

AFFIRMATION ITEM

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: COMMISSIONER MAGWOOD
SUBJECT: SECY-14-0072 – FINAL RULE: CONTINUED
STORAGE OF SPENT NUCLEAR FUEL (RIN 3150-
AJ20)

Approved X Disapproved _____ Abstain _____

Not Participating _____

COMMENTS: Below _____ Attached X None _____



SIGNATURE

31 July 2014

DATE

Entered on "STARS" Yes X No _____

**Commissioner Magwood's Comments on
SECY-14-0072: "Final Rule: Continued Storage of Spent Nuclear Fuel"**

It has been almost exactly one year since the Commission approved the issuance of the draft Generic Environmental Impact Statement (GEIS). Since that time, staff has engaged interested stakeholders and the general public in an impressive campaign of meetings, briefings, and webinars and received and processed many thousands of comments from around the country. In Appendix D of the GEIS, the staff provides clear and thorough responses to each comment received.

These comments were very helpful to the agency and I thank all those who provided their thoughts and input to this process. Public input has prompted wise changes to the draft that have resulted in a stronger, clearer outcome. I approve, contingent upon the incorporation of the relatively minor comments attached, the issuance of both the *Federal Register* Notice and the GEIS.

This focused effort, which allowed a team of people with the requisite skills and talents to work cohesively, should be considered as a model for future efforts that require a timely deliverable. The quality of the final *Federal Register* Notice and GEIS is attributable to the excellent level of cooperation amongst the various offices involved in this effort. In addition to NMSS, which was the lead technical organization behind this effort, many individuals from FSME, NRR, NRO, RES, and OGC were integral to this successful process.

I commend all the staff who worked on this project for the high quality product that has been submitted to the Commission. The Waste Confidence Directorate did a tremendous job in a very short period of time. I provide my congratulations to the Director of the Directorate who demonstrated tremendous leadership and dexterity in completing this challenging task. Finally, I believe the General Counsel deserves special recognition and gratitude for guiding her staff and the agency through this complex matter and doing so with creativity, skill, and legal acumen.

Given the importance of this decision and the staff's continuing efforts to evaluate technical issues related to extended storage, I support the concept of having staff provide the Commission with an information paper on a regular period (e.g., five years) to detail any new information arising from operational experience and research that may be relevant to the continued storage analysis.



William D. Magwood, IV 7/31/14
Date

Detailed Comments on the FRN and GEIS

Item No.	Page(s)	Comment	Recommended Change
1	FRN, Global Comment	The FRN refers to "NUREG-2157" and "the GEIS" interchangeably, which can prove unnecessarily confusing.	Change references to "NUREG-2157" in the FRN to "the GEIS". However, the rule language should remain as proposed by staff.
2	FRN, Global Comment	Staff's proposed language for 10 CFR § 51.23(a) states: "The Commission has generically and conclusively determined that the environmental impacts of continued storage of spent nuclear fuel beyond the licensed life for operation of a reactor are those impacts identified in the GEIS."	Delete the words "and conclusively" from § 51.23(a), and make conforming changes in the preamble materials in the FRN.
3	FRN, Page 6	The addition of the words "and conclusively" is a change from the language in the proposed rule, and is redundant as the rule already states that the impacts have been determined generically. The heading "C. Repository and Safety Conclusions" could incorrectly lead the reader to believe that we are making a safety conclusion.	Revise the heading as follows: "C. Repository and Safety Conclusions Regarding Technical Feasibility" Revise the text as follows:
4	FRN, Pages 21	The first sentence on page states: "Because a GEIS has been developed, "Findings" are no longer necessary." This is a very abbreviated discussion that lacks clarity. Language is needed to more clearly explain the connection between the use of a GEIS and the removal of the "Findings".	"Because a GEIS has been developed, "Findings" are no longer necessary." "The relationship between the prior "Findings" and the technical feasibility analyses in the current GEIS, is discussed in greater detail in Section D.2.4.1 of the GEIS. As noted in the GEIS, the former "Findings" were outputs of previous Waste Confidence proceedings which included an environmental assessment and finding of no significant impact. In contrast, the current GEIS provides a detailed analysis under NEPA and provides an analysis of numerous specific impacts."

