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**RICHARD J. MYERS**

Senior Director, Economic & Business Policy  
Phone: 202.739.8021  
Fax: 202.293.3451  
EMail: rjm@nei.org

July 26, 2000

Ms. Annette Vietti-Cook  
Secretary  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

ATTENTION: Rulemakings and Adjudications Staff

SUBJECT: Nuclear Energy Institute's Comments on the Petition for Rulemaking filed by Eric Joseph Epstein (65 Fed. Reg. 30550, May 12, 2000)

Dear Ms. Vietti-Cook:

These comments are submitted by the Nuclear Energy Institute (NEI)<sup>1</sup> on behalf of the nuclear energy industry in response to the Nuclear Regulatory Commission's *Federal Register* Notice seeking public comment on a Petition for Rulemaking filed by Eric Joseph Epstein (65 Fed. Reg. 30550, May 12, 2000). In the *Federal Register* notice, the Nuclear Regulatory Commission (NRC) requested public comment on Epstein's request that NRC initiate a rulemaking relating to financial assurance for decommissioning.

Assuring adequate funding to decommission commercial nuclear power plants at the end of their useful lives is a major industry priority. Like the NRC, the industry believes (1) that decommissioning of nuclear power reactors is a public health and safety necessity, and (2) that there must be reasonable assurance that decommissioning will be funded, regardless of whether a plant

<sup>1</sup> NEI is the organization responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry, including regulatory aspects of generic operational and technical issues. NEI members include all companies licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, materials licensees, and other organizations and individuals involved in the nuclear energy industry.

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Ms. Annette Vietti-Cook  
July 26, 2000  
Page 2

is operating or shut down, and regardless of the market uncertainties associated with industry restructuring.

The NRC is to be commended for having addressed the issue of decommissioning funding, and other significant regulatory issues that arise as a result of the ongoing restructuring of the electric power industry, in a measured and systematic way over the last several years.

In 1997, the NRC published a Proposed Rule on Financial Assurance Requirements for Decommissioning Nuclear Power Reactors (62 Fed. Reg. 47588; September 10, 1997). After extensive comments and discussions with all stakeholders and interested parties, the NRC published a Final Rule on Financial Assurance Requirements for Decommissioning Nuclear Power Reactors (63 Fed. Reg. 50465; September 22, 1998). That Final Rule satisfies the NRC's need for reasonable assurance that nuclear power plant licensees will accumulate sufficient funds to decommission their facilities, and requires licensees to file biennial reports with the NRC on the status of their decommissioning trust funds.

These comments first provide a general assessment of the issues raised in the Epstein Petition. Second, these comments address the three specific recommendations in the petition. Third, since the petition also expresses opinions on several other issues in support of its recommendations, some of these issues warrant further comment and clarification. NEI's comments address the following three issues raised by Epstein: (1) non-radiological decommissioning costs; (2) premature shutdown of nuclear reactors; and (3) spent fuel storage and high-level waste disposal.

In brief, NEI believes the Epstein Petition for Rulemaking is without merit, has no basis in fact, proceeds from a number of mistaken assumptions and must, therefore, be rejected.

## **I. General Assessment of the Epstein Petition**

The Petition for Rulemaking alleges, *inter alia*, that NRC has failed to require financial assurance of decommissioning from minority owners of nuclear power plants; that one such minority owner of one commercial facility (the Susquehanna nuclear power plant) is not accumulating sufficient funds to meet its decommissioning obligation; and that the nuclear energy industry as a whole is not accumulating sufficient funds for decommissioning.

Ms. Annette Vietti-Cook  
July 26, 2000  
*Page 3*

Contrary to the petition's allegations, the facts are as follows:

1. All entities with an ownership interest in a commercial nuclear facility are NRC licensees.
2. The NRC already requires all such entities to provide reasonable financial assurance of decommissioning funding. This authority is stated explicitly and unequivocally in the NRC's Final Rule on Financial Assurance Requirements for Decommissioning Nuclear Power Reactors, published in September 1998: "The NRC reserves the right to take the following steps in order to ensure a licensee's adequate accumulation of decommissioning funds: review, as needed, the rate of accumulation of decommissioning funds; and, either independently or in cooperation with the FERC and the licensee's state PUC, take additional actions as appropriate on a case-by-case basis, including modification of a licensee's schedule for the accumulation of decommissioning funds" (63 Fed. Reg. 50482).
3. There is no evidence that the nuclear energy industry as a whole, or any particular facility or licensee, are failing to accumulate sufficient funds for decommissioning. Under the NRC's September 1998 rule, all licensees are required to report every two years on the status of their decommissioning funds. The first such reports were required to be filed by March 31, 1999. The NRC's assessment of those reports (SECY-99-170, July 1, 1999) showed:

