

November 1, 2000

MEMORANDUM TO: William D. Travers  
Executive Director for Operations

FROM: Samuel J. Collins, Director */ra/*  
Office of Nuclear Reactor Regulation

SUBJECT: TRANSMITTAL OF THE INDIAN POINT 2 STEAM GENERATOR TUBE  
FAILURE LESSONS-LEARNED REPORT

The purpose of this memorandum is to transmit the completed Indian Point 2 (IP2) Steam Generator (SG) Tube Failure Lessons-Learned Report, which is attached. As you are aware, this lessons-learned activity was described in my May 24, 2000 memorandum, "Indian Point Unit 2 Steam Generator Tube Failure Lessons-Learned Task Group and Charter," and the multi-office activity was initiated on June 19, 2000. In the May 24, 2000, memorandum, I committed to using the lessons-learned assessment to identify any generic technical or process elements that could be improved in the NRC's review and oversight of SG issues. NRR plans to study the group's recommendations and implement them, as appropriate.

I have directed my staff to develop an action plan that will include the disposition of the lessons-learned report in an integrated manner with other ongoing SG activities, such as the NEI 97-06 change package review, by November 17, 2000. In implementing the action plan, the staff will consider appropriate stakeholder involvement.

The lessons-learned charter stated that the objective of this effort was to conduct an evaluation of the staff's technical and regulatory processes related to assuring SG tube integrity in order to identify and recommend areas for improvement applicable to the NRC and/or the industry. In order to satisfy this objective, the lessons-learned task group reviewed many of the licensee and NRC staff documents associated with the SG examinations, inspections, and the root cause analysis. The task group also reviewed the Office of Nuclear Regulatory Research (RES) March 16, 2000, Technical Review and the Office of the Inspector General (OIG) August 29, 2000, Event Inquiry Report. In order to better understand the technical and regulatory issues, the task group interviewed selected NRC staff and contractors as well as some technical staff of the licensee, Consolidated Edison (Con Ed).

CONTACT: Louise Lund, EMCB/DE  
415-2786

The attached lessons-learned report provides a number of generic technical and process recommendations that apply to the industry and the NRC. There is a recommendation directed to Con Ed which supports the conclusions of the August 31, 2000, NRC Special Inspection Report on the IP2 SG tube failure. The lessons-learned report reiterates the significant performance issues (as described in the August 31, 2000, NRC Special Inspection Report) related to how Con Ed implemented its SG inspection program during the 1997 plant outage. Principally, those performance issues were associated with the licensee not recognizing and taking appropriate corrective actions for significant conditions adverse to quality that affected the SG inspection program (e.g., not adequately accounting for conditions which adversely affected the detectability of, and increased the susceptibility to, tube flaws). The licensee specific deficiencies identified in the Special Inspection Report and any further interactions between NRC and Con Ed relative to those deficiencies are being addressed under the NRC's oversight process.

Based on our review of the lessons-learned report, we have concluded that there are no safety concerns that have been identified that require immediate action with respect to the industry. Several of the recommendations in the report support ongoing and planned activities by the NRC staff and the industry.

The NRC staff has been working to address the issues arising from the IP2 tube failure and has activities underway to strengthen SG programs in response to the IP2 SG tube failure. During the current fall outage season, for example, the NRC headquarters staff has had calls with certain licensees during their SG outages and has involved the NRC regional office staff in the phone calls. The staff has asked the licensees to explicitly discuss in the phone calls any steps that they have taken, or plan to take, in response to the industry lessons-learned (discussed below) from the IP2 tube failure. The staff is also preparing a Regulatory Issue Summary (RIS), drawing on issues in the staff's technical evaluation of the IP2 tube failure and the Arkansas Nuclear One, Unit 2 safety evaluation of the risk-informed amendment on the SG performance criteria. The RIS will be issued in the near future. Performance indicators related to maintaining tube integrity are also being developed which will be considered for incorporation into the revised reactor oversight program. The staff is also planning a stakeholder workshop by midyear 2001 to discuss recent SG operating experience and to solicit views from a broad range of stakeholders on the SG issues, including the NRC lessons-learned report.

