



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

November 20, 2015

MEMORANDUM TO: Steven D. Bloom, Chief
Subsequent Renewal, Guidance,
and Operations Branch
Division of License Renewal
Office of Nuclear Reactor Regulation

FROM: Albert Wong, Project Manager */RA/*
Subsequent Renewal, Guidance,
and Operations Branch
Division of License Renewal
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF THE QUARTERLY MEETING BETWEEN THE U.S.
NUCLEAR REGULATORY COMMISSION STAFF AND THE
NUCLEAR ENERGY INSTITUTE TO DISCUSS CURRENT LICENSE
AND SUBSEQUENT LICENSE RENEWAL TOPICS

The U.S. Nuclear Regulatory Commission (NRC) staff and representatives of the Nuclear Energy Institute (NEI) met on September 10, 2015, to discuss various topics on license and subsequent license renewal. The meeting summary package is available in the NRC's Agencywide Documents Access and Management System (ADAMS) under Accession No. ML15289A414. The enclosure is a list of the meeting participants.

A summary of the meetings discussion follows:

1. **Opening Remarks**

The NRC staff, in their opening remarks, discussed several issues related to the license and subsequent license renewal (SLR) issues. With respect to safety reviews issues, topics included the Advisory Committee on Reactor Safeguards (ACRS) meetings related to the Byron and Braidwood power plant's, the Sequoyah Nuclear Plant final safety evaluation report, and issuance of the final license decision by the end of September 2015. In addition, the staff stated that the Davis-Besse Nuclear Power Station license renewal application (LRA) and related ACRS meeting had been scheduled for September 23, 2015. The staff

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also indicated that the NRC has issued a schedule change letter on the Fermi 2 LRA due to some open items to be addressed, and the NRC has received a schedule change letter from FENOC for submitting the Perry Nuclear Power Plant LRA to October of 2019. Further, the staff discussed the SLR optimization project, the selective leaching issues at the South Texas Project plants, and issuance of draft SLR guidance documents, namely, "Generic Aging Lesson for Subsequent License Renewal Report" (GALL) and "Standard Review Plan for Review of Subsequent License Renewal Applications for Nuclear Power Plants" (SRP). Both guidance documents are currently under concurrence review. Additionally, the staff discussed the definition of air and the visit to the Oak Ridge National Laboratory (ORNL) in July which resulted in the development of deep dives tables.

On the environmental review side, the staff stated that Byron, Units 1 and 2, Final safety environmental impact statement (SEIS) was issued on July 15, 2015, and that the Seabrook Station, Unit 1, Final SEIS was issued on July 29, 2015. The Diablo Canyon Power Plant environmental scoping meeting was held on August 5, 2015; and the meeting results were very satisfactory. The Fermi 2 draft SEIS was scheduled to be published for public comment in late October 2015.

Finally, the staff highlighted a few activities in the SLR area. First, the division's quality assurance, management review and concurrence process of the draft GALL/SRP for SLR guidance documents are near completion. The draft documents will be sent to the Office of General Counsel. Second, the NRC is currently on schedule to issue the draft GALL/SRP-SLR documents by the end of 2015. The ACRS subcommittee (SC) for GALL/SRP-SLR is scheduled for November 17, 2015, to discuss the technical issues on SLR. The NRC staff is working on possible improvements to the SLR safety review process and will be discussing them during today's meeting. In addition, the staff is looking forward to hearing from industry in the near future about possible ways to streamline the SLR environmental review process.

The NEI representative stated that the industry was looking forward to the deep dive meetings, which would be held in October as a vehicle to have dialogues with the NRC on technical issues related to SLR. He also stated that the industry appreciates the multiple meetings on various technical topics (e.g., electrical aging management program (AMP)) held between the NRC and industry representatives in the past to better understand both sides' perspectives. The representative mentioned that the industry was looking forward to the findings from the SLR Optimization Working Group; and that it has designated a point of contact from the utilities on a part-time basis for the environmental review process.

