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Date: Thu, Sep 21, 2000 4:00 PM
Subject: NEI Comments

65 FR 39206
June 23, 2000

179

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Enclosed are NEI's comments on:

A. "Draft Environmental Impact Statement for the Construction and Operation of an Independent Spent Nuclear Fuel Storage Installation on the Reservation on the Skull Valley Band of Goshute Indians and the Related Transportation Facility in Tooele County, Utah" submitted in accordance with the instructions on 65 FR 39206.

Comments are in (2) Microsoft Word attachments; a cover letter and its attached comments.

If you have any questions or problems downloading, please call Michelle Hinnant at 202-739-8147.

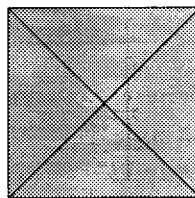
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NUCLEAR ENERGY INSTITUTE

Steven P. Kraft
Director,
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September 21, 2000

Chief, Rules Review and Directives Branch
Division of Freedom of Information and Publications Services
Office of Administration
Mail Stop T-6D-59
U. S. Nuclear Regulatory Commission
Washington, DC, 20555-0001

SUBJECT: Nuclear Energy Institute (NEI) comments on the Draft Environmental Impact Statement for the Construction and Operation of an Independent Spent Fuel Storage Installation on the Reservation of the Skull Valley Band of Goshute Indians and the Related Transportation Facility in Tooele County, Utah.

The Nuclear Energy Institute (NEI),¹ on behalf of the nuclear energy industry, is pleased to submit these comments to the U.S. Nuclear Regulatory Commission (NRC) on the *Draft Environmental Impact Statement (DEIS) for the Construction and Operation of an Independent Spent Fuel Storage Installation on the Reservation of the Skull Valley Band of Goshute Indians and the Related Transportation Facility in Tooele County, Utah.*, NUREG-1714, Docket No. 72-22

The DEIS is an important step in the licensing process for Private Fuel Storage LLC's interim used nuclear fuel storage facility (PFS facility). The proposed action will play a significant role in used nuclear fuel management and, hence, make a valuable contribution to the nation's efforts to meet important clean air and energy security goals. NRC has conducted a thorough evaluation in the DEIS, which demonstrates that the overall benefits of the facility outweigh any disadvantages and costs. This conclusion is appropriately based on the following considerations:

- The need for an alternative to limited at-reactor used fuel storage that provides consolidated

¹ NEI is the organization responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry. NEI's members include all utilities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, nuclear material licensees, and other organizations and individuals involved in the nuclear energy industry.

and economical interim storage capacity for used fuel from those U.S. nuclear power plants that may utilize the facility.

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- The minimal radiological impacts associated with transporting, handling, and storing the proposed quantities of used nuclear fuel.
- The absence of significant adverse non-radiological environmental impacts resulting from the proposed action.
- The economic benefits that would accrue to the Skull Valley Band during the life of this \$3 billion project, in addition to the economic benefits to the workers, local vendors, and to the state and local governments.
- The absence of any significant conflicts with existing resource management plans or land use plans within Skull Valley.

NRC has taken a conservative and balanced approach to assessing the environmental impacts of the PFS facility. NRC performed a comprehensive assessment of the PFS facility as well as examining the impacts associated with alternative sites for an interim storage facility and a no-action alternative.

Because this DEIS is only one tool for informing any decision NRC may make in licensing PFS, it is important that it be viewed in the context of a larger body of information. For this reason, our comments emphasize the following three aspects of PFS that, while beyond the scope of the DEIS, should also be considered:

- The considerable overall environmental and economic benefits of nuclear energy. These benefits are supported by the PFS facility in that the used nuclear fuel proposed for storage is a byproduct of the operation of nuclear plants that did not emit any greenhouse gases or particulates into the atmosphere.
- The potential environmental and economic benefits at locations where there are currently shutdown nuclear plants. The movement of used fuel from such plants to the PFS facility would enable faster decommissioning and will free up land resources at those locations for other uses earlier.
- The interim nature of this project and the fact that going forward with this project does not, in any way, lessen the need for a permanent used fuel disposal facility.

The enclosed comments are offered to NRC to emphasize the support of the nuclear energy industry for the PFS facility, elaborate on the importance of providing a viable temporary alternative to the at-reactor storage of used nuclear fuel, and offer recommendations for further strengthening of the DEIS.

We would be pleased to address any questions the agency may have on our comments.



