



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001**

June 29, 2018

MEMORANDUM TO: Michael C. Layton, Director
Division of Spent Fuel Management
Office of Nuclear Material Safety
and Safeguards

FROM: Kristina L. Banovac, Project Manager **/RAI/**
Renewals and Materials Branch
Division of Spent Fuel Management
Office of Nuclear Material Safety
and Safeguards

SUBJECT: SUMMARY OF JUNE 7, 2018, MEETING WITH U.S. DEPARTMENT OF
ENERGY TO DISCUSS THE PROPOSED RESPONSES TO THE
REQUEST FOR ADDITIONAL INFORMATION REGARDING THE
RENEWAL OF THE THREE MILE ISLAND UNIT 2 INDEPENDENT
SPENT FUEL STORAGE INSTALLATION LICENSE (SNM-2508)
(CAC/EPID NOS. 001028/L-2017-RNW-0019 AND 000993/L-2017-LNE-
0007)

Background

On June 7, 2018, a meeting was held between representatives of the U.S. Department of Energy (DOE) and the U.S. Nuclear Regulatory Commission (NRC) to discuss DOE's proposed responses to the request for additional information (RAI) regarding the renewal of the Three Mile Island Unit 2 (TMI-2) Independent Spent Fuel Storage Installation (ISFSI) license (SNM-2508). The NRC's RAI is dated January 29, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18030A172).

The meeting was noticed on May 10, 2018 (ADAMS Accession No. ML18131A041).

Discussion

The list of meeting attendees is provided in Enclosure 1. The meeting discussion followed the meeting agenda, which is provided in Enclosure 2. DOE gave a presentation on its proposed approach for the RAI response, which is included in Enclosure 3. DOE specifically discussed how it plans to address RAIs 2-1, 2-4, 3-8, and 3-11, and discussion between DOE and NRC representatives followed.

Regarding RAI 2-1, DOE provided a detailed explanation of (1) the scoping evaluation for the license renewal application (LRA), (2) the differences between the "design drawings" (i.e., fabrication drawings) and updated final safety analysis report (UFSAR) drawings for the various structures, systems, and components (SSCs), (3) how the drawings and other information was used for the scoping evaluation, and (4) its proposed approach for responding to the RAI. The

NRC staff appreciated the explanation and recognized that as the proposed UFSAR supplement includes Table 3-4 (which includes the materials of the in-scope SSC subcomponents), this would require any future changes to the design bases (e.g., changes to SSC materials to something different from what was used in the scoping analysis) to be evaluated under Title 10 of the *Code of Federal Regulations* (10 CFR) 72.48, to determine if NRC approval is needed for the change. The NRC staff also noted that DOE should provide on the docket the drawings used for the scoping evaluation and referenced in the proposed UFSAR supplement (both the “design drawings” and any versions of the referenced UFSAR drawings not included in the latest biennial update of the UFSAR), per part “e)” of RAI 2-1.

Regarding RAI 2-4, DOE’s proposed approach for responding to the RAI includes (1) a license condition limiting the age of an MP-187 transfer cask to less than 20 years, and (2) incorporation by reference of the scoping, aging management review, time-limiting aging analyses, and aging management program for the OS-197 transfer cask from the Certificate of Compliance (CoC) No. 1004 (Standardized NUHOMS®) renewal, into the TMI-2 LRA. DOE clarified that its proposed approach is not based on the expected age of the transfer casks that may be used in the future for retrievability at the TMI-2 ISFSI. Rather, DOE’s approach is based on the level of NRC review for these components (i.e., the NRC issuance of the CoC No. 1004 renewal that includes the OS-197 transfer cask vs. the NRC has not yet completed review of the MP-187 transfer cask that is included in the Rancho Seco ISFSI LRA). The NRC staff noted that DOE’s RAI response should include information that shows that the CoC No. 1004 renewal (and the considerations regarding the OS-197 in the CoC No. 1004 LRA and NRC’s review and issuance of the renewal) bounds the TMI-2 ISFSI site and design bases conditions.

The NRC staff questioned whether use of the MP-187 for transfer operations at the TMI-2 ISFSI would require the dry shielded canister (DSC) vent/purge port assemblies to be placed in a transport configuration, if the MP-187 transfer cask is to be used in a “transport mode” per the TMI-2 UFSAR. DOE noted that any future use of the MP-187 transfer cask at the TMI-2 ISFSI would need to be consistent with the design bases provided in the TMI-2 UFSAR.