"As of December 31, 1998, power reactor licensees have on deposit approximately \$22.5 billion in external decommissioning trust fund accounts. The total minimum amount needed to decommission the radiological portion of power plants, based on the generic formulas in 10 CFR 50.75.c, is approximately \$31.9 billion. The aggregate estimate by licensees, based in some cases on site-specific estimates that exceed the minimum formula amounts, is approximately \$38.7 billion....

"The reports included aggregate projections of future trust fund deposits of an additional \$9.4 billion. In addition, licensees project that future interest earned on funds already collected and on future collections will be approximately \$12.1 billion. The total of current deposits and future estimated deposits and earnings is approximately \$44 billion. *This amount exceeds both NRC and licensee estimates of current*

Ms. Annette Vietti-Cook  
July 26, 2000  
Page 4

*decommissioning costs ... On the basis of the staff's review of the status reports and the foregoing findings, all power reactor licensees appear to be on track to fund decommissioning by the time that they permanently shut down their units."*<sup>2 3</sup>

This extensive factual record demonstrates beyond doubt that there are no concerns over decommissioning funding that warrant a new rulemaking initiative by the NRC, and that Epstein's Petition is based on mistaken assumptions and uninformed speculation. Even if there were legitimate concerns over the adequacy of decommissioning funding—either industrywide or at a single facility—the factual record demonstrates that the NRC has sufficient authority to require redress of any funding deficiencies by any licensee. For these reasons, the Nuclear Energy Institute urges the NRC to deny the Petitioner's request for rulemaking and dismiss the Petition in its entirety.

## II. Specific Recommendations in the Epstein Petition

The Epstein Petition specifically requests that NRC adopt three measures relating to "proportional partners" or "proportional owners" of nuclear generating stations, presumably referring to non-operating owners of nuclear power reactors. Epstein recommends that: (1) "proportional partners" be required every two years to conduct site-specific analyses of decommissioning costs that account for certain factors; (2) the NRC's requirements in 10 CFR 50.75 regarding Reporting and Recordkeeping for Decommissioning Planning be applied to all partners in nuclear generating stations, including board members of rural electric cooperatives (RECs); and (3) "proportional owners" be compelled by NRC to conduct prudency reviews.

*Biennial Site-Specific Decommissioning Cost Estimates.* Epstein's first recommendation appears to be designed to address his concern that non-

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<sup>2</sup> Emphasis supplied.

<sup>3</sup> The NRC staff noted in SECY-99-170 that "the NRC [had] thoroughly considered decommissioning funding assurance issues," starting with an Advance Notice of Proposed Rulemaking in April 1996. SECY-99-170 also noted that, during the rulemaking process, the NRC had considered requiring accelerated funding of decommissioning, and benchmarking (*i.e.*, requiring set amounts of decommissioning funds at specified points in a reactor's operating life). Based on the licensee reports on trust fund status filed with the NRC on March 31, 1999, "the staff does not believe that additional rulemaking to reconsider benchmarking or accelerated funding is necessary."

Ms. Annette Vietti-Cook  
July 26, 2000  
*Page 5*

operating owners of nuclear plants or "proportional partners" of nuclear generating stations be required to provide financial assurance that they will have adequate funds available to pay their share of decommissioning costs. Epstein therefore recommends that NRC require each such owner to biennially conduct a site-specific analysis of decommissioning costs, taking into account several factors that might affect the ultimate cost of decommissioning each plant.

This action is unnecessary because NRC's rules already require that each power reactor licensee, including a non-operating owner, provide financial assurance for decommissioning in a form acceptable to the NRC, and in an amount that provides reasonable assurance that adequate funds will be available for the decommissioning of its ownership share of a power reactor. These rules plainly apply to "proportional" owners of nuclear power reactors such as Rural Electric Cooperatives (RECs), municipalities, or any other corporate entity holding a direct ownership interest in a nuclear power plant.

