April 26, 2000

MEMORANDUM TO: William H. Bateman, Chief
Materials and Chemical Engineering Branch
Division of Engineering

THRU: Edmund J. Sullivan, Chief ***/ra/***
NDE & Metallurgy Section
Materials and Chemical Engineering Branch
Division of Engineering

FROM: James W. Andersen, Project Manager ***/ra/***
NDE & Metallurgy Section
Materials and Chemical Engineering Branch
Division of Engineering

SUBJECT: SUMMARY OF TWO MARCH 17, 2000, MEETINGS WITH NEI/EPRI/INDUSTRY TO DISCUSS ISSUES RELATED TO THE STEAM GENERATOR GENERIC LICENSING CHANGE PACKAGE

On March 17, 2000, the NRC staff met with representatives of Nuclear Energy Institute (NEI), Electric Power Research Institute (EPRI), and industry (industry) to discuss issues related to the steam generator generic licensing change package. The staff held two public meetings with the industry, the first at 10:00am with the Steam Generator Task Force, and the second at 1:00pm with the Steam Generator Industry Working Group. Meeting attendees are identified in Attachments 1 and 2. The agenda and slides presented during the meetings are provided as Attachments 3 and 4. The industry comments regarding the staff's generic safety evaluation on TIG-welded sleeves are provided in Attachment 5.

Both meetings followed the same agenda and the key points are discussed below. During the 10:00am meeting, the staff and industry also discussed the industry's comments regarding the staff's generic safety evaluation on TIG-welded sleeves. The summary of this discussion is included at the end of this meeting summary.

1. Steam Generator Generic License Change Package

Industry management discussed its commitment to the implementation of the new steam generator regulatory framework. Industry stated that all 69 pressurized water reactor (PWR) licensees have agreed to implement the generic license change package as proposed. The industry stated that the timing of the individual plant technical specification change requests would depend on the individual plant schedules, but that most of the requests should be received by the NRC within a year of the NRC's endorsement of NEI 97-06 and the associated regulatory framework.

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The NRC staff discussed the current status of its review of the generic licensing change package. The staff explained that its review is not as far along as it had planned due to the resource impact of the Indian Point 2 event. The staff stated that it was reassessing its review schedule for the generic licensing change package, but that it expected to start the review in the next few weeks.

The staff outlined its proposed review process and explained that a Commission Paper is being written to inform the Commission of the process as well. The review process includes a public comment period on the draft safety evaluation and briefing the Advisory Committee on Reactor Safeguards; with the end result being the issuance of a Regulatory Issue Summary (with safety evaluation attached). Industry noted that it requested approval of the generic licensing change package by July 2000, but the staff stated that it was unlikely to meet that date, especially in light of the delay in starting the review. The staff stated that early fall was more likely.

The staff discussed its proposed process for reviewing the individual technical specification change requests. The process would utilize the individual plant project manager, who would write the safety evaluation based on the generic guidance and route the final approval package through the Division of Engineering.

2. Steam Generator Support

The industry then discussed steam generator support programs. These include the EPRI Steam Generator Support Program, INPO Steam Generator Program reviews, self assessments, and a Steam Generator Review Board for interpreting the steam generator program guidelines.

3. Industry Events and Trends

The industry discussed different industry events and the process the industry uses to review the event, assist individual licensees, and evaluate potential changes needed to the program guidelines. The industry noted the improving trends in steam generator forced outage rates over the last 25 years and discussed the efforts the industry has in place to maintain steam generator tube integrity.

4. Generic Safety Evaluation Regarding TIG-Welded Sleeves

During the 10:00am meeting, the staff and industry discussed the staff's generic safety evaluation regarding TIG-welded sleeves. The industry presented several issues it had with the safety evaluation and the staff and industry explored possible ways to amend the safety evaluation. The staff stated that it would discuss possible options internally and then inform the industry of its decisions.

The next meeting was tentatively scheduled to be held after the staff completes its draft safety evaluation for the steam generator generic licensing change package and the industry has time to review it (the draft safety evaluation will be released for a 30-day public comment period).

