



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

July 16, 2013

MEMORANDUM TO: Bo M. Pham, Chief
Subsequent Renewal, Guidance,
and Operations Branch
Division of License Renewal
Office of Nuclear Reactor Regulation

FROM: Evelyn H. Gettys, Project Manager */RA/*
Subsequent Renewal, Guidance,
and Operations Branch
Division of License Renewal
Office of Nuclear Reactor Regulation

SUBJECT: MEETING BETWEEN THE U.S. NUCLEAR REGULATORY
COMMISSION STAFF AND INDUSTRY TO DISCUSS
SUBSEQUENT RENEWAL GUIDANCE

The U.S. Nuclear Regulatory Commission (NRC) staff and representatives of the Electric Power Research Institute (EPRI) and Nuclear Energy Institute (NEI) met on June 20, 2013, to discuss Subsequent License Renewal (SLR) and Long Term Operations (LTO) topics. The agenda and slide presentations are available in the NRC's Agencywide Documents Access and Management System (ADAMS) under Accession Numbers ML13172A011, ML13172A010 and ML13177A334. Enclosed is a list of the meeting participants.

The purpose of the meeting was to better understand the type and amount of research that the industry has completed towards the goal of a subsequent renewal application. This is one of three planned working groups meetings. The focus of this meeting was materials and LTO. The NRC wants to understand in more details the specific efforts that EPRI has undertaken to address LTO and subsequent renewal.

A summary of the industry's presentation follows:

1. Industry Perspective of AMPs

Relevant operating experience (OE) is continuously expanding and is used to improve aging management. Research and Development (R&D) uses lessons learned and corrective actions to continuously update aging management programs (AMPs). The industry stated that this is a learning organization and listed the LTO Program, owners groups and NEI working groups that makes this possible.

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2. Summary Report of EPRI Project to Assess R&D Efforts to Support Aging Management Program Application to Long-Term Operations.

A high-level summary was provided of the ongoing R&D work associated with the AMPs and an explanation of the AMP categories as:

- Category 1: AMPs that need additional R&D for SLR
- Category 2: AMPs that are acceptable but need additional R&D for improvements in implementation
- Category 3: AMPs that do not need additional R&D for SLR

The AMPs were assessed for technical needs relative to the projected operating conditions of greater than 60 years. The presentation explained how EPRI's materials degradation matrix (MDM) was used to identify potential degradation mechanisms and highlight which ones required additional research. The results did not identify any new issues. The process included mapping R&D gaps to AMPs using the Generic Aging Lessons Learned Report Revision 2 as a baseline.

EPRI will be publishing a report, sometime in the 4th quarter, titled "Long-Term Operations: Assessment of Research & Development Supporting Aging Management Programs for Long-Term Operations." This report will summarize the binning process for the AMP categories and the R&D projects for the category 1 AMPs.

NRC questioned how the industry knows that all the possible issues for SLR can be addressed by existing AMPs. The response was that all possible issues were identified and then reviewed to see if they mapped to existing AMPs and if there were any gaps in the existing AMPs.

The industry believes all issues align with existing AMPs with some additional R&D necessary hence binning the AMPs into categories. NRC staff indicated that they will need additional information on how industry arrives at their conclusions.

3. Materials Research Update for LTO

EPRI presented a summary of the EPRI materials reliability research program. EPRI explained how they use their MDM to identify and set priorities on knowledge gaps and issues that may lead to significant degradation of materials in nuclear power plants operating from 60 to 80 years. These issues are then tracked in their Issue Management Tables. EPRI then presented the plans and status of their programs addressing issues for the reactor pressure vessel and internals such as irradiated materials testing, irradiation assisted stress corrosion cracking analysis, development of advanced radiation resistant materials, analysis of void swelling, effects of lithium on stress corrosion cracking, and surveillance of the reactor pressure vessel.

4. Topical Reports Access and Information Exchange

It was requested that there be a way to identify topical reports that contain LTO information. Proposed 4th quarter meeting to discuss research on concrete degradation and sometime in 2014 to discuss research on cables.

5. Future Actions

- NRC – Staff provide a description of the different product lines from NRC/RES and a road map of how the NRC intends to go forth in updating the GALL/guidance for SLR.
- NRC – Describe the relationship of the expanded materials degradation assessment (EMDA) report to the future GALL.
- NRC/NEI – Future meeting on Concrete.
- NRC/NEI – Future meeting on Cables.
- NEI – Road mapping for the future application.

Enclosure:
As stated

cc: Listserv

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ADAMS ACCESSION No: ML13182A281

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DATE	7/10/2013	7/3/2013	7/15/2013	7/16/2013

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**Meeting between the U.S. Nuclear Regulatory Commission Staff and the
Nuclear Energy Institute to Discuss Subsequent Renewal Guidance
June 20, 2013**

Attendance List

Name	Affiliation
John Lubinski	NRC/NRR/DLR
Michael Marshall	NRC/NRR/DLR
Bo Pham	NRC/NRR/DLR
Evelyn Gettys	NRC/NRR/DLR
Albert Wong	NRC/NRR/DLR
Jim Medoff	NRC/NRR/DLR
Roger Kalikian	NRC/NRR/DLR
Bennett Brady	NRC/NRR/DLR
Seung Min	NRC/NRR/DLR
Rob Kuntz	NRC/NRR/DLR
Heather Jones	NRC/NRR/DLR
Yoira Diaz	NRC/NRR/DLR
Matt Homiack	NRC/NRR/DLR
William Holston	NRC/NRR/DLR
Ching Ng	NRC/NRR/DLR
William Ford	NRC/NRR/DLR
John Daily	NRC/NRR/DLR
Cliff Douth	NRC/NRR/DLR
Bart Fu	NRC/NRR/DLR
Lana Hoang	NRC/NRR/DLR
Steve Bloom	NRC/NRR/DLR
Ata Istar	NRC/NRR/DLR
Makuteswara Srinivasan	NRC/RES

ENCLOSURE

Amy Hull	NRC/RES
Michael Fallin	CENG
Richard Tilley	EPRI
Lynne Godman	DTE Energy
Al Fulvio	Exelon
John Hilditch	Exelon
Cliff Custer	FENOC
Rick Cliche	NextEra Energy - Seabrook
Jason Remer	Nuclear Energy Institute (NEI)
James Platte	NEI
Eric Blocher	STARS
Lance Escher	Morgan Lewis
Rich Reister	DOE
Terry Grebel	Pacific Gas & Electric
Ken Brune	TVA
Gary Adkins	TVA
Garry Young	Entergy
John O'Rourke	PSEG Nuclear
Sarah Kovaleski	Ameren Missouri
Alan Cox	Entergy
Jon Hornbuckle	SNC
Massoud Tafazzoli	AREVA
Michael Semmler	Westinghouse
Reza Ahrable	Entergy
John Twomey	Energy Northwest
John O'Rourke	PSEG Nuclear
Randal Boyd	APS
Bob Kalinowski	AEP

Lyle Berry	St. Lucie Licensing
Carlos Sisco	Winston & Strawn, LLP
Katsuaki Hidaka	INPO
Tom Clements	Public
Donald Williams	Oak Ridge National Lab
Nancy Slater-Thompson	DOE
Brittany Flaherty Theis	Whitt Law LLC
Sandra Birk	Idaho National Laboratory
Ryan Tracy	Public