



CONVERSATION RECORD

NAME OF PERSON(S)/TITLE CONTACTED OR IN CONTACT WITH YOU Department of Energy Idaho Operations Office		DATE OF CONTACT 04/16/2019	TYPE OF CONVERSATION <input type="checkbox"/> E-MAIL <input checked="" type="checkbox"/> TELEPHONE <input type="checkbox"/> INCOMING <input checked="" type="checkbox"/> OUTGOING	
E-MAIL ADDRESS		TELEPHONE NUMBER		
ORGANIZATION Department of Energy Idaho Operations Office		DOCKET NUMBER(S) 72-20		
LICENSE NAME AND NUMBER(S) SNM-2508		MAIL CONTROL NUMBER(S) 001028/L-2017-RNW-0019 and 000993/L-2017-LNE-0007		
SUBJECT Discuss April 1, 2019, Department of Energy Idaho Operations Office (DOE-ID) submittal on Three Mile Island, Unit 2 (TMI-2) Independent Spent Fuel Storage Installation (ISFSI) renewal application				
SUMMARY AND ACTION REQUIRED (IF ANY) DOE-ID attendees: Steven Wahnschaffe, Steve Ahrendts, Brian Gutherman, Jeffery Long, Chris Backus, Erik Gonsiorowski, Sarah Gibboney NRC attendees: Kristina Banovac, Ricardo Torres, Mike Call A teleconference was held between NRC and DOE-ID representatives to discuss DOE-ID's April 1, 2019, response (ADAMS Accession No. ML19093B118) to NRC's request for clarification of the technical request for additional information (RAI) responses (follow-up RAIs) on the TMI-2 ISFSI license renewal application (LRA). DOE-ID previously provided RAI responses on September 26, 2018 (ADAMS Accession No. ML18283A222). The purpose of the call was to seek clarification on the 4/1/19 response and NRC staff's remaining questions on the LRA. The following RAIs and responses were discussed. RAI 2-2, 3-4, 3-6 follow-ups: DOE-ID performed supplemental shielding analyses (in Orano CALC-3021323, and as discussed in the 9/26/18 and 4/1/19 submittals) to support the LRA approach: (1) to scope out the dry shielded canister (DSC) basket and purge port block, and (2) for the aging management review results for lightweight concrete (Licon). The supplemental analyses assess the effects of removing the basket, purge port block, and Licon on the shielding safety function – both in terms of the shielding the material provides, and the positioning of TMI-2 canisters within the DSC in relation to the vent and purge port openings (by assessing various reconfigurations of TMI-2 canisters within the DSC). The supplemental analyses calculate				
NAME OF PERSON DOCUMENTING CONVERSATION Kristina L. Banovac				
SIGNATURE 			DATE OF SIGNATURE 04/22/2019	

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SUMMARY AND ACTION REQUIRED (IF ANY) (Continued)

dose rates and compare them to the current TMI-2 ISFSI technical specification, LCO 3.2.2 surface dose rate limit of 1200 mrem/hr at the HEPA filter housing.

The NRC staff noted that, in evaluating the supplemental analyses and considering the radiation source term decay over 20 years of dry storage operations, the Licon aging management review appears to be adequately supported.

However, the NRC staff noted that it has remaining technical questions on the supplemental analyses related to scoping out the basket and purge port block, including on calculated dose rates at the horizontal storage module (HSM) rear access door. The 4/1/19 submittal points to an original design-basis calculation (219-02.0401) to estimate dose rates at the HSM rear access door, and it compares these estimated dose rates to the TMI-2 ISFSI technical specification, LCO 3.2.2 surface dose rate limit of 100 mrem/hr on the HSM rear access door. However, that original design-basis calculation does not reflect the potential reconfigurations of the TMI-2 canisters within the DSC, as was done in the Orano CALC-3021323 to address the removal of the positional/spatial function of the basket. Given the significant increases in calculated dose rates for the HEPA filter housing, from the design-basis analyses to the supplemental analyses, the staff expects that any recalculated HSM rear access door dose rates (to account for potential TMI-2 canister reconfiguration with the basket and purge port block scoping out) will challenge the LCO surface dose rate limit for the HSM rear access door.