Regarding RAI 3-8, DOE noted that the bounding design bases criticality analysis is for the knockout canister, and the knockout canister does not contain lightweight concrete (Licon). The NRC staff noted that DOE should consider in the aging management review whether degradation of the Licon could cause the fuel canister (which does contain Licon) to become the bounding criticality analysis (e.g., if Licon degradation could cause a change in position or geometry of the fuel debris contents in the fuel canister). DOE noted that it will consider that as it develops its RAI response. DOE clarified that the 14 liters of water analyzed in the criticality analysis is not a volume that would fill all of the canister voids. DOE also clarified that 14 liters is not the amount of residual water in the canister in dry storage; rather, it is the volume of water that was the most reactive case and thus what was used in the criticality analysis for conservatism. DOE noted that its response to RAI 3-9 will clarify the residual water content in the canisters during storage.

Regarding RAI 3-11, DOE noted that radiolytic oxidizing products created from gamma radiation interaction with residual water is expected to be minimal because the amount of water remaining in the canister after drying is minimal. The NRC staff noted that the RAI response should make clear the basis for this conclusion.

DOE and NRC staff discussed the schedule for the renewal. DOE plans to respond to the RAIs by September 30, 2018, and it will notify the NRC of any schedule changes. If no additional information is needed after DOE responds to the RAI, the NRC staff estimates making a

decision on the license renewal in March 2019. The NRC staff noted that because the submittal of the LRA was timely, the existing license will not expire until a final decision concerning the renewal has been made by the NRC, per the provision in 10 CFR 72.42(c).

After DOE and NRC representatives completed their discussion, the public was given the opportunity to make comments or ask questions of the NRC. Ms. Donna Gilmore asked about the thickness of a DSC and how the DSCs would be inspected since the horizontal storage modules do not have vents. The NRC staff noted that those details are provided in the LRA, which is publicly available at ADAMS Accession No. ML17089A501. Mr. Ace Hoffman asked about the level of review for SSCs and the scoping criterion of a SSC that is not important to safety, but its failure could prevent fulfillment of a function that is important to safety. The NRC staff noted that the LRAs and NRC's review of LRAs are at a SSC subcomponent level.

Action Items/Next Steps

DOE will respond to the RAI by September 30, 2018.

Docket No.: 72-20

CAC/EPID Nos.: 001028/L-2017-RNW-0019

and 000993/L-2017-LNE-0007

Enclosures:

1. Meeting Attendees
2. Agenda
3. DOE's Presentation Slides

SUMMARY OF JUNE 7, 2018, MEETING WITH U.S. DEPARTMENT OF ENERGY TO DISCUSS THE PROPOSED RESPONSES TO THE REQUEST FOR ADDITIONAL INFORMATION REGARDING THE RENEWAL OF THE THREE MILE ISLAND UNIT 2 INDEPENDENT SPENT FUEL STORAGE INSTALLATION LICENSE (SNM-2508) (CAC/EPID NOS. 001028/L-2017-RNW-0019 AND 000993/L-2017-LNE-0007),
DOCUMENT DATE: June 29, 2018

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ADAMS Accession No.: ML18184A515 Memo: ML18184A443 Encl. 3: ML18184A521

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MEETING ATTENDEES

Public Meeting with U.S. Department of Energy to discuss the proposed responses to the request for additional information regarding the renewal of the Three Mile Island Unit 2 Independent Spent Fuel Storage Installation license (SNM-2508)

June 7, 2018, 9:00 – 11:30 a.m.

Kristina Banovac	NRC/NMSS/DSFM/RMB
Ricardo Torres	NRC/NMSS/DSFM/RMB
Michel Call	NRC/NMSS/DSFM/CSRAB
David Tang	NRC/NMSS/DSFM/CSTB
Bernie White	NRC/NMSS/DSFM/SFLB
Caylee Kenny (via teleconference)	NRC/NMSS/DSFM/CSTB
Steven Wahnschaffe	DOE-Idaho Operations Office
Scott Ferrara	DOE-Idaho Operations Office
Jack Zimmerman	DOE-Idaho Operations Office
Greg Sosson	DOE-HQ
Nick DiNunzio	DOE-HQ
Jomaries Rovira (via teleconference)	DOE-HQ
Brian Gutherman	Gutherman Technical Services/ Spectra Tech Inc.
Jeff Long	Spectra Tech, Inc.
Chris Backus	Orano Federal Services
Don Shaw	Orano TN Americas
Donna Gilmore (via teleconference)	Public
Ace Hoffman (via teleconference)	Public

MEETING AGENDA

Meeting with U.S. Department of Energy (DOE)

June 7, 2018

9:00 – 11:30 a.m. (Eastern Daylight Time)

One White Flint North Building, O-11B4

Purpose: DOE to discuss the proposed responses to the request for additional information regarding the renewal of the Three Mile Island Unit 2 Independent Spent Fuel Storage Installation license (SNM-2508).

Agenda:

- Welcome, introductions, and meeting objectives
- DOE presentation and discussion
- Public questions or comments
- Wrap-up and closing remarks
- Meeting adjourned