2. **Staff Presentations**

a) Action Items from June 11, 2015 Quarterly Meeting:

The staff presented action items from the second quarterly meeting on June 11, 2015. They indicated that, from the total of ten (10) items two (2) had been completed and closed. The two were: open invitation to NRC to visit the ORNL in July 2015, and the NRC-industry coordination efforts to prepare a Commissioner's Assistant note on SLR in August 2015. Both are completed as scheduled. The other eight (8) open items were:

1. Further discussion(s) on NEI 14-13 and NEI 14-12 in future quarterly meetings. The NEI 14-12 was discussed by the staff at this meeting.
2. NRC and industry will coordinate efforts to prepare for the ACRS SC meeting on SLR in November 2015.
3. For the NEI SLR roadmap, NRC suggested to embed live links to connect the roadmap to other relevant sites (e.g., Department of Energy (DOE)/Electric Power Research Institute (EPRI) SLR sites). An NEI representative stated that on the NEI website there is a link to the roadmap and other relevant sites.
4. NRC will review the EPRI documents discussed in Mr. Rich Tilley's presentation. Issues raised by the staff at this meeting and from staff's later review will be provided to the industry.
5. For future quarterly meetings, staff will upload presentation slides to the public meeting website prior to the meeting so members of the public from remote locations could better follow along with the discussions. This item remains open for further action.
6. NRC will schedule a presentation on the best practice from experience in reviewing earlier LRAs in a future meeting.
7. NRC will provide feedback to NEI on a future NEI 95-10-like document for the SLR.
8. Once the draft SLR guidance documents are issued for public comment, NRC plans to schedule two separate public meetings to further discuss the guidance documents with industry in the January and February 2016 timeframe. Both meetings have been scheduled.

b) Selective Leaching of Ductile Iron Components

The NRC staff made a presentation on the susceptibility of ductile iron components to selective leaching. They provided an overview of selective leaching as it relates to gray cast and ductile iron, and provided technical justifications and literature examples showing that, although ductile iron is less susceptible, it is not immune to selective leaching when compared to gray cast iron. The staff concluded with proposed actions under consideration by the NRC staff on how to manage selective leaching of ductile iron components and suggested that this could be a topic for the upcoming deep dive meetings.

c) Buried Component Leakage Reporting Criteria/NEI 09-14

The NRC staff presented the issue of buried component leakage reporting criteria within the scope of NEI 09-14 "Guideline for the Management of Underground Piping and Tank Integrity." The staff first discussed the current scope of reporting in NEI 09-14. Next the staff explained its rationale for expanding the scope of reporting to include leaks from piping and tanks within the scope of license renewal for plants that have submitted for a renewed operating license. Finally, the staff asked the NEI representative to confirm that the expanded definition has been incorporated into the upcoming revision of NEI 09-14.

d) Subsequent License Renewal Optimization Working Group

The NRC staff provided an overview of current composition of the Subsequent License Renewal Optimization Working Group, its charter, the timeline of key activities, the expected outcome of the working group, and how staff plans to communicate the working group outcomes to the public. The areas of the working group's review included the expected format and content of a subsequent license renewal application (SLRA) and the conduct of the staff's SLRA safety review. The staff then answered question from the audience regarding the regional involvement, how to communicate the outcome of the Subsequent License Renewal Optimization Working Group, and how to leverage the review efforts gained in the first license renewal review to inform the SLRA. Industry reported that they had undertaken a similar effort to examine the SLR review. Both sides agreed that early dialogues between NRC and NEI/Industry on this topic would be appropriate.

e) NEI 14-12 "Aging Management Program Effectiveness" and SLR Roadmap

The NRC staff thanked NEI for the opportunity to review and comment on both documents. NRC staff's specific comments for the two documents will be forwarded to NEI for consideration. The staff discussed the following comments on both documents.

- NEI 14-12: In general, the staff indicated that the final copy looked different from the draft report. Staff raised questions on (1) the mechanism of industry operating experience self-assessment, and (2) why industry chose to remove Appendix A, “Program Review Questions,” and Appendix B, “Program Health Roll-Up.” For the first question, industry’s response was that there were two main mechanisms: Institute of Nuclear Power Operations self-assessment and the use of the quarterly meeting between NRC and NEI as a vehicle to provide verbal feedback to industry. For the second question, the industry stated that the information in the appendices was too restrictive and did not allow for plant specific flexibility in addressing plant-specific aging management issues.
- SLR Roadmap: The NRC staff raised the question of updating the SLR Roadmap as new information becomes available. NEI replied that the SLR Roadmap is meant to be a living document and will be updated periodically to keep it up to date.

