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

December 19, 2000

ORGANIZATION: Nuclear Energy Institute

SUBJECT: SUMMARY OF MEETING WITH THE NUCLEAR ENERGY INSTITUTE (NEI) ON INDUSTRY'S COMMENTS ON CHAPTER 2, "STRUCTURES AND COMPONENTS SUBJECT TO AGING MANAGEMENT REVIEW", CHAPTER 4, "TIME-LIMITED AGING ANALYSES (TLAAs)", APPENDIX A, "BRANCH TECHNICAL POSITIONS", OF THE DRAFT STANDARD REVIEW PLAN FOR THE REVIEW OF LICENSE RENEWAL (SRP-LR) APPLICATIONS FOR NUCLEAR POWER PLANTS AND CHAPTER VI, "ELECTRICAL COMPONENTS", CHAPTER XI, "AGING MANAGEMENT PROGRAM, ELECTRICAL COMPONENTS", OF THE DRAFT GENERIC AGING LESSONS LEARNED (GALL) REPORT

On November 8, 2000, representatives from NEI met with the Nuclear Regulatory Commission (NRC) staff in Rockville, Maryland. The purpose of this meeting was to clarify certain of industry's comments on Chapter 2, Structures and Components Subject to Aging Management Review, Chapter 4, Time-Limited Aging Analyses (TLAAs), and Appendix A, Branch Technical Position, of the Draft Standard Review Plan for the Review of License Renewal Applications for Nuclear Power Plants (SRP-LR), and Chapter VI, Electrical Components, and Chapter XI, Aging Management Program, Electrical Components, of the Draft Generic Aging Lessons Learned (GALL) Report. These comments were provided to NRC staff on October 13, 2000. A list of meeting attendees and handouts provided by NEI are attached.

During the meeting, NRC staff and NEI representatives discussed the comments on each section of Chapter 2, 4, Appendix A of SRP, and Chapters VI and XI EI-E4 of GALL, to understand each others position on the issues. The staff will consider industry's comments, including the following:

Chapter 2 of SRP-LR:

- Delete reference of "Probabilistic Risk Assessment (PRA) Reports" and "Emergency Operating Procedures (EOP)" as information sources in the Scoping Methodology.
- Revise Section 2.4 to be consistent with Section 2.2 and 2.3 of the SRP.
- Revise the definition of "long lived" screening criteria of environmentally qualified (EQ) electrical components in the third paragraph of SRP Section 2.5.3.

Chapter 4 of SRP-LR:

- Delete the sentence stating that, "The listing of TLAAs should provide sufficient detail to identify the type of calculations and a summary result of calculations."

- Environmental effects are not a TLAA, and should not be addressed in the TLAA section.

- Add a new sentence stating that, " For the purposes of the license renewal only those components with a service life of 40 years or greater would be TLAAs."

Appendix A.1 and A.3 of SRP-LR:

- Add further guidance to Sections A.1.2.3.4, detection of aging effects and A.1.2.3.5, monitoring and trending.

- The annual report on the status of generic safety issues (GSIs) from the staff to the Commission may be a reliable alternative to the actual release of supplements to NUREG-0933 and more useful to applicants in determining the current status of open GSI.

Chapter VI and XI of GALL:

- Delete "BWR" from the Type column Table 6 of GALL Chapter VI-1 for the "Non-EQ Electrical connectors exposed to borated water leakage."

- Delete Chapter XI aging management program E4 for cables exposed to borated water leakage and incorporate the program into the boric acid corrosion program, XI.M5.

The staff stated that it would consider industry's comments in preparing SRP-LR and GALL for final issuance.

Sikhindra K. Mitra, Project Manager
License Renewal and Standardization Branch
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Project No. 690

Attachments: As stated

cc: See next page

- Environmental effects are not a TLAA, and should not be addressed in the TLAA section.

- Add a new sentence stating that, " For the purposes of the license renewal only those components with a service life of 40 years or greater would be TLAAs."