Attachments: As stated

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Attachments: As stated

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STEAM GENERATOR GENERIC LICENSING CHANGE PACKAGE MEETING
MARCH 17, 2000
10:00AM

LIST OF ATTENDEES

	NAME	ORGANIZATION
1.	Jim Andersen	NRC/NRR/DE/EMCB
2.	Michael Short	Southern California Edison
3.	Jim Riley	NEI
4.	David Goetcheus	TVA
5.	Rick Mullins	Southern Nuclear
6.	Kevin Sweeney	APS
7.	Emmett Murphy	NRC/NRR/DE/EMCB
8.	Bill Bateman	NRC/NRR/DE/EMCB
9.	Deann Raleigh	SERCH, Bechtel Power
10.	Bob Tjader	NRR/DRIP/RTSB
11.	Dan Mayes	Duke Power
12.	Mati Merilo	EPRI
13.	Helen Cothron	TVA
14.	Gary Elder	Westinghouse
15.	Phil Rush	MPR
16.	Joe Muscara	NRC/RES
17.	Ben Mays	TXU Electric
18.	David Steininger	EPRI
19.	Richard Pearson	Northern States Power
20.	Donald Streinz	ABB CENP

ATTACHMENT 1

STEAM GENERATOR GENERIC LICENSING CHANGE PACKAGE
SENIOR MANAGEMENT MEETING
MARCH 17, 2000
1:00PM

LIST OF ATTENDEES

	NAME	ORGANIZATION
1.	Jim Andersen	NRC/NRR/DE/EMCB
2.	Michael Short	Southern California Edison
3.	Jim Riley	NEI
4.	David Goetcheus	TVA
5.	Rick Mullins	Southern Nuclear
6.	Kevin Sweeney	APS
7.	Emmett Murphy	NRC/NRR/DE/EMCB
8.	Bill Bateman	NRC/NRR/DE/EMCB
9.	Deann Raleigh	SERCH, Bechtel Power
10.	Steve Long	NRC/NRR/DSSA/SPSB
11.	Dan Mayes	Duke Power
12.	Jack Strosnider	NRC/NRR/DE
13.	Helen Cothron	TVA
14.	Gary Elder	Westinghouse
15.	Jack Woodard	Southern Nuclear
16.	Brian Sheron	NRC/NRR/ADPT
17.	Larry Womack	PG&E
18.	David Steininger	EPRI
19.	Richard Pearson	Northern States Power
20.	Donald Streinz	ABB CENP
21.	Bob Jasinski	NRC/OPA

ATTACHMENT 2

Agenda, SG Generic License Change Package Meetings
March 16 and 17, 2000

SGTF / NRC Staff Meeting
March 17, 2000
10:00 AM – 12:00 PM
8B4 White Flint 1

- **Generic License Change Package**
  - NRC technical comments on the package — *NRC*
  - Review process for the Generic License Change Package — *NRC*
  - Schedule for review of the Generic License Change Package — *NRC*
  - Implementation plan for the Tech Spec changes included in the Generic License Change Package
    - Anticipated timeframe for adoption — *SGTF*
    - NRC review time for license amendment requests — *NRC*
  - Need for licensing workshops to assist understanding of the Generic License Change Package and its implementation — *All*
- **Internal industry efforts to facilitate SG Programs** — *SGTF*
- **Generic SE on TIG Welded sleeves – comments on the document and approach** — *SGTF*
- **Implications of the IP2 event on NEI 97-06 SG Program** — *SGTF*

Steam Generator Generic License Change Package

SGIWG / NRC Senior Management Meeting

March 17, 2000

NEI

Agenda

- Introduction — *All*
- Generic License Change Package
  - Industry Commitment — *SGIWG*
  - NRC comments — *NRC*
  - NRC Review Process — *NRC*
  - NRC Review Schedule — *All*
  - Tech Spec Amendments — *All*
  - Implementation — *All*
- SG Program Support — *SGIWG*
- Recent industry events — *SGIWG*
- Conclusions — *All*

NEI

ATTACHMENT 4

Introduction

- The proposed changes are an enhancement to plant safety
- The industry and NRC have worked closely in the development of the generic package
- The industry is behind the proposed changes
- It is time to resolve this issue

NEI

Industry Commitment

- **68 / 69 PWR Units have agreed to implement the license changes <u>as proposed</u>**
- Changes to reflect plant-specific design and licensing basis will be necessary

NEI

NRC Review Schedule

- Changes are an enhancement to safety and should be approved as soon as possible
- Industry has requested approval by July 2000

NEI

Tech Spec Amendments

- Recommended six months to submit license amendment
- Plant-specific priorities will cause variance in this goal
- NRC efforts to reduce its approval time is important
  - Use of generic license amendment approval process

NEI

Implementation

- Guideline workshops
- Benchmarking
- SG Program workshops
- Licensing workshops
- Confusion arising from dual guidance
  - DG-1074 and potential GL

