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November 16, 2005 (11:50am)

**BEFORE THE**  
**UNITED STATES NUCLEAR REGULATORY COMMISSION**  
**WASHINGTON, D.C.**

**OFFICE OF SECRETARY**  
**RULEMAKINGS AND**  
**ADJUDICATIONS STAFF**

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In the Matter of )

RIN

Implementation of a Dose Standard )  
After 10,000 Years )

3150-AH68

**Reply Comments of The**  
**National Association Of Regulatory Utility Commissioners**

The National Association of Regulatory Utility Commissioners ("NARUC") respectfully submits the following comments in response to the Nuclear Regulatory Commission's ("NRC") proposed rule released September 8, 2005 in the above captioned proceeding.

**I. NARUC's Interest**

NARUC is a quasi-governmental nonprofit organization founded in 1889. Its members include those State officials<sup>1</sup> charged with the duty of regulating the retail rates and services of electric, gas, water, and telephone utilities operating within their respective jurisdictions. NARUC's members include public servants from all fifty States, the District of Columbia and U.S. Territories. Each has the obligation under State law to assure energy service required by the public convenience and necessity are established

<sup>1</sup> NARUC has been recognized by both Congress and federal (and state) courts as an appropriate representative for these officials. *See, e.g.,* 47 U.S.C. § 410(c) (1971) (Congress designates NARUC to nominate members of Federal-State Joint Board to consider issues of concern to both the Federal Communications Commission and State regulators on universal service, separations, and related concerns); *Cf.* 47 U.S.C. § 254 (1996). *Cf. NARUC, et al. v. ICC*, 41 F.3d 721 (D.C. Cir 1994) (where the Court explains "...Carriers, to get the cards, applied to...(NARUC), an interstate umbrella organization that, as envisioned by Congress, played a role in drafting the regulations. . .the ICC issued to create the "bingo card" system).

1st draft 11/11/2005

and maintained at rates and conditions which are just, reasonable and nondiscriminatory for all consumers. The disposal of nuclear waste has a critical and significant impact on these obligations. Indeed, NARUC has been involved with disposal issues since well before the passage of the Nuclear Waste Policy Act of 1982 ("NWPA" or "Act"). Thirty-four States have nuclear power plants have spent nuclear fuel stored on-sites. Those sites, though currently licensed for safe storage, were never intended for indefinite storage of such materials. In many locations, the capacity to store spent fuel has reached the limits of the facility, or will do so, before the national geologic repository is operational. Moreover, fourteen nuclear plants have shut down. Any reuse of those properties is foreclosed until the radioactive material can be physically relocated off-site.

The NWPA established the Nuclear Waste Fund ("NWF") as the mechanism to pay for the cost of packaging, shipping and emplacing spent nuclear fuel and other high-level radioactive waste for permanent disposal in a national geologic repository. Congress specified that the process should begin in January 1998. The Department of Energy ("DOE") was responsible for meeting that milestone. The Act also assigned the responsibility for setting the radiation standards for the repository to the EPA. The responsible federal agencies, for a variety of reasons, have failed to meet schedules critical for the timely opening and use of the repository. However, payments into the NWF, collected from ratepayers who consume electricity generated by nuclear power plants, began in June 1983 and continue to be collected. To date, the total fee payments plus interest total over \$23 billion dollars. NARUC has an obvious interest in the efficient use of ratepayer assessments, the safety concerns and additional costs that

1st draft 11/11/2005

accompany on-site storage and the impact on prospects for additional nuclear power sources caused by uncertainty over disposal issues.<sup>2</sup>

## II. Comments

NARUC's message is simple:

The repository must be built in the safe, economic and expedient manner required by Congress in the NWPA.

The spent nuclear fuel must be moved from its present locations—which were never intended to store the material indefinitely—as soon as possible.

Accordingly, the NRC should expeditiously revise the licensing regulation to incorporate the EPA revised radiation standards, and other EPA criteria, which are prerequisites for DOE's efforts to design, build, operate, and monitor the repository. As discussed, *infra*, we agree with the NRC's adoption of various EPA proposals as a basis for action.

