November 18, 2015

MEMORANDUM TO: Kevin Hsueh, Chief
Licensing Processes Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

FROM: Joseph J. Holonich, Project Manager ***/RA/***
Licensing Processes Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF OCTOBER 21, 2015, PUBLIC MEETING WITH NUCLEAR ENERGY INSTITUTE ON NEI 12-16, REVISION 1, "GUIDANCE FOR PERFORMING CRITICALITY ANALYSES OF FUEL STORAGE AT LIGHT-WATER REACTOR POWER PLANTS"

On October 21, 2015, U.S. Nuclear Regulatory Commission (NRC) staff met with representatives of the Nuclear Energy Institute (NEI) in an audio conference. The enclosure provides a list of those in attendance.

The public meeting followed NRC staff concerns about the request for additional information (RAI) responses from NEI regarding the submittal NEI 12-16, Revision 1, "Guidance for Performing Criticality Analyses of Fuel Storage at Light-Water Reactor Power Plants." The intent of the meeting was to discuss the need for periodic neutron attenuation testing for spent fuel pools.

Summary of Discussion Topics

NEI explained their position on periodic neutron attenuation testing in the spent fuel pool. NEI stated that the NEI 12-16 guidance document did not remove the need for periodic neutron attenuation testing but instead specified that basic testing could be initially performed, followed by periodic neutron attenuation testing, if degradation was observed. Specifically, NEI expressed concern about coupon programs and periodic neutron attenuation testing. NEI stated that some licensees may not have sufficient quantities of coupons to meet future 10-year testing intervals. Furthermore, NEI briefly discussed NUREG-1801 and its recommended guidance on aging management of neutron absorbing materials and testing. In particular, NEI stated that other parameters could be used to evaluate the areal density of neutron absorber materials other than neutron attenuation testing.

CONTACT: Joseph J. Holonich, NRR/DPR
301-415-7297

The NRC staff stated that examination of the boron-10 content is necessary to verify compliance with the licensing basis and that periodic neutron attenuation testing is one method with which it can be verified. The NRC staff noted that since the intent of NEI 12-16 is to provide generic guidance, it may not be appropriate to address specific issues of individual licensees (i.e., not having sufficient quantities of coupons). The staff stated that plants challenged with coupon inventory could address this issue with the NRC on a plant-specific basis. Furthermore, the NRC staff stated that performing neutron attenuation testing is the only test method it is aware of that can directly evaluate the boron-10 content of a neutron absorber material. Accordingly, periodic neutron attenuation testing should be the primary method used to verify boron-10 areal density. The NRC staff also stated that neutron attenuation testing provides an in-depth look at the material in the spent fuel pool and provides a quantitative measurement that can be used to evaluate the condition of the material.

In a follow-on discussion, the participants discussed the merits of creating a standalone document to address the neutron absorbing material program. NEI took an action to consider separating this section from the overall guidance document and provide a schedule for its separate submission. NEI stated that the industry will discuss how to address the issue of plants being challenged by their coupon inventory.

At the conclusion of the meeting, the NRC staff facilitated a discussion overview, action item identification, and closeout.

Several licensees participated in this meeting; however, no member of the public was present.

Project No. 689

Enclosure:
List of Attendees

The NRC staff stated that examination of the boron-10 content is necessary to verify compliance with the licensing basis and that periodic neutron attenuation testing is one method with which it can be verified. The NRC staff noted that since the intent of NEI 12-16 is to provide generic guidance, it may not be appropriate to address specific issues of individual licensees (i.e., not having sufficient quantities of coupons). The staff stated that plants challenged with coupon inventory could address this issue with the NRC on a plant-specific basis. Furthermore, the NRC staff stated that performing neutron attenuation testing is the only test method it is aware of that can directly evaluate the boron-10 content of a neutron absorber material. Accordingly, periodic neutron attenuation testing should be the primary method used to verify boron-10 areal density. The NRC staff also stated that neutron attenuation testing provides an in-depth look at the material in the spent fuel pool and provides a quantitative measurement that can be used to evaluate the condition of the material.