f) Requests in NEI July 7, 2015, Letter on Tables in GALL and SRP

The NRC staff provided a response to the requests of NEI in its July 7, 2015 letter. The staff stated that an appendix outlining the evolution of GALL line items from the first edition (GALL, Rev. 0) to GALL-SLR will be placed in the SRP-SLR, GALL-SLR, GALL master spreadsheet, and the Technical Basis document. A new column will be added to the GALL-SLR and SRP-SLR tables indicating whether the line item is new, modified, deleted or no change. Any GALL, Rev. 2 items modified by a license renewal Interim Staff Guidance (ISG) will also be designed in a similar manner.

g) Regulatory Process for SLR

The NRC staff discussed the regulatory process for SLR and indicated that the staff does not intend to issue additional ISGs. They indicated that the GALL-SLR and SRP-SLR draft documents are expected to be issued in December 2015. The staff indicated that in order to appropriately inform the public on SLR activities, the NRC will create a separate public website for SLR, and NRC will provide input to the NRC daily blog on SLR. The staff stated that the NRC will host two Regulatory Information Conference sessions on SLR in March 2016, and asked industry when a new “NEI 95-10” like document for SLR could be expected. The NEI representative stated that it would be issued in 2017.

3. Industry’s presentations

- a) Definition of “Air” – Due to the multiple definitions of air environments (e.g., air with condensation, moist air, etc.) in the current GALL and SRP, the industry has formed a working group to simplify the definitions of air environments. The working group is

expected to report back on the consolidated definitions of air environments within 30 to 40 days. The consolidated definitions are expected to impact three AMPs: XI.M18 “Bolting Integrity,” XI.M36 “External Surfaces Monitoring of Mechanical Components,” and XI.M38 “Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components.” Industry is prepared to engage the NRC staff for discussion before the next license renewal quarterly meeting between NRC and NEI.

b) ACRS Subcommittee Meeting on November 17, 2015

The NEI representative discussed the ACRS SC meeting on SLR and indicated that NEI and the NRC staff would continue to communicate and coordinate efforts to support the ACRS meeting on the research activities for SLR. The NEI representative stated that a preparation conference call would be held between NRC and NEI to discuss both side’s presentations to the ACRS SC prior to the meeting on November 17, 2015.

c) Deep Dive Research and Development Issue Discussion Meetings

The NEI/Industry representative discussed the deep dive issues and indicated that the NEI has received staff’s questions on the “Deep Dive,” and a conference call had been scheduled in the week of September 14, 2015, to clarify the questions. Once the questions are understood by the industry, a second conference call between the industry experts and the cognizant NRC staff will be arranged prior to the November 17 ACRS SC meeting. The purpose of the second conference call is to help NRC staff better understand how industry’s research initiatives could resolve the technical challenges during the SLR. NRC staff reminded the industry that the initial batch of questions was meant to stimulate discussions between the staff and industry, and was not all inclusive. The industry acknowledged the staff’s point. Both sides agreed that the purpose of the deep dive meetings was to reach alignment between NRC, the DOE, and the industry on technical research and development issues for operations beyond 60 years, as well as to gain a better understanding on the longer-term research activities that need to be pursued at the time of SLR application submittal. The meetings will be closed to the public and be held under the NRC-DOE Memorandum of Understanding (MOU) process.

4. **New Topics**

The following new items are identified at the meeting:

- i. Following the recent July 8 trip to ORNL, NEI plans to schedule additional side visits in 2016 to enhance knowledge transfer.
- ii. NRC informed NEI that there were some discussions at the Commission level on how to manage active electrical components when these active components operate

beyond their original manufacturer recommended service date. Additional information will be disseminated to stakeholders through a Regulatory Information Summary.

- iii. NRC is interested in hosting future public meeting(s) to learn the industry's view on how to conduct environmental reviews to support SLR.
- iv. Industry will keep NRC apprized and report the results of the Definition of Air Working Group when the working group completes its work.
- v. NEI will provide feedback to the NRC staff on its preference on whether the GALL, Rev. 0 line items should be linked back to the SLR Excel spreadsheet (GALL master).
- vi. NEI is in the process of developing an SLR project plan and expects 5 years to complete the review.
- vii. EPRI identified 26 reports that required to be updated to support SLR activities.

5. **Action Items**

The first eight items (i through viii) were the action items from the June 11, 2015 quarterly meeting that have not been completed or partially completed, and the next 14 action items (items ix through xxii) are identified at this meeting.