Sincerely,

Steven P. Kraft

Enclosure

ENCLOSURE

**NUCLEAR ENERGY INSTITUTE (NEI)
COMMENTS ON
The US Nuclear Regulatory Commission
DRAFT ENVIRONMENTAL IMPACT STATEMENT
“For the Construction and Operation of an Independent Spent Fuel Storage
Installation on the Reservation of the Skull Valley Band of Goshute Indians and
The Related Transportation Facility in Tooele County, Utah”**

I. The overall benefits of the proposed Private Fuel Storage (PFS) facility far outweigh any environmental impacts associated with the construction and operation of the facility.

The U.S. Nuclear Regulatory Commission's (NRC) Draft Environmental Impact Statement (DEIS) for the proposed Private Fuel Storage (PFS) facility concludes that the overall benefits of the proposed facility outweigh any disadvantages and costs. NRC appropriately based this conclusion on the following considerations:

- The need for an alternative to limited at-reactor used fuel storage that provides a consolidated and economical interim storage capacity for used fuel from those U.S. nuclear power plants that may utilize the facility.
- The minimal radiological impacts associated with transporting, handling, and storing the proposed quantities of used nuclear fuel (potential radiation exposures to the public have been estimated to be less than 2% of naturally occurring background radiation).
- The absence of significant adverse non-radiological environmental impacts resulting from the proposed action.
- The economic benefits that would accrue to the Skull Valley Band during the life of this \$3 billion project, in addition to the economic benefits to the workers, local vendors, and to the State and local governments.
- The absence of any significant conflicts with existing resource management plans or land use plans within Skull Valley.

NRC has taken a conservative and balanced approach to assessing the potential environmental impacts of the PFS facility. NRC performed a comprehensive assessment of the PFS facility as well as examining the impacts associated with alternative sites for an interim storage facility and a no-action alternative. Even though the DEIS analysis has shown the impacts of the proposed facility will be small, the real impacts are likely to be even less than what is indicated. By including conservative assumptions that clearly overestimate potential adverse conditions such as the assumptions used to calculate the potential radiological impacts of transportation (examples of such conservative assumptions are cited in Comment IV), NRC has provided a robust assurance that its analysis bounds the full range of potential occurrences with significant margin. Public confidence in the results of this analysis should be high.

NRC has reached its appropriate and conservative conclusion even without fully considering the overall environmental and economic benefit accrued in using the nuclear fuel proposed for storage

at PFS to generate electricity. The industry recognizes that it is not possible to predict what effect either the proposed facility or the no-action alternative would have on the prospects for future nuclear electric power generation. However, it can be said with certainty that those prospects – and the environmental benefits that come with them – would be stronger if the PFS facility is constructed and operated as proposed. Clearly, the loss of even a small fraction of the environmental benefits of nuclear power would far outweigh the environmental impacts of this project.

As a general matter, the U.S.'s 103 nuclear plants supply approximately 20 percent of our electricity. The operation of these plants does not emit any greenhouse gases or particulates into the atmosphere.

- Nuclear generated electricity avoids 168 million metric tons of carbon equivalent per year. This figure is more than double the 70 million tons included in the Clinton administration's Global Climate Action Plan.
- Nuclear energy avoids 2 million tons of nitrogen oxide and 4 million tons of sulfur dioxide annually, this contribution is vital to meeting clean air requirements.
- Without the emission avoidance from nuclear energy, required reductions in greenhouse gas emissions would increase by more than 50 percent.
- According to the U.S. Department of Energy's (DOE) report Voluntary Reporting of Greenhouse Gases 1997 (published June 1, 1999), the single most effective emission control strategy for utilities was to increase nuclear energy.

The nuclear plants at which this fuel was used generate electricity at a cost less than any form of new replacement power available on the market. Therefore, providing appropriate storage for this material is an important factor in fueling the nation's ongoing economic prosperity – as well as in preserving the quality of our environment.

II. An alternative to at-reactor used fuel storage would provide a consolidated, economical storage capacity for used fuel from those U.S. nuclear power plants that may utilize the facility.