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5	FRN, Page 37	The second to last line on page 37 lists "51.75 (b)" twice.	Revise the text as follows: "51.75 (a), 51.75 (b), 51.75 (b c)..."
6	FRN, Page 43	The heading "C. Repository and Safety Conclusions" could incorrectly lead the reader to believe that we are making a safety conclusion.	Revise the heading as follows: "C. Repository and Safety Conclusions Regarding Technical Feasibility"
7	FRN, Page 52	The 5 th and 6 th lines from the bottom of the page, cite incorrect dates for issuance of the proposed rule, which was issued last year.	Revise as follows: "Due to the lapse in appropriations and the subsequent shutdown of NRC, the NRC published a Federal Register notice on November 7, 2014-2013 (78 FR 66858), that extended the public comment period until December 20, 2014-2013."

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8	FRN, Pages 56-57	<p>The first full sentence on page 57 reads as follows:</p> <p>“Safety determinations associated with licensing of these activities are contained in the appropriate regulatory provision addressing licensing requirements and in the specific licenses for facilities.....</p> <p>On page 57, the fourth full sentence on the page reads as follows:</p> <p>“By not including a safety policy statement in the rule text, the NRC does not mean to imply that spent fuel cannot be stored safely. Rather, the conclusion that spent fuel can be stored safely for the short-term, long-term, and indefinite timeframes supports the analysis in the GEIS and is based upon the technical feasibility analysis in Appendix B of the GEIS and the NRC’s decade-long experience with spent fuel storage and development of regulatory requirements for licensing of storage facilities that are focused on safe operation of such facilities, which have provided substantial technical knowledge about storage of spent fuel.”</p> <p>This discussion, as written, may lead to confusion regarding the difference between an AEA safety determination and the consideration regarding storage safety and repository feasibility undertaken in support of the GEIS.</p>	<p>Revise as follows:</p> <p>“<u>AEA</u> Safety determinations associated with licensing of these activities are contained in the appropriate regulatory provision addressing licensing requirements and in the specific licenses for facilities.”</p> <p>“By not including a safety policy statement in the rule text, the NRC does not mean to imply that spent fuel cannot be stored safely. Rather, the conclusion that <u>To the contrary, the analyses documented in the GEIS is predicated on the ability to store safely spent fuel can be stored safely for over the short-term, long-term, and indefinite timeframes and is.</u> This understanding is based upon the technical feasibility analysis in Appendix B of the GEIS and the NRC’s decades-long experience with spent fuel storage and development of regulatory requirements for licensing of storage facilities that are focused on safe operation of such facilities, which have provided substantial technical knowledge about storage of spent fuel.”</p>

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9	FRN, Page 64 (Table)	<p>In the first line/first column after the "NRC Documents" heading in the table reads as follows:</p> <p>"Federal Register notice - Extension of Comment period (78 FR 66858 November 7, 2014)"</p> <p>November 7, 2014 is not the correct date. The comment period will not be extended later this year, it was extended last year.</p>	<p>Make the following revision:</p> <p>"Federal Register notice - Extension of Comment period (78 FR 66858 November 7, 2014-2013)"</p>
10	GEIS, Page xxx	<p>The second to last sentence of the second paragraph, reads as follows:</p> <p>"The long-term timeframe considers the environmental impacts of continued storage for a total of 160 years after the end of a reactor's licensed life for operation."</p> <p>As written, this sentence does not clearly communicate that the long-term time frame encompasses the short-term time frame of 60 years after the end of a reactor's licensed life for operation.</p>	<p>For clarity, revise the sentence so to be consistent with the language which can be found on page 26 of the FRN by adding the underlined text as shown below:</p> <p>"The long-term timeframe considers the environmental impacts of continued storage for an additional 100 years after the <u>short-term timeframe</u> for a total of 160 years after the end of a reactor's licensed life for operation."</p>

