

**COMMENTS BY INSTITUTE FOR ENERGY AND ENVIRONMENTAL RESEARCH,
BLUE RIDGE ENVIRONMENTAL DEFENSE LEAGUE, NATURAL RESOURCES
DEFENSE COUNCIL, RIVERKEEPER, AND SOUTHERN ALLIANCE FOR CLEAN
ENERGY ON NRC REPORT UPDATING PRELIMINARY ASSUMPTIONS FOR AN
EIS ON LONG-TERM SPENT FUEL STORAGE IMPACTS**

I. INTRODUCTION

As provided by the U.S. Nuclear Regulatory Commission's ("NRC's") press release of January 3, 2012, Blue Ridge Environmental Defense League ("BREDL"), the Institute for Energy and Environmental Research ("IEER"), Natural Resources Defense Council ("NRDC"), Riverkeeper, and Southern Alliance for Clean Energy ("SACE") hereby submit comments on the NRC's draft report, *Background and Preliminary Assumptions for an Environmental Impact Statement – Long-Term Waste Confidence Update* (December 2011) ("Draft Report"). The Draft Report should be withdrawn because the assumptions it proposes are inconsistent with the National Environmental Policy Act ("NEPA") and NRC regulations. In addition, by indicating that the NRC plans to prepare an EIS that discusses the environmental impacts of long-term SNF disposal without also discussing the impacts of SNF disposal in a repository and the impacts that may occur if SNF disposal is never achieved, the NRC unlawfully segments the environmental analysis for SNF disposal. Finally, the NRC's decision to issue the Draft Report without publishing a notice in the Federal Register is inconsistent with the NRC's open government policy and long-established practice.

II. DESCRIPTION OF COMMENTERS

BREDL, NRDC, Riverkeeper, and SACE are public interest environmental organizations whose members include neighbors of nuclear reactors, nuclear factories, and nuclear waste storage and disposal facilities. They submitted comments on the related Waste Confidence Decision ("WCD") and Waste Confidence Rule ("WCR") that were published in the Federal Register on December 23, 2010. 75 Fed. Reg. 81,032, 81,037. They are also parties to a lawsuit challenging the Waste Confidence Decision and Waste Confidence Rule in the D.C. Circuit, *State of New York v. NRC*, D.C. Cir. No. 11-1045 (consolidated with D.C. Cir. Nos. 11-1051, 11-1056, 11-1057).

IEER is a nonprofit organization that provides policymakers, journalists and the public with understandable and accurate scientific and technical information on energy and environmental issues. IEER commented on the WCD and WCR and also provided expert support for comments filed by BREDL, Riverkeeper, and SACE.

III. FACTUAL BACKGROUND

In the 2010 WCD, the NRC declared that it intends to "update" the WCD and WCR by analyzing, in an environmental impact statement ("EIS"), the effects of storing SNF from U.S. nuclear reactors for as long as 200 years. WCD, 75 Fed. Reg. at 81,040. On January 3, 2012, the NRC issued a press release regarding this proposal (PR No. 12-001) and attached the Draft Report for comment. According to the Press Release, the Draft Report:

discusses several storage scenarios, including at nuclear power plants, regional or centralized storage sites or a combination of storage and reprocessing of spent fuel. A key assumption is that extended storage would be managed under a regulatory program similar to current regulation of spent fuel. To analyze the impacts associated with the scenarios, the staff will develop generic, composite sites for each scenario, and these sites will account of a range of characteristics of actual reactor and storage sites.

Id.

While the WCD and the Press Release state that the length of SNF storage time to be analyzed in the EIS is 200 years, the Draft Report itself states that the time period is 300 years: the new time period would be added on to the 100 years that SNF from the oldest reactors will have been in storage:

The staff plans to develop the EIS to analyze impacts of storage from approximately the middle of this century for a period of 200 years. The staff selected mid-century as the starting point for the impacts analysis because it represents the time when some spent fuel will begin to reach the minimum storage periods accounted for in the current Waste Confidence rule (60 years after the expiration of licensed life). In other words, the oldest spent fuel will have been stored for about 100 years by the middle of the century. *The staff selected a 200-year span for the EIS because that is approximately when this oldest fuel will approach 300 years of storage.* The 200-year period is the timeframe being used by NRC and others in technical analyses to identify spent fuel aging issues.

Id. at 6 (emphasis added).

As part of the NRC's preliminary process for scoping for long-term SNF storage for periods up to 300 years, the Draft Report proposes a series of assumptions regarding the circumstances under which spent nuclear reactor fuel ("SNF") may be stored for an extended period of time that lasts as long as 300 years. These circumstances include the nature of future nuclear reactor operations, the length of time that active institutional controls and regulatory oversight will be maintained, and other aspects of SNF storage, transportation, and handling. The assumptions proposed by the NRC in the Draft Report will "define the scope of the EIS and preliminary scenarios for analysis." *Id.* at 9.