In a follow-on discussion, the participants discussed the merits of creating a standalone document to address the neutron absorbing material program. NEI took an action to consider separating this section from the overall guidance document and provide a schedule for its separate submission. NEI stated that the industry will discuss how to address the issue of plants being challenged by their coupon inventory.

At the conclusion of the meeting, the NRC staff facilitated a discussion overview, action item identification, and closeout.

Several licensees participated in this meeting; however, no member of the public was present.

Project No. 689

Enclosure:
List of Attendees

DISTRIBUTION:

PUBLIC	TMcGinty	RidsNrrDss	JDrake
RTaylor	AMendiola	WMacFee	CJackson
AObodoako	GKulesa	MYoder	RidsNrrLADHarrison
RidsNrrDprPlpb			

EXTERNAL DISTRIBUTION:
KCummings (kwc@nei.rg)

ADAMS Accession No.: **Package**: ML15302A085; **Summary**: ML15294A491;
Notice: ML15278A042 *concurrence via email

OFFICE	NRR/DPR/PLPB	NRR/DPR/PLPB*	NRR/DSS/SRXB
NAME	WMacFee	DHarrison	CJackson
DATE	10/21/15	10/27/15	10/30/2015
OFFICE	NRR/DE/ESGB	NRRDPR/PLPB	NRR/DPR/PLPB
NAME	GKulesa	KHsueh	JHolonich
DATE	11/13/2015	11/16/2015	11/18/2015

OFFICIAL RECORD COPY

Attendees List:

U.S. Nuclear Regulatory Commission (NRC) Staff Meeting with Nuclear Energy Institute on NEI 12-16, "Guidance for Performing Criticality Analyses of Fuel Storage at Light-Water Reactor Power Plants" Request for Additional Information Responses			
Name	**Organization**	**Telephone**	**Email**
William MacFee	NRR/DPR/PLPB	301-415-1326	WXM5@nrc.gov
Gloria Kulesa	NRR/DE/ESGB	301-415-6011	Gloria.Kulesa@nrc.gov
Aloysius Obodoako	NRR/DE/ESGB	301-415-2889	Aloysius.Obodoako@nrc.gov
Chris Jackson	NRR/DSS/SRXB	301-415-3456	Christopher.Jackson@nrc.gov
Kent Wood	NRR/DSS/SRXB	301-415-4120	Kent.Wood@nrc.gov
Matthew Yoder	NRR/DSS/ESGB	301-415-4017	Matthew.Yoder@nrc.gov
Rob Taylor	NRR/DSS	301-415-3283	Robert.Taylor@nrc.gov
Sarah Obadina	NRR/DLR/RARB	301-415-3106	Sarah.Obadina@nrc.gov
Kris Cummings	NEI		kwc@nei.org
Robin Jones	Southern Nuclear		RDJONES@southernco.com
Spencer Feuerstein	Curtiss-Wright Corporation	203-448-3440	sfeuerstein@curtisswright.com
Brian Holman	Entergy	601-368-5131	bholman@entergy.com
Stephen Luther	Nebraska Public Power District	402-825-5267	swluthe@nppd.com
David Phegley	Exelon	630-657-2188	David.phegley@exeloncorp.com
Jeffrey Dunlap	Exelon	630-657-2191	Jeffrey.dunlap@exeloncorp.com
Courtney Thomas	NextEra Energy		Courtney.Thomas@fpl.com
Hatice Akkurt	EPRI	980-228-6913	hakkurt@epri.com
Matthew Kirkland	DTE – Fermi 2		kirklandm@dteenergy.com
Tom Schleicher	Dominion		Tom.schleicher@dom.com
Glenn Schwartz	PSEG	856-339-1857	Glenn.Schwartz@pseg.com
Kevin Koski	FirstEnergy	330-315-6805	kakoski@firstenergycorp.com