Detailed Comments on the FRN and GEIS

Item No.	Page(s)	Comment	Recommended Change
11	GEIS, Pages 1-9	<p>The second to last sentence on the page, reads:</p> <p>“Therefore, under current law the NRC will issue a nuclear power plant or materials license (including a license authorizing storage of spent fuel) when the NRC determines that a license applicant has met the NRC’s regulatory standards for issuance of a license, addressing adequate protection of public health and safety and common defense and security, and the NRC has no other reason to doubt that issuance of the license would provide adequate protection. “</p> <p>Leaving the word “other” in the sentence could be misinterpreted to mean that the NRC has an existing reason to doubt that issuance of the license would provide adequate protection.</p>	<p>Revise the sentence as follows:</p> <p>“Therefore, under current law the NRC will issue a nuclear power plant or materials license (including a license authorizing storage of spent fuel) when the NRC determines that a license applicant has met the NRC’s regulatory standards for issuance of a license, addressing adequate protection of public health and safety and common defense and security, and the NRC has no other reason to doubt that issuance of the license would provide adequate protection. “</p>

Detailed Comments on the FRN and GEIS

Item No.	Page(s)	Comment	Recommended Change
12	GEIS, Appendix B, Page B-4	<p>The third paragraph on page B-4 references DOE's WIPP project as a portion of the discussion supporting the technical feasibility of a deep geologic repository:</p> <p>“The technical feasibility of a deep geologic repository is further supported by current DOE defense-related activities. The DOE sited and constructed, and since March 1999 has been operating a deep geologic repository for defense-related transuranic radioactive wastes near Carlsbad, New Mexico. At this site, DOE has successfully disposed of transuranic waste from nuclear weapons research and testing operations. This Waste Isolation Pilot Plant is located in the Chihuahuan Desert of southwestern New Mexico, approximately 42 km (26 mi) east of Carlsbad. The facility is used to store transuranic waste from nuclear weapons research and testing operations from past defense activities. Project facilities included mined disposal rooms 655 m (2,150 ft.) underground.”</p> <p>Ongoing issues at WIPP and comments from several external stakeholders citing WIPP as an example to consider when assessing the viability of institutional controls for an extended time frame require that this paragraph be revised.</p>	<p>Staff should delete or revise the text regarding the WIPP project, as appropriate.</p>

Detailed Comments on the FRN and GEIS

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13	GEIS, Appendix B, Page B-29	<p>In the heading towards the bottom of the page, it states:</p> <p>“4. A permanent loss of Institutional controls could have “catastrophic” impacts”</p> <p>The use of the term “catastrophic” in this context is unsupported and inappropriate.</p>	<p>Revise the heading on page B-29 as follows:</p> <p>“Impacts of Loss of Institutional Control”</p>
14	GEIS, Appendix B, Page B-30	<p>“While the consequences-as explained above-are unpredictable, the NRC can state qualitatively that the consequences of such a catastrophe to the environment and public health could be similar to the impacts DOE analyzed for the no-action alternative (scenario 2-permanent loss of institutional controls) in its Yucca Mountain EIS (assuming a similar number of facilities were considered). “</p> <p>The use of the term “catastrophe” in this context is unsupported and inappropriate.</p>	<p>Revise the sentence as follows:</p> <p>“While the consequences-as explained above-are unpredictable, the NRC can state qualitatively that the consequences of such a catastrophe <u>an insult</u> to the environment and public health could be similar to the impacts DOE analyzed for the no-action alternative (scenario 2-permanent loss of institutional controls) in its Yucca Mountain EIS (assuming a similar number of facilities were considered). “</p>
15	GEIS, Appendix B, Page B-30	<p>The last sentence on the page states:</p> <p>“Thus, in the event of a permanent loss of institutional controls, the resulting consequences to the environment across nearly all resource areas would be clearly noticeable and destabilizing.”</p> <p>There is no analysis to support this statement.</p>	<p>Delete this sentence.</p>