- The calculated dose rates for the HEPA filter housing in the *design-basis* analyses are ~3 mrem/hr in the original analyses, or 35 mrem/hr as recalculated in the supplemental analyses with a more recent and refined calculation method.
- The calculated dose rates in the *supplemental* analyses for neglect of the basket and Licon for the vent port's filter housing are 174 mrem/hr for the same port and filter housing configuration in the preceding analyses, and 265~314 mrem/hr for a model that more accurately reflects the design specifications and the as-stored configuration.
- The calculated dose rates in the *supplemental* analyses for the purge port filter housing, neglecting the purge port block, are up to 1121 mrem/hr for the same model that produced the 265~314 mrem/hr dose rates on the vent port filter housing.

In addition, the NRC bases an ISFSI license renewal on the continuation of the approved design bases through the period of extended operation. In terms of the LRA approach of scoping out the basket and purge port block, the NRC staff questions if the approved shielding design bases are maintained, given the significant increase in calculated dose rates from the approved design-basis analyses to the supplemental analyses (even if the supplemental analyses were further refined and could result in calculated dose rates that met the LCO dose rate limits).

The NRC staff noted that the materials and environment for the basket and purge port block appear similar to that for the vent port shield block, which was scoped into the renewal and shown in the proposed aging management review to not require any specific aging management activities in addition to those in the

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proposed DSC aging management program (AMP). Given the NRC staff's remaining technical questions and issues with the supplemental analyses for scoping out the basket and purge port block, the NRC staff asked DOE-ID to consider scoping these components into the renewal (as it may not impact the proposed AMPs and aging management activities), instead of pursuing further analysis to support scoping them out.

DOE-ID representatives noted that they need time to consider and discuss the NRC staff's remaining questions before DOE-ID could respond, and DOE-ID requested that any remaining questions from the NRC staff be provided in writing.

RAI 3-9 follow-up: The NRC staff noted it has clarification questions regarding the 4/1/19 submittal information on the TMI-2 canister drying operations and verification that the residual water amount did not exceed the maximum water content assumed in the criticality analyses. DOE-ID representatives noted that they need to review their records to definitively respond to the NRC staff's remaining questions, and DOE-ID requested that any remaining questions from the NRC be provided in writing.

Proposed License Condition #18: DOE-ID noted that it wishes to clarify the language in the proposed license condition #18 in the LRA, regarding development of procedures for AMP implementation. DOE-ID intends for the license condition to refer to an overarching AMP implementation plan, rather than a field implementing procedure. The NRC staff recognized that there may be tiers of procedural documents (from a higher-level programmatic document to a field-level procedure for completion of a specific task), and it noted that a higher-level procedure may be appropriate to reference in this condition. The NRC staff also noted that the guidance in NUREG-1927 indicates that such procedures be developed generally within one year following issuance of the renewal. The NRC staff noted that DOE-ID may wish to review the NRC's Temporary Instruction 2690/011 (ADAMS Accession No. ML17167A268) on inspection of licensee's processes or procedures for AMP implementation. DOE-ID inquired when NRC would need information on field-level procedures, and the NRC staff clarified that such information is not needed for the LRA review; rather, such information would be communicated during the planning of a future NRC inspection of DOE-ID's AMP implementation. The NRC staff noted that DOE-ID may provide revised language to the NRC for it to consider for the license condition. Also, the NRC staff will provide the draft SER (that contains the draft license conditions) to DOE-ID for a proprietary review, concurrent with the NRC staff's internal review of the license renewal package.

ACTION ITEMS:

The NRC staff will transmit its remaining questions on the TMI-2 LRA to DOE-ID.

DOE-ID will provide revised language for proposed license condition #18 to NRC.