Appendix A.1 and A.3 of SRP-LR:

- Add further guidance to Sections A.1.2.3.4, detection of aging effects and A.1.2.3.5, monitoring and trending.

- The annual report on the status of generic safety issues (GSIs) from the staff to the Commission may be a reliable alternative to the actual release of supplements to NUREG-0933 and more useful to applicants in determining the current status of open GSI.

Chapter VI and XI of GALL:

- Delete "BWR" from the Type column Table 6 of GALL Chapter VI-1 for the "Non-EQ Electrical connectors exposed to borated water leakage."

- Delete Chapter XI aging management program E4 for cables exposed to borated water leakage and incorporate the program into the boric acid corrosion program, XI.M5.

The staff stated that it would consider industry's comments in preparing SRP-LR and GALL for final issuance.

Sikhindra K. Mitra, Project Manager
License Renewal and Standardization Branch
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Project No. 690

Attachments: As stated

cc: See next page
DISTRIBUTION: See attached list
*See previous concurrence
DOCUMENT NAME: G:\RLSB\Mitra\nei-meeting-summary-nov 8.wpd

OFFICE	LA	RLSB	SC:RLSB	BC:RLSB:DRIP
NAME	EGHylton	SKMitra	PTKuo	CGrimes
DATE	12/6 /00*	12/ 12/00	12/19/00	12/19/00

OFFICIAL RECORD COPY

- Clarify although environmental effects are not a TLAA, it relates to conservatism of the fatigue calculations, which is a TLAA, and these two issues should not be separated.

- Clarify that only equipment "qualified" for 40 years or greater would be TLAA; not those with a "service" life of 40 years or greater.

Appendix A.1 and A.3 of SRP-LR:

- Add further guidance to Sections A.1.2.3.4, detection of aging effects and A.1.2.3.5, monitoring and trending.

- Reference NUREG-0933 as the source document for identifying generic safety issues applicable to license renewal as it is more current than the annual report to the Commission.

Chapter VI and XI of GALL:

- Delete "BWR" from the Type column Table 6 of GALL Chapter VI-1 for the "Non-EQ Electrical connectors exposed to borated water leakage."

- Delete Chapter XI aging management program E4 for cables exposed to borated water leakage and incorporate the program into the boric acid corrosion program, XI.M5.

The staff stated that it would consider industry's comments in preparing SRP-LR and GALL for final issuance.

Sikhindra K. Mitra, Project Manager
License Renewal and Standardization Branch
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Project No. 690

Attachments: As stated

cc: See next page

DISTRIBUTION: See attached list

DOCUMENT NAME: G:\RLSB\Mitra\nei-meeting-summary-nov 8.wpd

OFFICE	LA	RLSB	SC:RLSB	BC:RLSB:DRIP
NAME	EGHylton	SKMitra	PTKuo	CGrimes
DATE	12/6/00	/ /00	/ /00	/ /00

OFFICIAL RECORD COPY

DISTRIBUTION:
HARD COPY
RLSB RF
E. Hylton

E-MAIL:
PUBLIC
R. Zimmerman
J. Johnson
D. Matthews
S. Newberry
C. Grimes
C. Carpenter
B. Zalcman
J. Strosnider
R. Wessman
G. Bagchi
K. Manoly
W. Bateman
J. Calvo
C. Holden
P. Shemanski
J. Shea
G. Holahan
T. Collins
C. Berlinger
B. Boger
J. Peralta
J. Moore
R. Weisman
J. Euchner
M. Mayfield
S. Bahadur
A. Murphy
W. McDowell
S. Droggitis
RLSB Staff
S. Duraiswamy

A. Thadani
M. Federline
C. Julian
R. Gardner
D. Chyu
M. Modes
J. Vora

NUCLEAR ENERGY INSTITUTE

Project No. 690

cc:

Mr. Dennis Harrison
U.S. Department of Energy
NE-42
Washington, D.C. 20585

Mr. Richard P. Sedano, Commissioner
State Liaison Officer
Department of Public Service
112 State Street
Drawer 20
Montipelier, Vermont 05620-2601