Detailed Comments on the FRN and GEIS

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16	GEIS, Appendix E, Page E-14	<p>The first sentence of the first full paragraph on the page reads:</p> <p>“Given the need to locate nuclear power plants near large surface water bodies, the siting of reactors typically in areas of lower population density, and the typically large size of the licensee-controlled area surrounding the spent fuel pool and the entire facility, it is unlikely that groundwater users will be located between the spent fuel pool and the nearest receiving surface water body.”</p> <p>As written, the sentence could lead the reader to believe that nuclear power plants need to be located near large surface bodies of water, which is not accurate.</p>	<p>Revise text as follows:</p> <p>“Given the need, in many cases, to locate nuclear power plants near large surface water bodies, the siting of reactors typically in areas of lower population density, and the typically large size of the licensee-controlled area surrounding the spent fuel pool and the entire facility, it is unlikely that groundwater users will be located between the spent fuel pool and the nearest receiving surface water body.”</p>

Detailed Comments on the FRN and GEIS

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17	GEIS, Appendix E, Pages E16-17	<p>Section E.2.2.2, starting at the last full sentence at the bottom of page E-16 reads:</p> <p>“The NRC acknowledges that, in the unlikely event, the radiological impacts on groundwater quality resulting from a spent fuel pool leak during the short-term timeframe could noticeably alter, but not destabilize a groundwater resource. However, because of the relatively small size of the maximum leak rate likely to escape detection (see Section E.2.1.1), the impacts to groundwater would likely be highly localized and would not be expected to impact regional groundwater resources. <i>If contamination from a spent fuel pool leak were to exceed a Maximum Contaminant Level for one or more radionuclides at a groundwater source that currently supplies water...</i>” (emphasis added)</p> <p>As written, the italicized sentence could lead the reader to believe that contamination from a spent fuel pool leak is likely.</p>	<p>Revise the text as follows:</p> <p>“I<u>n the unlikely event that</u> contamination from a spent fuel pool leak were to exceed a Maximum Contaminant Level for one or more radionuclides at a groundwater source that currently supplies water...”</p>
18	GEIS, Appendix F, Page F-4	<p>The last paragraph on page F-4 reads:</p> <p>“The ranges in Table F-1 are mean values of consequence of a spent fuel pool fire in which the NRC assumed a late evacuation of 95 percent of the population inside the 16 km (10mi) emergency planning zone around Surry.”</p> <p>There is no need or benefit to identify Surry in this discussion.</p>	<p>Revise the sentence as follows:</p> <p>“The ranges in Table F-1 are mean values of consequence of a spent fuel pool fire in which the NRC assumed a late evacuation of 95 percent of the population inside the 16 km (10mi) emergency planning zone around Surry.”</p>

Detailed Comments on the FRN and GEIS

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19	GEIS, Appendix F, Pages F-4, F-9, and F-16	<p>The discussion on the “Environmental Impacts of Spent Fuel Pool Fires” in Section F. 1 is separated into three sections:</p> <p>Section F. 1. 1, “Consequences of Spent Fuel Pool Fire” on page F-4</p> <p>Section F. 1. 2, “Probability-Weighted Consequences of a Spent Fuel Pool Fire” on page F-9</p> <p>Section F. 1. 3 “Conclusions” on page F-16</p> <p>Separating the discussions in F. 1. 1 and F. 1. 2 is inappropriate and will prove confusing and distracting to many readers. The agency’s analysis of spent fuel pool fires is not a two-step process. We have reached a single conclusion based on an assessment of the potential risks posed by such events.</p>	<p>Combine sections F. 1. 1 and F. 1. 2 so that the subheading reads as follows:</p> <p>F. 1. 1 Consequences of a Spent Fuel Pool Fire</p> <p>Revise the text in the combined section, as appropriate.</p> <p>Given the change above to F. 1. 1, revise F. 1. 3 “Conclusions” to read as follows:</p> <p>F. 1. 2 Conclusions</p>