U.S. nuclear power plants were not designed to store, in their original spent fuel pools, all the used nuclear fuel generated through the life of plant operations. DOE is responsible for construction and operation of a deep geologic repository to dispose of used nuclear fuel from commercial nuclear power plants. Although DOE has a legal obligation to have begun disposing used fuel in 1998, the disposal facility is not expected to begin operation before 2010. However, by 2003, the year the PFS facility is expected to begin operation, approximately 40 of the 103 nuclear power plants will require additional used fuel storage capacity. By 2010, approximately 70 reactors will have run out of current storage capacity in their spent fuel storage pools. Although plant owners may add additional storage capacity by installing at-reactor dry container storage, this is not feasible at all sites. The PFS facility offers nuclear plants needing additional storage a viable, cost effective alternative to at-reactor dry storage of used nuclear fuel that ensures continued reactor operation, and the corresponding clean air and energy security benefits

to the nation.

NRC's approval of the PFS facility by granting a license to construct and operate the facility on the Reservation of the Skull Valley Band of Goshute Indians (together with the Bureau of Land Management's approval of the right-of ways for the related transportation infrastructure) would ensure the following:

1. An effective alternative to limited at-reactor dry storage of used fuel would be available to reactor operating companies that need such an alternative;
2. Faster decommissioning of permanently shutdown nuclear plants providing for earlier use of the land for other activities; and,
3. Economic savings to electricity consumers due to increased efficiency resulting from consolidation of a portion of the nation's used fuel inventory.

The NRC's DEIS indicates that if the proposed PFS facility is not licensed, it could lead to the termination of nuclear power plant operation before NRC license expiration at one or more plants. Early plant closures would lead to increased use of fossil fuel fired power plants that would emit greater quantities of air pollutants than nuclear plants. Plant closures would also lead to increases in the price of electricity and concerns about the reliability of electric supply.

III. The proposed PFS facility will be an interim facility until a Federal Geologic Repository is available.

It is important to emphasize that the license for the proposed PFS facility will be issued by the NRC for 20 years, with the possibility for a 20-year license renewal period.

This facility is meant to be a temporary facility for the storage of used nuclear fuel until the DOE begins acceptance of used fuel for disposal at a geologic repository. DOE's schedule for the geologic repository calls for used fuel acceptance to begin in 2010. Therefore, the operating period for the PFS facility will meet interim used fuel storage needs with more than adequate time for shipment of used fuel from the PFS facility to the geologic repository. However, the licensing of PFS does not, in any way, lessen the need for a permanent disposal facility. NRC has appropriately recognized the temporary nature of the PFS facility in this DEIS.

Once the license period has expired, the PFS facility will be decommissioned and the site will be available for the residents of the Skull Valley to use the land for whatever purposes they see fit. Therefore, the only permanent legacy the proposed action will leave for the children and grandchildren of the valley's current inhabitants will be the enhanced economic opportunity that the proceeds of the project will provide.

IV. Transportation Impacts Associated with the PFS facility are Small

The NRC staff concluded in the DEIS that the radiological and non-radiological risks associated with used nuclear fuel transportation to the proposed PFS facility are small. This assessment included the potential impacts of hypothetical transportation accidents as well as the impacts associated with incident-free transportation. In fact, NRC acknowledges that the impacts associated with used fuel transportation would be even smaller if NRC had not overestimated the impacts by using conservative assumptions in its analysis. Examples of NRC use of such conservative assumptions include: a 30 percent increase in the population that would potentially be exposed during shipments of used fuel to the proposed PFS facility; use of an assumed 2,781 mile shipment route for all shipments; and use of the conservative accident probabilities and release fractions from NUREG/CR-4829

The small risks associated with the transportation of used nuclear fuel have been clearly demonstrated by the safety record for more than 3,000 cask shipments of used nuclear fuel from commercial and research reactors and 700 shipments of Navy spent fuel over the past 30 years in the United States. All of these shipments have traveled without radiological incident.

International experience in the transport of used nuclear fuel, in packages designed to the same safety standards used in the United States, provides an even greater experience base from which to judge used fuel transport safety. This experience includes approximately 30,000 cask shipments of used nuclear fuel over the past 30 years. (Reference "Survey of Wet and Dry Spent Fuel Storage," IAEA TECDOC-1100, July 1999)

It is important to note that there has never been an accident involving a commercial used fuel transportation package that has resulted in the release of its radioactive contents. This is because:

- * The packages are designed to withstand severe transportation accidents
- * The packages must be proven safe in a series of tests before being approved by the NRC for transportation. These tests involve drop and puncture tests, thermal tests (fire), and water submersion tests.