Mr. Douglas J. Walters
Nuclear Energy Institute
1776 I Street, N.W., Suite 400
Washington, DC 20006-3708
DJW@NEI.ORG

National Whistleblower Center
3238 P Street, N.W.
Washington, DC 20007-2756

Mr. Stephen T. Hale
Florida Power & Light Company
9760 S.W. 344 Street
Florida City, Florida 33035

Mr. Robert Gill
Duke Energy Corporation
Mail Stop EC-12R
P.O. Box 1006
Charlotte, NC 28201-1006

Mr. Charles R. Pierce
Southern Nuclear Operating Co.
40 Inverness Center Parkway
BIN B064
Birmingham, AL 35242

Mr. David Lochbaum
Union of Concerned Scientists
1707 H Street, NW
Suite 600
Washington, DC 20006-3919

Mr. Garry Young
Entergy Operations, Inc.
Arkansas Nuclear One
1448 SR 333 GSB-2E
Russellville, Arkansas 72802

NRC Meeting Attendance List
November 8, 2000

Name	Organization
1. Paul Colaianni	Duke Energy
2. Robet Gill	Duke Energy
3. Rounette Nader	Duke Energy
4. John Rycyna	Constellation Nuclear
5. Doug Walters	NEI
6. Chris Gratton	NRC/NRR/DSSA/SPLB
7. Paul Shemanski	NRC/NRR/DE/EEIB
8. Juan Peralta	NRC/NRR/DIPM/IQMB
9. Carl Berlinger	NRC/NRR/DSSA
10. P. T. Kuo	NRC/NRR/DRIP/RLSB
11. E. A. Kleeh	NRC/NRR/DRIP/RLSB
12. Hai-Boh Wang	NRC/NRR/DRIP/RLSB
13. Noel Dudley	ACRS
14. Cornelius Holden	NRC/NRR/DE/EEIB
15. Sam Lee	NRC/NRR/DRIP/RLSB
16. Robert Lofaro	BNL
17. Kimberley Rico	NRC/NRR/DRIP/RLSB
18. Wan C. Liu	NRC/NRR/DRIP/RLSB
19. Omid Tabatabai-Yazdi	NRC/NRR/DRIP/RLSB
20. Talmage Clements	CP&L
21. Stephen Hoffman	NRC/NRR/DRIP/RLSB
22. Jit Vora	NRC/RES/DET/MEB
23. S. K. Mitra	NRC/NRR/DRIP/RLSB
24. Jim Strnisha	NRC/NRR/DRIP/RLSB
25. Tony Grenci	Constellation Nuclear
26. Bill Corein	Dominion
27. Shou-nien Hou	NRC/NRR/DE/EMCB
28. Goutam Bagchi	NRC/NRR/DE
29. Hans Ashar	NRC/NRR/DE/EMEB
30. Kamal Manoly	NRC/NRR/DE/EMEB
31. John Fair	NRC/NRR/DE/EMEB