IV. DISCUSSION

A. NRC Should Publish the Draft Report in the Federal Register

As a preliminary matter, the NRC's process for seeking public input on the proposed assumptions for the EIS on long-term SNF disposal is inadequate. Given the enormous safety and environmental significance of the Draft Report's subject matter of long-term SNF storage and given its purpose and effect of defining the scope of the NRC's proposed EIS for long-term

SNF storage, the Draft Report should have been published for public comment in the Federal Register. The NRC's decision to use only a press release to notify the public of its proposed assumptions is inconsistent with its long-established practice of publishing even "preliminary" rulemaking notices. *See, e.g.*, Final Rule, Licensing Requirements for Land Disposal of Radioactive Wastes, 47 Fed. Reg. 57,446 (Dec. 27, 1982) (discussing previous publication of both a proposed rule and a "preliminary draft regulation"). The use of a press release to notify the public about the NRC's proposed assumptions is also inconsistent with the Commission's stated commitment to openness in decision-making. *See* NRC Strategic Plan for FY 2008-2013 at 16 (as part of NRC's commitment to "appropriately inform[] and involve[] stakeholders in the regulatory process," copies of "key documents and notifications" are "published in the Federal Register" in addition to being "made available electronically on the NRC Web site.")

<http://www.nrc.gov/public-involve/open/philosophy.html>

The Draft Report clearly constitutes a "key document" with respect to the preparation of an EIS on long-term SNF storage impacts. Therefore, in order to ensure that the report reaches a broad enough audience, the NRC should withdraw the Draft Report and re-publish it for comment in the Federal Register.

B. The Scope of the EIS Should Include SNF Disposal in Addition to SNF Storage and Should be Integrated into Reactor Licensing Decisions.

By restricting the proposed scope of the EIS to the impacts of long-term SNF storage, the NRC segments the environmental analysis of nuclear reactor operation, in violation of NEPA. The NRC may not consider a segment of a project separately where it will result in the irreversible or irretrievable commitments to the remaining segment of a project. *United States Dept. of Energy, Project Management Corp., Tennessee Valley Authority (Clinch River Breeder Reactor Plant)*, CLI-82-23, 16 NRC 412, 424 (1982). Here, the long-term above-ground storage is a risky response to the failure of the proposed Yucca Mt. project as a SNF repository and the lack of any other viable disposal options on the horizon. The NRC's proposal to store SNF for 200-300 years must be acknowledged as a measure of last resort to compensate for the federal government's failure to site a SNF repository, and the uncertainties and costs of the combined failure of repository siting and resort to long-term SNF must be integrated into the cost-benefit analyses for reactor licensing decisions.

C. The Draft Report's Key Assumption Regarding the Longevity of Institutional Controls is Inconsistent with NRC and EPA Regulations and Therefore is Impermissible.

One of the Draft Report's key assumptions is that active institutional controls over SNF storage will remain effective over a period of several hundred years. *Id.* at 11. The NRC proposes to assume, for instances, that "[l]ong-term storage and handling facilities will operate under a framework of aging management that is designed to monitor, detect, and mitigate significant aging impacts." *Id.* at 11. In addition, the NRC proposes to assume that:

[t]he storage of spent fuel will remain under a regulatory program comparable to the current program. Regulatory oversight and maintenance of storage facilities and activities, such as spent fuel repackaging, will continue, as appropriate.

Id. at 11. Finally, the Draft Report proposes to assume that either licensees or the U.S. government “will provide sufficient resources and protection to ensure continued safe and secure storage.” *Id.*

These assumptions regarding the long-term effectiveness of active institutional controls are contradicted by federal regulations governing the storage and disposal of radioactive waste. *See* 40 C.F.R. 191.14(d) (SNF, high-level waste and transuranic waste disposal) and 10 C.F.R. 61.59(b) (low level radioactive waste (“LLRW”) disposal). These regulations were promulgated by the NRC and the U.S. Environmental Protection Agency (“EPA”) after years of extensive study, mutual consultation, and gathering of public comments.

As a matter of law, these regulations establish a presumption that 100 years is the maximum length of time that institutional controls may be assumed to be effective. If the NRC wants to change that presumption and assume that institutional controls will be in effect for a period of 200-300 years, it must re-examine and update the extensive studies on which the NRC and EPA relied in establishing their regulations. As required by NEPA, it must also publish this analysis for comment by the public and by the EPA, with whom it cooperated in establishing the 100-year presumption.

D. In General, the NRC Proposes to Assume Many Important Facts That Should be the Subject of the EIS.

The proposed EIS for long-term SNF storage necessarily will involve a number of long-range predictions regarding a range of circumstances that will affect the feasibility, safety and environmental impacts of SNF storage hundreds of years from now. These circumstances include the number of nuclear reactors in operation, the size and vigor of the nuclear industry, the effectiveness of institutional controls by licensees, and even the continued existence of the NRC.

The NRC asserts that its assumptions are based on “present-day attributes, current scientific knowledge, and documented trends for potential growth in the use of nuclear power and spent fuel generation rates.” Draft Report at 9. While it may be reasonable to forecast trends for twenty years, the NRC offers no basis – nor is any conceivable – for making 200 to 300-year forecasts and then assuming they are correct in an EIS. The irrationality of the NRC’s approach is clear when one contemplates the violent and unpredicted events that occurred over the last 200-300 years in North America and that caused major upheavals in government, business and society: the Revolutionary War, the War of 1812, the Civil War, and the attacks of 2001 on U.S. facilities. The NRC simply has no basis to assume *any* of the facts that are asserted on pages 9 through 11.

V. CONCLUSION

| For the foregoing reasons, -the NRC should withdraw the Draft Report and revise it to be consistent with NEPA and its regulations. Then the NRC should publish it for comment in the Federal Register and on its website.

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February 17, 2012