NRC's rules require that each power reactor licensee provide financial assurance for decommissioning in an amount that is no less than the NRC formula amount calculated in accordance with 10 CFR 50.75(c). Licensees may accumulate funds that exceed this amount based upon their own individual circumstances and their own projections relating to certain factors such as inflation, earnings, and site specific needs. Licensees may also accumulate funds that are less than the NRC formula amount, pursuant to a site-specific estimate, if they obtain an exemption from the NRC. However, the formula amount provides an appropriate benchmark amount of decommissioning funding, with adjustments for increased costs owing to inflation in key categories, to provide adequate assurance that licensees are accumulating sufficient funds over time to assure that they will be capable of funding decommissioning.

In addition, at or about five years prior to the projected end of operations, at a time when site-specific decommissioning costs can be more accurately calculated, each licensee is required to submit a preliminary cost estimate, which includes an up-to-date assessment of the major factors that could affect the cost to decommission [10 CFR 50.75(f)(2)]. NRC's regulations also already require that a site-specific decommissioning cost estimate be submitted within two years following permanent cessation of operations [10 CFR 50.82(a)(8)(iii)]. Thus, the NRC's current regulations strike an appropriate balance by establishing threshold requirements for the accumulation of

Ms. Annette Vietti-Cook  
July 26, 2000  
Page 6

decommissioning funding during the operating life of the facility, and by imposing more specific requirements that funding be provided for site-specific costs at the time that more specific decommissioning planning is underway.

In its September 1998 rulemaking, NRC considered and rejected suggestions from commenters who argued in favor of the use of site-specific decommissioning cost as the basis for financial assurance and reporting, even if these estimates are less than the current minimum amounts prescribed in 50.75 (63 Fed. Reg. at 50468-69). There is simply no public health and safety basis or rationale for the NRC to depart from its current regulatory approach, which establishes an acceptable level of required decommissioning funding based upon NRC's generic formula amounts, while permitting licensees and their rate-setting bodies to fine-tune their schedules for collecting decommissioning funds based upon site-specific factors and assumptions.

Reporting and Record Keeping Requirements. Epstein's second recommendation is based upon the legitimate proposition that non-operating owners of nuclear power plants should be subject to the NRC's regulations in 10 CFR 50.75 which apply to all power reactor licensees. However, it appears to be premised upon the mistaken assumption that a non-operating co-owner of a power reactor is not a power reactor licensee as that term is used in 10 CFR 50.75.

Pursuant to longstanding precedent, NRC views all co-owners as co-licensees responsible for complying with the terms of their licenses (*Final Policy Statement on the Restructuring and Economic Deregulation of the Electric Utility Industry*, 62 Fed. Reg. 44071 and 44077, Aug. 19, 1997). Thus, any proportional co-owner of a power reactor is required to become an NRC licensee. See *Public Service Company of Indiana, Inc.* (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-459, 7 NRC 179, 200-201 (1978). There can be little doubt that such co-owner licensees are power reactor licensees within the meaning of the term as used in 10 CFR 50.75 and, therefore, the NRC's reporting and recordkeeping requirements for decommissioning planning in 10 CFR 50.75 already apply to any partner in a nuclear generating station owning an interest in the plant.

Epstein's petition recommends that the requirements of 10 CFR 50.75 be extended to include board members of RECs. To the extent this and other statements in the petition might be construed as suggesting that NRC require that shareholders, board members or other non-licensees be held directly and

Ms. Annette Vietti-Cook  
July 26, 2000  
Page 7

personally responsible for decommissioning funding and/or reporting, any such action would be a significant departure from established principles of corporate law and past NRC practice. NRC should respect the corporate form and decline to extend NRC requirements to such non-licensees. Moreover, it would appear doubtful that NRC has jurisdiction over such non-licensee individuals, and Epstein suggests no basis for concluding that it does. In any event, extending NRC jurisdiction to include individuals is wholly unnecessary because NRC already has controlling authority over the licensed corporate entities.