Enclosure 1

NEI ELECTRICAL COMMENTS OMITTED FROM THE COMMENT LETTER

COMMENT NUMBER	ITEM NUMBER	PROPOSED CHANGE INCLUDING ANY PROPOSED REWRITE	JUSTIFICATION FOR PROPOSED CHANGE
S 2.5- 33	2.5.1 Paragraph 3	Revise Section 2.5.1 paragraph 3 to read: "Scoping for electrical systems and components, as defined in 10 CFR 54.4(a), is based on the Design Basis Events (DBEs) considered in the plant's current licensing basis (CLB) and other CLB information relating to non-safety-related systems and structures and certain regulated events. The staff reviews the applicant's 'scoping' results separately following the guidance in Section 2.2 of this standard review plan." (No changes suggested for paragraph 4.)	Section 2.5.1 Paragraphs 3 and 4 state: *"An applicant should list all plant level systems and structures. Based on the Design Basis Events (DBEs) considered in the plant's current licensing basis (CLB) and other CLB information relating to non-safety-related systems and structures and certain regulated events, the applicant would identify those plant level systems and structures within the scope of license renewal, as defined in 10 CFR 54.4(a). This is 'scoping' of the plant level systems and structures for license renewal. The staff reviews the applicant's plant level 'scoping' results separately following the guidance in Section 2.2 of this standard review plan.* *"For an electrical and I&C system that is within the scope of license renewal, an applicant would not identify the specific electrical and I&C components that are subject to an aging management review. For example, an applicant may not 'tag' each specific length of cable that is 'passive,' 'long-lived,' and performs an intended function as defined in 10 CFR 54.4(b). Instead, an applicant would use the so-called 'plant spaces' approach (Ref. 1) which is explained below. The 'plant spaces' approach provides efficiencies in aging management review of electrical equipment located within the same plant space environment."* COMMENT Paragraph 4 describes the use of the "spaces approach" which is the preferred method used for electrical components because it does, as stated, provide efficiencies in the aging management review. A major contributor to these efficiencies is that global scoping of systems and components is not required. Scoping performed during a spaces approach review of cables is not necessarily performed before the AMR but may be performed toward the end of the AMR, only when it was required as part of the AMR. The additional work required to scope electrical and I&C systems to specifically identify all systems that are in scope is counter-productive to the efficiency of the spaces approach and is not required by 10 CFR 54.21(a). When using the spaces approach, an applicant may identify for a specific area only the components subject to an AMR, but for the bulk

NEI ELECTRICAL COMMENTS OMITTED FROM THE COMMENT LETTER

COMMENT NUMBER	ITEM NUMBER	PROPOSED CHANGE INCLUDING ANY PROPOSED REWRITE	JUSTIFICATION FOR PROPOSED CHANGE
			of the plant, the most efficient way for electrical components subject to an aging management review to be reported in the application would be to state something like, "All insulated cables and connections are subject to an AMR excluding those associated with the following systems and groups of electrical components: ..." This type of reporting by an applicant matches exactly the review process outlined in SRP Section 2.5.3.1 where the reviewer is instructed to *"review selected components that the applicant did not identify as within the scope of license renewal"*. Using this approach avoids needless work by the applicant, avoids including extraneous information in the application, and provides the reviewer with the specific information needed to make the reasonable assurance finding for the identification of components subject to an aging management review.

NEI ELECTRICAL COMMENTS OMITTED FROM THE COMMENT LETTER

COMMENT NUMBER	ITEM NUMBER	PROPOSED CHANGE INCLUDING ANY PROPOSED REWRITE	JUSTIFICATION FOR PROPOSED CHANGE
S 2.5- 34	2.5.1 Paragraph 5	Replace Section 2.5.1 paragraph 5 with the following two paragraphs: "Under the 'plant spaces' approach, an applicant would begin the aging management review with all 'passive' and 'long-lived' electrical insulated cables and connections subject to an aging management review. That is, no scoping is yet performed. Using the 'plant spaces' approach an applicant identifies the insulation materials (or materials with bounding aging characteristics) and assumes that all materials may be in all plant spaces. Then, the plant environments of each space are globally compared to the environments to which the materials could be exposed for 60 years and still perform their function. This environment, when describing temperature, is referred to as the 60-year service-limiting temperature (Ref. 1). This same concept when applied to radiation is known as the 60-year service-limiting dose. If this comparison identifies a plant space where insulated cables or connections with specific insulation materials would require aging management, the electrical components in this space may be individually identified along with their functions for the purpose of scoping. All in-scope insulated cables and connections installed in the identified plant space and constructed with the specific insulation material would require aging management." "For example, an applicant would initially identify all non-EQ electric cables located within the turbine building ('plant space') to be subject to an aging management review for license renewal. In the subsequent aging management review, the applicant would compare the environment of the turbine building to the cable insulation materials 60-year service-limiting temperature. If the applicant identified elevated temperatures in a specific plant area that could cause PVC insulated cables to prematurely age and lose their function during the renewal term, the applicant has the option to individually identify cables in the elevated temperature area to determine if there really are PVC insulated cables in the area and to determine if the PVC insulated cables are within the scope of license renewal."	Section 2.5.1 paragraph 5 states: *"Under the 'plant spaces' approach, an applicant would identify all 'passive,' 'long-lived' electrical equipment within a specified plant space as subject to an aging management review, regardless of whether these components perform any intended functions. For example, an applicant could identify all 'passive,' 'long-lived' electrical equipment located within the turbine building ('plant space') to be subject to an aging management review for license renewal. In the subsequent aging management review, the applicant would evaluate the environment of the turbine building to determine the appropriate aging management activities for this equipment. The applicant has options to further refine this encompassing scope on an as-needed basis. For the above example, if the applicant identified elevated temperatures in a particular area within the turbine building, the applicant may elect to identify only that 'passive,' 'long-lived' electrical equipment which perform an intended function in this particular area as subject to an aging management review."* COMMENT The above description describes the plant spaces approach fairly well. The concept of the plant spaces approach is sometimes difficult for individuals to grasp and sometimes needs more explanation. Also, the plant spaces approach is used mainly for the evaluation of electrical insulated cables and connections as this is the only passive electrical commodity that is installed in most plant areas. This proposed change is submitted to provide a fuller explanation of the spaces approach as it is being practiced in order to better help the reviewer understand the concept.

