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To: U.S. Senate Committee on Energy and Natural Resources

The American Nuclear Society (ANS) appreciates the opportunity to comment on the draft Nuclear Waste Administration Act (NWAA). The ANS is a not-for-profit, international, scientific, and educational organization with nearly 12,000 members worldwide. The core purpose of ANS is to promote awareness and understanding of the application of nuclear science and technology. As an organization, it has published a number of position statements regarding the issue of spent fuel and radioactive waste.

We applaud your efforts to re-invigorate the dialogue to address this nation's high-level waste and spent nuclear fuel disposal policy. But we must also express our concern that lack of action by the Congress and the Administration in addressing the Nuclear Waste Policy Act (NWPA) of 1982 et seq. sets a poor precedent for any future legislation on this matter. The NWAA could be a step forward in fulfilling the federal government's responsibilities but it must be done within the context of the NWPA, rather than replace it.

A new nuclear waste management organization is critical for both the continued viability of the nuclear power industry in the United States as well as the credibility of the United States as a global leader in nuclear trade and non-proliferation. While we do not believe the governance structure proposed in the NWAA is the appropriate model, we strongly encourage the committee to continue their efforts to establish and ultimately charter an organization that will address our nation's nuclear waste.

Respectfully submitted,

A handwritten signature in black ink that reads "Michael Corradini". The signature is written in a cursive, flowing style.

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Considerations for locating storage facility sites

1. *Should the Administrator take into account, when considering candidate storage facility sites, the extent to which a storage facility would: (a) unduly burden a State in which significant volumes of defense wastes are stored or transuranic wastes are disposed of; or (b) conflict with a compliance agreement requiring the removal of nuclear waste from a site or a statutory prohibition on the storage or disposal of nuclear waste at a site? Alternatively, should the State and other non-federal parties seeking to site a candidate storage facility be allowed to determine whether they are unduly burdened? Should the final consent agreement, which would be sent to Congress for ratification, contain an authorizing provision to amend any conflicting compliance agreement or statutory prohibition?*

As responsibility for managing used fuel and high level waste lies at the federal level, it follows that assessment of candidate site suitability for characterization likewise be a federal responsibility. Suitability in this context must be transparently evaluated according to standards and science-based criteria. However, the subjective concept of “burden”, undue or due, cannot be quantified in such criteria. Should a site be determined scientifically suitable by the federal government, the questions of burden or compliance agreements, along with other less quantifiable factors, must be assessed by and negotiated with State and other non-federal entities.

In other countries where a consent-based siting approach has been used, siting potential was determined before asking consent and decisions by the national government and substantial incentive packages were required for success. In addition, the only consenting communities were those where nuclear installations were already present. Lessons learned from our international nuclear colleagues must be incorporated into the U.S. process.

Lessons learned from the Nuclear Waste Policy Act (NWPA) of 1982 and the Waste Isolation Pilot Plant (WIPP) show that transparency, regulatory oversight, and adherence to a scientifically established plan to assure the safety and security of the new facilities would be the only viable option for moving forward. The WIPP began operations only after decades of regulatory battles as well as large amounts of incentives to the local community. Over the course of 20 years under the NWPA, the goals and designs for developing NWMFs changed almost as frequently as the political situation. Had the NWPA been planned to be more adaptive to changes in the public and political climate, the delays associated with Yucca Mountain (as well as the elimination of potential secondary repository sites) may never have occurred.



Relevant ANS documents

- **American Nuclear Society (ANS) Comments in Response to The Blue Ribbon Commission on America's Nuclear Future Draft Report to the Secretary of Energy (September 2011)**
- **Position statement: Licensing of Yucca Mountain as a Geological Repository for Radioactive Wastes (ANS-80-2009)**

Linkage between storage and repository

2. *Should the bill establish a linkage between progress on development of a repository and progress on development of a storage facility? If so, is the linkage proposed in section 306 of the bill appropriate, too strong, or too loose? If a linkage is needed, should it be determined as part of the negotiations between the state and federal governments and included in the consent agreement rather than in the bill?*

It is the position of ANS that the interim storage must be inextricably aligned with strategies and options for eventual long-term disposal. Whether or not the United States decides to develop recycling technology, some amount of material will be required to be disposed in a geologic repository. Accordingly, the ANS supports a siting process that creates a dependency between proposed interim storage facilities and long-term geologic storage facilities. From a scientific and logistics point of view, back-end fuel cycle facilities would ideally be co-located in order to reduce transportation requirements as well as reduce overall costs. Ultimately, the consent agreement is a negotiated contract and co-located facilities and systems are clearly incentives for any siting and hosting process.

Relevant ANS documents

- **Position statement: Interim Storage of Used or Spent Nuclear Fuel (ANS-76-2008)**
- **Position statement: Nuclear Fuel Recycling* (ANS-45-2007)**
- **Position statement: The Safety of Transporting Radioactive Materials* (ANS-18-2002)**
- **American Nuclear Society (ANS) Comments in Response to The Blue Ribbon Commission on America's Nuclear Future Draft Report to the Secretary of Energy (September 2011)**

Separate process for storage facility siting

3. *Should the bill establish separate storage and disposal programs with clearly defined requirements for each, with any linkage negotiated in the consent agreement between the federal and non-federal parties, to allow the two programs to run on separate, but parallel tracks, as proposed in the alternative section 305 (which would replace section 304(b)-(g) of the draft bill)?*

No. See comments per question number 2.

