioning options.