### A. *The NRC Appropriately Adopted the EPA Revised Dose Standard for the Period After 10,000 years*

Both the EPA radiation standard revised rule and the NRC proposed amendment leave unchanged the dose standards set in the original rules for the period up to 10,000 years. NARUC comments on the original 1999 EPA rulemaking argued extension of the regulatory period beyond 10,000 years was not practical. NARUC also disagreed with having any dose limit past 10,000 years. However, since then, the D.C. Circuit<sup>3</sup> has ruled

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<sup>2</sup> It is clear that the United States needs diverse fuel sources. It is also clear that many are concerned about greenhouse gas emissions from fossil sources. These factors weigh in favor of construction of new nuclear plants. However, some experts believe no new nuclear plants will be built until there is greater certainty on disposal issues.

<sup>3</sup> *Nuclear Energy Institute v. Environmental Protection Agency*, 373 F.3d 1251 (D.C. Cir. 2004).  
*National Association of Regulatory Utility Commissioners*

1st draft 11/11/2005

that EPA has to either extend the standard to the period of peak dose to be "based on and consistent with" the recommendations of the National Academy of Sciences or seek further direction from Congress. Given EPA is now tasked with making such revisions, NARUC agrees that the EPA's proposed 350 *mrem* per year above background radiation is a common sense level the public could understand. NARUC also agrees the revised dose limits are protective of public health and that the use of median value for dose projections past 10,000 years is appropriate. NARUC concurs with the NRC proposed amendments that reflect these EPA proposals.

***B. The NRC Appropriately Adopted the Criteria EPA Sets for Performance Assessments***

Using EPA's suggestion that the performance assessment for the first 10,000 years be the basis for projecting repository performance after 10,000 years, the NRC amendment proposes certain specific constraints for consideration of features, events, and processes for seismic, igneous, climate variation and general corrosion effects. Since this is consistent with the revised EPA rule, NARUC agrees is the appropriate way to proceed.

***C. The NRC Appropriately Adopted the Weighting Factors Set by EPA for Calculating Individual Doses***

EPA proposed DOE use weighting factors in individual dose calculations that reflect current methods of dosimetry based on guidance from International Commission on Radiological Protection publications. NARUC agrees with the NRC's amendments that implement those revisions, which are consistent with the most current international scientific methodology.

1st draft 11/11/2005

*D. Worker Dose Calculations*

NARUC also concurs with the amendment allowing DOE to use the same weighting factors for calculating doses to workers during the operational phase of the repository as it will be useful for calculating individual doses to members of the public. This change is also consistent with EPA specifications for dosimetry.

*E. Revisions Related to Long-term Impact of Climate Variation*

NARUC will not comment specifically on the NRC proposed amendment on climate variations after 10,000 years. However, a discussion of this issue in the final will be useful for discussions about submission and review of the DOE license application. Stakeholders will be relying upon the NRC's discussion of the consequences of possible climate variations on repository performance and dose limits. If DOE's climatic analysis and forecast differ from the deep percolation rates set in the amended rule, then it will serve as a point of reference in the NRC's license review proceedings. NRC license reviewers should be open to the possibility that there may be other analytical methods for addressing future climate changes for such long periods.

*F. Dose Calculation Variations*

NARUC supports the justification put forth in the EPA revised rule for use of the arithmetic mean for dose calculations for the period up to 10,000 years and use of the median of projected doses during the period after 10,000 years. NARUC also agrees with the implementation of that approach in the NRC proposed amendment.

1st draft 11/11/2005

### III. Conclusion

National policy has been established through the NWPA to dispose of spent nuclear fuel and other high-level radioactive waste in a geologic repository that was to have begun operation in 1998. The earliest date that movement of spent nuclear fuel is now forecast is 2012, provided the NRC approves a license application from DOE. As the proposed NRC amendment to 10 CFR Part 63 protects the public health and the environment for an unprecedented period, NARUC urges expeditious completion of the rulemaking process so that DOE can prepare and submit the repository license application.

Respectfully submitted,

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