4. *To what extent should the siting and consensus approval process for spent fuel storage facilities differ from that for the repository? Should the Administrator be required to conduct sufficient site-specific research (referred to as “characterization” in the bill) on candidate storage sites to determine if they are suitable for storing nuclear waste or only on candidate repository sites to determine if they are suitable for geologic disposal of nuclear waste? Should the Administrator be required to hold public hearings both before and after site characterization (as required by current law in the case of the Yucca Mountain site) or only before site characterization?*

ANS supports a transparent, phased, adaptive, and standards and science-based approach to selecting new storage and repository facilities. As such, the first step is to establish the criteria and then to characterize the site to determine if the criteria are met. Criteria for storage facilities and repositories will not be the same, as the functions of the facilities are not the same. Therefore, characterization of candidate storage sites should be performed according to the relevant criteria.

The question of public hearings before and/or after characterization should be left to the Administrator’s discretion, thereby allowing adaptation of the process to changes in the public and political climate. A lack of flexibility in the NWPAs contributed to the many delays associated with characterization of, and license application for, a repository at Yucca Mountain.

Relevant ANS documents

- **Position statement: Interim Storage of Used or Spent Nuclear Fuel (ANS-76-2008)**
- **Position statement: Risk-Informed and Performance-Based Regulations for Nuclear Power Plants* (ANS-46-2004), which is also**

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applicable to waste facilities

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Complexity of repository and storage facility siting processes

5. *Should the siting process in section 304 of the draft bill be streamlined? If so, how?*

Yes. An overly prescriptive process and structure for a hosting agreement may discourage some states and communities. ANS would point to the lessons learned from the DOE Waste Isolation Pilot Plant. While there was no hosting agreement the WIPP Land Withdrawal Act contained a negotiated set of state and local benefits. This occurred prior to operations but after the site had been characterized and the full extent of operations and potential impacts were understood. Qualifying a site is a technical decision and must be conducted by the NRC in compliance with EPA requirements.

Governance of the Nuclear Waste Administration

6. *Should the new entity be governed by a single administrator or by a board of directors?*
- If by a single administrator, should the administrator serve for a fixed term? If so, how long should the term of service be? Should the legislation prescribe qualifications for the administrator? If so, what should be the selection criteria?*
 - If by a board of directors, how many people should comprise the board and how should they be selected?*

The American Nuclear Society has previously urged Congress and the Executive branch to consider the creation of an independent entity to oversee management of the current and expected stockpile of U.S. used nuclear fuel. Such an entity would possess the following characteristics:

1. access to nuclear waste fees, not subject to annual congressional appropriations;
2. governance that promotes long-range planning and continuity of leadership;
3. authority to provide consolidated interim storage, nuclear fuel recycling, and geologic disposal consistent with laws, policies, and regulations;
4. authority to support U.S. national security and nonproliferation objectives on a full-cost reimbursement basis;



5. fully subject to U.S. Nuclear Regulatory Commission and U.S. Environmental Protection Agency regulations.

The governance structure proposed by the NWAA would not address these needs. Rather the NWAA would create a political structure to oversee an operational entity and we suggest that this would be little different from the current Department of Energy governance. The ANS sees two viable alternatives to the proposed design.

A standalone corporation must be established with a governing board from both political and stakeholder organizations which must include representation from the nuclear utilities and their public utility regulatory commissions. Each stakeholder organization must be able to nominate qualified individuals to represent their interests. The President would select the Chairman from the Board members. In lieu of a standalone Administrator, the Corporation should have a Chief Executive hired by, and reporting, to the Board.

An alternative option for the formulation of the new waste management organization would be to follow the models of other nations where public-private corporations have been established with a consortium of nuclear utilities to manage radioactive wastes and spent fuel.

Relevant ANS documents

- **Position statement: Creation of an Independent Entity to Manage U.S. Used Nuclear Fuel (ANS-22-2009)**
- **American Nuclear Society (ANS) Comments in Response to The Blue Ribbon Commission on America's Nuclear Future Draft Report to the Secretary of Energy (September 2011)**

7. *The Blue Ribbon Commission recommended establishment of both a board of directors for management oversight whose “primary role ... is not to represent all stakeholder views, but rather to carry out fiduciary responsibilities for management oversight” and “a larger and more widely representative stakeholder advisory committee.” The draft bill responds to these recommendations, first, by establishing a Nuclear Waste Oversight Board of senior federal officials and, second, by authorizing the Administrator to establish advisory committees. Should the Oversight Board and advisory committee be combined into a single body to perform both management oversight and stakeholder representation functions? Should the focus and membership of any advisory committees be established in the legislation or left to the Administrator?*

The current failure by Congress and the Administration to implement the NWPA demonstrates that oversight restricted to government officials will lead to

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politicization of the new organization. Government oversight can be provided through representation on the Board of Directors and through periodic financial and performance reviews of the corporation conducted by the government. Advisory committees are appropriate but must have an appropriate charter and position in the reporting structure so that their views have influence. As an example, the Advisory Committee on Reactor Safeguards is a statutory technical body reporting to the Nuclear Regulatory Commission. Their findings have significant influence on Commission decisions as well as the nuclear industry as a whole both domestically and internationally. We believe that the Board of Directors should have a statutory technical advisory committee and that the Chief Executive may establish advisory committees as appropriate in the conduct and operation of the enterprise.

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8. *Dr. Meserve testified in 2012 that representatives of stakeholders and public utility commissioners should be added to the Nuclear Waste Oversight Board. Would these additions make the Board better able to carry out its fiduciary oversight mission effectively?*

Yes. Please see comments for questions 6 and 7