- i. Further discussion(s) on NEI 14-13 and 14-12 in future quarterly meetings (partially resolved)
- ii. NRC will review the EPRI documents discussed in Rich Tilley's presentation (under review).
- iii. NRC and industry coordinate efforts to prepare for the ACRS SC meeting on SLR in November 2015. Preparation for this meeting has already started and will be completed before the ACRS SC meeting on November 17, 2015.
- iv. For the NEI SLR Roadmap, NRC suggested to embed live links to connect the Roadmap to other relevant sites (e.g., DOE/EPRI SLR sites).
- v. NRC will schedule a presentation on the best practice from experience in reviewing earlier LRAs in a future quarterly meeting. The DLR staff will shortly inform all parties about the date and location of presentation.

- vi. For future quarterly meetings, staff will upload presentation slides to the public meeting web site prior to the meeting so members of public from remote locations could better follow along the discussions.
- vii. NRC will provide feedback to NEI on a future "NEI 95-10" like document for the SLR.
- viii. Once the SLR guidance documents are issued for public comment, NRC plans to schedule two separate public meetings to further discuss the guidance documents with industry in January and February of 2016.

New Items:

- ix. NRC and NEI agree to keep each other side apprized on the status and progress made in the SLR review process (both safety and environmental reviews).
- x. Deep Dive Research & Development Activities – The Deep Dive meetings will be conducted using the existing MOU process between the Office of Regulatory Research (RES) and DOE.
- xi. Industry's Letter of Intent on the Lead Plants – NEI indicated that the letter of intent is forthcoming.
- xii. SLR Guidance Documents (GALL & SRP) – The NRR office review is on schedule. The OGC review follows the NRR office review. Afterwards, the documents will undergo Office of Administration review before publication at the end of year. The public commenting period ends at the end of February, 2016. Two public meetings will be scheduled in January and February 2016, to receive stakeholders' feedback on the SLR guidance documents.
- xiii. Communications with the Public – NRC is in the process of developing an SLR public website to capture and catalog all the SLR documents.
- xiv. NRC is in the process of developing an SLR blog to better communicate with all stakeholders on matters related to SLR.
- xv. NEI inquired if there was an avenue to provide NEI an early indication of how NRC staff dispositions NEI's comments on SLR documents. To allow time for the industry to focus on reviewing the SLR documents, NEI decided to cancel the SLR workshop originally scheduled in early 2016.

- xvi. NEI plans to update NEI 95-10, "Industry Guideline for Implementing the Requirements of 10 CFR Part 54 – The License Renewal Rule" upon the publication of the final GALL-SLR.
- xvii. NRC plans to host two SLR panels in the upcoming Regulatory Information Conference (RIC 2016, March 8 – 10, 2016); one panel chaired by DLR will focus on the SLR review process; and the second one chaired by RES will be dedicated to the technical issues pertaining to SLR.
- xviii. NRC and NEI will continue discussion of SLR Optimization project.
- xix. NRC and NEI will schedule future meeting is, on the environmental review process improvement for SLR.
- xx. EPRI identified 26 reports that required to be updated to support subsequent license renewal activities.
- xxi. NEI is in the process of developing the project plan and expects 5 years to complete the review.
- xxii. NEI will provide feedback to the NRC staff on its preference on whether the link of GALL Rev 0 line numbers to the GALL-SLR line numbers need to be shown in SLR Excel spreadsheet (GALL master), in addition to being shown in the SRP-SLR appendix.

6. **Public Participation**

No one from the public participated.

Enclosures:

- 1) Participation List
- 2) NRC Staff Presentation
- 3) Industry Presentations

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6. **Public Participation**

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**ADAMS ACCESSION No: ML15289A414 (package), ML15289A482 (Summary)
ML15289A419 (Final Agenda), ML15289A440 (Final Presentation)
ML15289A492 (NEI 09-14),ML15289A497 (NRC-NEI Quaterly Meeting)**

***Concurred via e-mail**

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**Meeting between the U.S. Nuclear Regulatory Commission Staff and the
Nuclear Energy Institute to Discuss License Renewal Topics**

Thursday, June 11, 2015

Participants List

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| Fred Polaski | Polaski Consultant |
| Ben Rodill | Dominion |
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