NEI ELECTRICAL COMMENTS OMITTED FROM THE COMMENT LETTER

COMMENT NUMBER	ITEM NUMBER	PROPOSED CHANGE INCLUDING ANY PROPOSED REWRITE	JUSTIFICATION FOR PROPOSED CHANGE
S 2.5-35	2.5.1.1	Revise Section 2.5.1.1 to read: "The applicant's identification of electrical and I&C systems and components that are within the scope of license renewal is reviewed. When using the 'plant spaces' approach the intermediate step of identifying all systems or components within the scope of license renewal is not necessarily used. (Scoping)"	Section 2.5.1.1 states: *"The applicant's identification of electrical and I&C system components that are within the scope of license renewal is reviewed. (Scoping)"* COMMENT Based on the proposed changes or Section 2.5.1, paragraph 3, this corresponding proposed change for Section 2.5.1.1 is provided.
S 3.6-1	Table 3.6-2 Implementation Schedule column	Revise the Implementation Schedules of Table 3.6-2 to read: "The first inspection [tests] for license renewal should be completed at the earliest opportunity during the period of extended operation." Quality Assurance Program "Program should be implemented at the start of the extended period of operation."	Under Implementation Schedule of Table 3.6-2 it states: *"The first inspection [or tests] for license renewal should be completed before the period of extended operation."* COMMENT Per 10 CFR 54.21(a)(3) an applicant is not required to perform any license renewal demonstration of adequate management prior to the extended period of operation. The stated program implementation schedules go beyond the rule because they require license renewal actions prior to the period of extended operation. Any question regarding the adequacy of programs during the current operating term must be addressed as directed under 10 CFR 54.30 and are not within the scope of the license renewal review.
S 4.4-3	4.4.1.2 Sentence 1	Delete the first sentence of Section 4.4.1.2.	The first sentence of Section 4.4.1.2 states: *"The EQ requirements differ for newer and older plants."* COMMENT This is a true statement. But there are a variety of other reasons that GSI-168 was generated. Highlighting this one reason and not the others implies that it is of most importance. In actuality, the difference in EQ requirements between newer and older plants was eliminated as a safety issue in the *Report on the Status of the Environmental Qualification Task Action Plan* dated November 15, 1996.

Areas of Review – Special Circumstances

SSC	NUREG-0800	GALL/SRP-LR	Application
Refueling Water System	AUX	ESF	ESF
Control Area Ventilation and Chilled Water	ESF	AUX	ESF
Residual Heat Removal	ESF	ESF/AUX	ESF
Condenser Circulating Water	SPCS	AUX	SPCS
Condensate Storage System	AUX	SPCS	SPCS
Spent Fuel Racks	AUX	AUX	Structural
Spent Fuel Pool	AUX	AUX	Structural
Fire Barriers	AUX	AUX	Structural