Prudency Reviews. In his third recommendation, Epstein suggests that NRC order each proportional owner of nuclear power plants "to conduct a prudency review in order to determine a balanced formula for decommissioning funding involving ratepayers and/or taxpayers and shareholders and/or Board Members of Rural Electric Cooperatives" (Petition for Rulemaking, page 3). For the reasons discussed above, NRC's existing rules already provide reasonable assurance that all licensees will be able to fund their share of decommissioning costs. Therefore, NRC has determined that its current regulations provide "a balanced formula for decommissioning funding," and there is no basis for imposing additional requirements.

In addition to being unnecessary and inconsistent with NRC's findings in its recent 1998 rulemaking, Epstein's recommendation that NRC order "prudency reviews" would require the NRC to exercise jurisdiction over ratemaking matters that are beyond the scope of its regulatory purview. Significantly, the NRC has no mandate or authority under the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, or any other federal statute, to require licensees to review the "prudence" of their decommissioning funding decisions or to review prudence issues itself.

NRC has previously disposed of suggestions that it become involved in the distribution of decommissioning costs among ratepayers and shareholders, and it has concluded properly that, from NRC's safety perspective, "it does not matter whether the source for a licensee's financial assurance is the licensee's ratepayers or its shareholders, but only that the licensee has provided adequate financial assurance for decommissioning" (63 Fed. Reg. at 50477). The prudence of a licensee's decommissioning funding is a matter properly within the jurisdiction of state PUCs, FERC and/or the ratemaking authority of municipal utilities, RECs, and other electric utilities that establish their own rates.

Ms. Annette Vietti-Cook  
July 26, 2000  
Page 8

### III. Other Issues Raised By Epstein

Non-Radiological Decommissioning Costs. Epstein raises a concern that NRC does not require licensees to provide estimates of non-radiological decommissioning costs (65 Fed. Reg. at 30552). However, NRC has previously addressed this concern in its 1996 rulemaking regarding decommissioning:

*The NRC's authority is limited to assuring that licensees adequately decommission their facilities with respect to the cleanup and removal of radioactive material prior to license termination. Radiological activities that go beyond the scope of decommissioning, as defined in 50.2, such as waste generated during operations or demolition costs for "greenfield" restoration, are not appropriate costs for inclusion in the decommissioning cost estimate.<sup>4</sup>*

This position remains sound, and nothing in NRC's regulations precludes a licensee from planning to restore a site to "greenfield" condition, and accumulating sufficient funds to do so.

Premature Shutdown of Nuclear Reactors. Epstein raises concerns that commercial nuclear power plants may not operate for the full 40-year term of their operating license and suggests that licensees should assume that they would shut down prematurely. The NRC specifically addressed the issue of decommissioning funding for facilities shut down prematurely in its 1996 and 1998 rulemakings, and determined, appropriately, that it would address the status of decommissioning funding and expenditure of funds for prematurely shutdown plants on a case-by-case basis.

Significantly, although a small number of plants have shut down prematurely,<sup>5</sup> all licensees undergoing premature shutdown have met their decommissioning obligations. Epstein fails to establish otherwise, and provides no evidence that circumstances may be different in the future.

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<sup>4</sup> *Final Rule: Decommissioning of Nuclear Power Reactors*, 61 Fed. Reg. 39278, 39285 (July 29, 1996).

<sup>5</sup> During the 1990s, 10 nuclear units representing 6,779 MW of capacity closed permanently before the expiration of their 40-year license terms.

Ms. Annette Vietti-Cook  
July 26, 2000  
*Page 9*

Equally significantly, Epstein's concern about premature shutdowns has no factual basis. Data on economic performance demonstrate clearly that nuclear units can generate electricity, safely, reliably and competitively, at a cost significantly lower than the alternatives available for new baseload generation. In addition, a large number of licensees recently have applied for, or announced intentions to apply for, a 20-year license renewal, beyond the initial 40-year license term—further evidence that Epstein's concern over premature shutdowns of nuclear units lacks a factual basis. In fact, approximately one-third of U.S. nuclear power plants has already notified the NRC that they intend to seek license renewal. The industry expects that most operating nuclear units will renew their licenses simply because they represent the lowest-cost source of electricity supply available from any source.