NEI

SG Program Support

- EPRI Steam Generator Management Program (SGMP) - since 1977
  - Executive oversight
  - Issue Integration Group (IIG)
  - Technical Advisory Group (TAG)
  - Issue Resolution Groups (IRG)
  - Technical Support Subcommittee (TSS)
  - Ad Hoc EPRI Guideline revision committees
    - Biannual review for revision

NEI

SG Program Support

- INPO Steam Generator Program Reviews - since 1995
  - Systematic review of all stations
  - Use of industry peers
  - Annual summary to industry
- Self assessments
- NEI/SGMP SG Review Board
- NEI, INPO, and EPRI SG Websites

NEI

Industry Events

- ANO 2 In Situ Pressure Test
  - Different interpretation of the guideline
  - Inquiry submitted to the Review Board
  - Industry will be informed of Review Board resolution
  - Process includes revisions to the guidelines if necessary

NEI

Industry Events

- Indian Point 2 Tube Leak
  - INPO assist team using industry peers
  - Too early to make conclusions on implications
  - Industry's SG Program Guidelines are based on self evaluation and evolution
  - Potential impact on guidelines is being evaluated

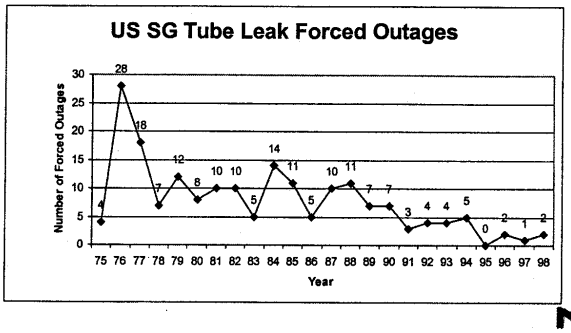
NEI

Industry Event Trends

- Industry approved a Formal Initiative in December 1997 to develop a SG Program that meets the intent of NEI 97-06 by the first refueling outage after January 1, 1999
- Continuing SGMP efforts that culminated in the NEI Initiative have contributed to an improving trend in SG performance over the last 25 years

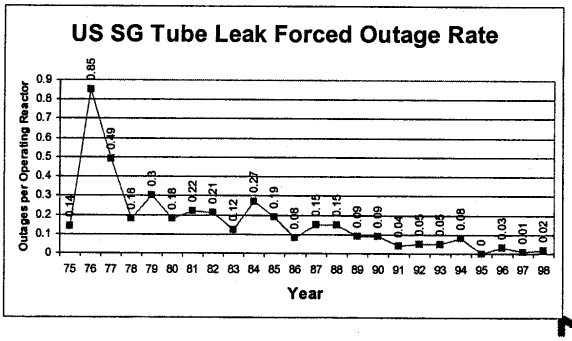
NEI

Improving Trend



NEI

Improving Trend



NEI

Conclusions

- Improvement over existing requirements
- Promotes application of best practices
- Enhances safe operation
- Process based on self evaluation and evolution
- Encourages technical advances
- Industry is behind the improvements
- **July 2000 approval is appropriate**

NEI

Comments on TIG Welded Sleeve Generic SER

- **General** – We believe that this represents an acceptable approach.

- **Items 3 and 4 seem to contradict item 1** – Item 1 should also allow changes via the 50.59 process. What is meant by NRC approval? If item 1 can be interpreted similar to the ASME Code exception process, we can agree. Tech Spec changes should not be necessary.

- **Sec 3.2, applicability to mill annealed alloy 600** – The applicability should be extended to alloy 690 and thermally treated alloy 600. There is no difference in thermal expansion coefficient between mill annealed and thermally treated alloy 600. For 690 TT, there are no dissimilar materials.

- Report should refer to ABB C-E Nuclear Power, Inc. or ABB CENP.

- In #2 of the Conclusion, the NRC Staff raises the issue of axial forces due to differential thermal expansion due to locked tubes at the tube support plates. The Conclusion seems to be an odd place to raise this issue for the first time. This should be discussed in section 3.3.

- In #7 of the Conclusion, the NRC states "Prior to implementing the subject sleeve repair method, the licensee shall update its design basis documents to identify the approved sleeving method and to place conditions/clarifications on its use in accordance with this safety evaluation." We agree that we do need a TRM change. Do we need anything else? If not, what is the intent of this statement?

- We presume that a utility with an existing SER for TIG welded sleeves would be able to adopt the generic SER with only a 50.59 evaluation.