In March, the NRC released NUREG/CR-6672 "*Reexamination of Spent Fuel Shipment Risk Estimates.*" This study examined the risks associated with new cask designs along with other new information and clearly demonstrated that the overall risks associated with incident-free transportation and hypothetical severe transportation accidents are small and that the results of previous studies (i.e. NUREG-0170) were very conservative. NUREG-0170 is one of numerous studies performed by NRC over the past 25 years that demonstrates the safety of used nuclear fuel transportation and the small associated risks. NRC's latest study reveals that transportation risks that were once assessed to be small, are now known to be even smaller than previously calculated.

NRC has also recently announced that it intends to supplement its recent re-assessment of used fuel transportation container risks in a proposed Package Performance Study to be performed by Sandia National Laboratory. This supplemental effort is intended to demonstrate confidence in the results of the risk assessment by performing additional physical tests and modeling. The results of this study need not be available to include in the FEIS since all risk studies performed to date

show the risks of used fuel transportation to be small and this conclusion is not expected to be altered by the results of the Package Performance Study. It would, therefore, not be necessary or appropriate for NRC to delay the FEIS to await the updated Package Performance Study (this study is only now in the planning process).

V. NRC could further strengthen this EIS by making specific changes

NEI offers the following specific comments:

- In Section 2.2.1.3, *Alternatives That , in Effect, Eliminate the Need for the Proposed PFS facility*, NRC states that the “need for the facility could be eliminated by the Federal Government taking possession and title to the SNF in a manner that would allow sufficient on-site storage to be maintained so that plant operations could continue and so that decommissioning could be completed for reactors that have already been shutdown.” Any agreements between reactor operating companies and DOE calling for the agency to (1) “take title” to spent nuclear fuel or (2) provide financial relief for increased used fuel storage costs resulting from DOE delays represent business transactions that should not affect the need for the proposed PFS facility. Nuclear plants may still have storage constraints and need to move fuel even if contract issues are addressed by such agreements. It is beyond the scope of this DEIS to consider the business aspects of used fuel storage. Furthermore, for shutdown plants, completion of decommissioning does not free up land for other uses unless the used fuel is removed from the site. This statement should, therefore, be deleted. Doing so would make this DEIS consistent with NRC’s recent and previous rulings on Waste Confidence (10 CFR part 51) that were made without regard to the business aspects of used fuel disposal.
- In Section 4.5, NRC discusses the economic benefits to Tooele County and the state of Utah in terms of number of jobs and absolute dollar values. It would be useful to put these numbers in perspective by also citing current employment, economic and tax revenue statistics so that it would be apparent how these benefits compare to the overall existing scale of the local economy.
- In evaluating the ITF transportation option, NRC states (on p. xxxviii of the Executive Summary) that “Based on current projections, the doses received by these workers would exceed the 5 rem occupational exposure limit in 10 CFR Part 20.” Because the facility will and must comply with NRC regulations (workers will be monitored for radiation exposure and exceedence of this limit would constitute a violation of NRC regulations) it is not appropriate for NRC to make this assumption. The FEIS should assume that operations will be conducted in full compliance with NRC regulations in that, as recognized in the FEIS, NRC would not permit PFS to continue operations otherwise. A more appropriate consideration of worker doses would change NRC’s determination of the significance of the potential impact from “small to moderate” to “small” as doses within regulatory limits do not “alter noticeably” the condition of workers as would be required for NRC’s definition of “moderate” impacts to be met.

- Appendix D, Transportation Risk Analysis, discusses transportation risks during accidents in highly technical terminology. It might be useful to explain transportation cask performance standards and transportation risk in more simpler, understandable terms as was done in the NRC publication, "Transporting Spent Fuel, Protection Provided Against Severe Highway and Railroad Accidents." For example, in order for the public to have a better understanding of the inherent safety of used nuclear fuel shipments, NRC might include a discussion of transportation cask performance in Section 5 of the DEIS, such as:
 - "Current NRC regulations require that shipping casks meet certain performance standards. The performance standards include normal operating conditions and hypothetical accident conditions a cask must be capable of withstanding without exceeding specified acceptance criteria that (1) limit the releases of radioactive material and radiation levels outside the cask and (2) assure that the spent fuel will remain subcritical (that is will not undergo a self-sustaining nuclear reaction)."
 - Additional excerpts from, or reference to, the above cited NRC publication would be useful in providing the general public with a better understanding of the minimal, insignificant transportation risk involved with the PFS facility project.

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