*Spent Fuel Storage and High-Level Waste Disposal.* Epstein raises general concerns about the management of spent nuclear fuel, including doubts about the long-term prospects for the proposed repository at Yucca Mountain, NV.

The NRC has examined this issue in detail in its Waste Confidence Decision, first issued in 1984, and reaffirmed in 1990 and again in 1999. The original Waste Confidence Decision, and subsequent reviews, suggests that Epstein's concern is misplaced.

In 1984, the NRC concluded that there was reasonable assurance that safe disposal in a geologic repository was technically feasible. In 1990, the NRC found reasonable assurance that at least one mined repository would be available within the first quarter of the 21<sup>st</sup> century, and that spent nuclear fuel would be managed in a safe manner until the repository was available. In its 1999 review, the NRC reviewed progress in the federal government's waste management program, and concluded that "no significant and unexpected events have occurred—no major shifts in national policy, no major unexpected institutional developments, no unexpected technical information—that would cast doubt on the Commission's Waste Confidence findings" (64 Fed. Reg., December 6, 1999, 68007).

To support his concern over the long-term prospects for the Yucca Mountain project, Epstein quotes from secondary sources such as newspaper articles, and ignores the published scientific record. Such primary sources, summarizing the results of extensive scientific research at the Yucca Mountain site, demonstrate that, despite significant delays, the Yucca Mountain project is proceeding toward successful completion: "Yucca Mountain remains a

Ms. Annette Vietti-Cook  
July 26, 2000  
*Page 10*

promising site for a geologic repository .... Over 15 years, extensive research has validated many of the expectations of the scientists who first suggested that remote, desert regions of the Southwest are well-suited for a geologic repository. Engineered barriers can be designed to contain waste for thousands of years, and the natural barriers can delay and dilute any radioactive material that migrates from the waste packages ....”<sup>6</sup>

The Epstein petition suggests that licensees should be required to account for the possibility of increased spent fuel storage costs, in the event that a high-level waste storage facility is unavailable. Epstein suggests that this might occur under a premature shutdown scenario or if the Department of Energy (DOE) fails to take spent nuclear fuel as scheduled.

The NRC has already addressed the need for funds for interim spent fuel storage and maintenance in 10 CFR 50.54(bb), which requires that licensees submit plans, including funding, to manage spent nuclear fuel until the fuel is transferred to the Department of Energy. These spent fuel management plans must be submitted either five years before the expiration of the operating license or within two years after the permanent cessation of operations, whichever occurs first. NRC’s approach in this regard is consistent with Congress’ mandate that the industry provides ongoing funding for DOE’s program to provide for the permanent storage of high level waste and DOE’s assumption of responsibility for such storage, pursuant to the Nuclear Waste Policy Act of 1982, as amended.

#### **IV. Conclusion**

The extensive and detailed factual record on financial issues associated with nuclear power plant decommissioning demonstrates beyond doubt that there are no concerns over decommissioning funding that warrant a new rulemaking initiative by the NRC, and that Epstein’s Petition for Rulemaking is based on mistaken assumptions and uninformed speculation.

Even if there were legitimate concerns over the adequacy of decommissioning funding—either industrywide or at a single facility—the factual record also

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<sup>6</sup> *Viability Assessment of a Repository at Yucca Mountain*, U.S. Department of Energy (DOE-RW-0508), December 1998, page 36.

Ms. Annette Vietti-Cook

July 26, 2000

*Page 11*

demonstrates that the NRC has sufficient authority to require redress of any funding deficiencies by any licensee.

For these reasons, the Nuclear Energy Institute urges the NRC to deny the Petitioner's request for rulemaking and dismiss the Petition in its entirety.

Sincerely,

A handwritten signature in cursive script that reads "Richard J. Myers". The signature is written in black ink and is positioned above the typed name and title.

Richard J. Myers  
Senior Director  
Economic & Business Policy  
Nuclear Energy Institute

Cc: The Honorable Richard A. Meserve, Chairman, NRC  
The Honorable Greta Joy Dicus, Commissioner, NRC  
The Honorable Nils J. Diaz, Commissioner, NRC  
The Honorable Edward McGaffigan, Jr., Commissioner, NRC  
The Honorable Jeffrey S. Merrifield, Commissioner, NRC  
Mr. William D. Travers, EDO/NRC