With respect to the industry's response, by letter dated October 6, 2000, NEI provided the industry's lessons-learned report based on the IP2 tube failure. The industry is working on revising the Electric Power Research Institute guidelines that support the SG industry initiative framework (NEI 97-06) and change package based on their lessons-learned activity and input from the NRC staff. The industry discussed with the NRC staff their plan to provide interim guidance on data quality to assist licensees with fall 2000 outages that include SG examinations. On their own initiative, some of the plants used a high frequency eddy current probe during the spring and fall 2000 outages to improve the data quality in the small radius U-bend region of the tubes.

Many of these actions to improve the SG programs directly relate to the framework of the industry initiative, NEI 97-06, that has been the focus of industry and NRC staff efforts to improve the industry SG management programs during the past three years. This effort, which was deferred to allow the staff sufficient time to properly assess the issues arising from the tube failure, will recommence within the next two months.

Attachment: As stated

Many of these actions to improve the SG programs directly relate to the framework of the industry initiative, NEI 97-06, that has been the focus of industry and NRC staff efforts to improve the industry SG management programs during the past three years. This effort, which was deferred to allow the staff sufficient time to properly assess the issues arising from the tube failure, will recommence within the next two months.

Attachment: As stated

**DISTRIBUTION**

REnnis	BBoger	SNewberry	MMayfield	JDonoghue	TFrye
DMatthews	CPaperiello	ARubin	PMilano	OPA	PNorry
JZwolinski	KCyr	JGoldberg	RCroteau	AThadani	EAdensam
GHolahan	HMiller	JYerokun	OCA	EMCB RF	WDean
MGamberoni	FMiraglia	MBanerjee	JCraig	OGC	

Accession No.: ML003765110

DOCUMENT NAME: G:\EMCB\Sullivan\Lessons-learned transmittal letter.wpd

INDICATE IN BOX: "C"=COPY W/O ATTACHMENT/ENCLOSURE, "E"=COPY W/ATT/ENCL, "N"=NO COPY

\*PREVIOUSLY CONCURRED

OFFICE	EMCB:DE	EMCB:DE	EMCB:DE:BC	D:DE
NAME	LLund:ll	EJSullivan:ejs	WHBateman:whb	JRStrosnider:jrs
DATE	10 /18 /00	10 /23 /00	10 /23 /00	10 /23 /00
OFFICE	ADPT/NRR	AD:ADIP/NRR	DD:NRR	D:NRR
NAME	BWSheron:bws	JJohnson:jj	RZimmerman:rz	SCollins:sc
DATE	10 /26 /00	10 /26 /00	10 /31 /00	10 /31 /00

**MATERIALS & CHEMICAL ENGINEERING BRANCH  
ROUTING SLIP**

DOCUMENT TYPE	
<input checked="" type="checkbox"/> Memo <input type="checkbox"/> Note <input type="checkbox"/> Letter  <input type="checkbox"/> Other (describe):	<input type="checkbox"/> Green Ticket <input type="checkbox"/> Yellow Ticket <input type="checkbox"/> WITS Item <input type="checkbox"/> Division Item

**SUBJECT:** TRANSMITTAL OF THE INDIAN POINT 2 STEAM GENERATOR  
TUBE FAILURE LESSONS-LEARNED REPORT

**AUTHOR:** Louise Lund, 415-2786

**SECRETARY:** Rene Cesaro, 415-2795

**DATE:** November 6, 2000

**\*\*\* ROUTING \*\*\***

<u>NAME</u>	<u>DATE</u>
1. Louise Lund	_____
2. Ted Sullivan	_____
3. William Bateman	_____
4. Richard Wessman	_____
5. Jack Strosnider	_____
6. Jon Johnson	_____
7. Brian Sheron	_____
8. Roy Zimmerman	_____
9. Samuel Collins	_____