

March 30, 2001

MEMORANDUM TO: Brian W. Sheron, Associate Director
for Project Licensing and Technical Analysis

R. William Borchardt, Associate Director
for Inspection and Programs

FROM: Jack R. Strosnider, Director */ra/*
Division of Engineering

SUBJECT: STEAM GENERATOR ACTION PLAN ITEM 1.9 - GUIDANCE TO
INSPECTORS OVERSEEING FACILITIES WITH KNOWN STEAM
GENERATOR TUBE LEAKAGE

In the steam generator action plan dated November 16, 2000, the NRC staff indicated that we would document the completion of each major milestone in the action plan with a memorandum or report from the lead division director to the associate directors in the Office of Nuclear Reactor Regulation. This memorandum documents completion of milestone 1.9 regarding the development of guidance to inspectors, which is provided as an attachment to this memorandum.

Milestone 1.9 deals with the development of guidance to inspectors on overseeing facilities with known steam generator tube leakage. The need for this guidance was addressed in the November 3, 2000, memorandum from W. D. Travers to the Commission. This memorandum was written in response to the findings presented in the Office of the Inspector General (OIG) report "NRC's Response to the February 15, 2000, Steam Generator Tube Rupture at Indian Point Unit 2 Power Plant." Even though the OIG report didn't list a specific finding on this issue, the report discussed the resident inspector and regional staff response to the leakage observed by the licensee.

This guidance is intended to contribute to the NRC's four performance goals for the Nuclear Reactor Safety arena: maintain safety, protect the environment and the common defense and security; increase public confidence; make NRC activities and decisions more effective, efficient, and realistic; and reduce unnecessary regulatory burden. Specifically, this guidance was developed to aid the regional staff and resident inspectors in evaluating the significance of any reported leakage, which can be used as a tool to achieve the performance goals of maintaining safety and making NRC activities and decisions more effective, efficient, and realistic. In addition, the guidance will improve communications among the regional inspectors, regional staff, and the licensee when leakage is reported, thus assisting the NRC in achieving the goals of increasing public confidence and reducing unnecessary regulatory burden.

The leakage guidance discusses the sources of leakage and leakage detection methods that are commonly used by the licensees. The guidance also provides direction on assessing the

CONTACT: Louise Lund, DE/EMCB
415-2786

significance of the leakage, based on industry guidance on action levels of leakage. Information is also provided relative to questions asked by NRC staff when significant levels of leakage are identified. The guidance also summarizes the NRC generic communications and operating experience relative to forced outages due to SG tube leaks.

It is expected that this guidance will assist in assuring the licensee maintains an adequate mitigation capability and in minimizing the potential for tube rupture for those situations where significant leakage occurs before tube rupture. Unfortunately, SG tubes will not always leak before they break and the possibility exists for burst with very small or no observed leakage. For example, the greatest amount of leakage that Indian Point 2 experienced prior to a February 2000 tube failure was 4.5 gallons per day. This level of primary-to-secondary leakage was below the level that would have prompted additional action by the licensee according to current industry guidance. Therefore, guidance to the inspectors on primary-to-secondary leakage would not have prevented steam generator tube failures such as the one that occurred at IP2.

By copy of this memorandum we are requesting that the Inspection Program Branch, DIPM, request regional review in accordance with the normal process. Accordingly, since the attached guidance is predecisional, it is not being made publically available. Subsequent to addressing regional comments, the guidance will be issued in final form and made publically available.

In summary, the attached written guidance is responsive to the Office of the Inspector General comments and observations on these issues. It is our intent to update this guidance, as deemed necessary, to reflect operating experience and changes to the industry guidance.

Attachment: As stated

significance of the leakage, based on industry guidance on action levels of leakage. Information is also provided relative to questions asked by NRC staff when significant levels of leakage are identified. The guidance also summarizes the NRC generic communications and operating experience relative to forced outages due to SG tube leaks.

It is expected that this guidance will assist in assuring the licensee maintains an adequate mitigation capability and in minimizing the potential for tube rupture for those situations where significant leakage occurs before tube rupture. Unfortunately, SG tubes will not always leak before they break and the possibility exists for burst with very small or no observed leakage. For example, the greatest amount of leakage that Indian Point 2 experienced prior to a February 2000 tube failure was 4.5 gallons per day. This level of primary-to-secondary leakage was below the level that would have prompted additional action by the licensee according to current industry guidance. Therefore, guidance to the inspectors on primary-to-secondary leakage would not have prevented steam generator tube failures such as the one that occurred at IP2.

By copy of this memorandum we are requesting that the Inspection Program Branch, DIPM, request regional review in accordance with the normal process. Accordingly, since the attached guidance is predecisional, it is not being made publically available. Subsequent to addressing regional comments, the guidance will be issued in final form and made publically available.

In summary, the attached written guidance is responsive to the Office of the Inspector General comments and observations on these issues. It is our intent to update this guidance, as deemed necessary, to reflect operating experience and changes to the industry guidance.

Attachment: As stated

Distribution:

EMurphy	SCoffin	CKhan	ASmith	JTsao
REnnis	ZFu	HConrad	JMuscara	NChokshi
MMayfield	DPowers	DLew	HConrad	JJacobson
MLesser	EMCB RF			

DOCUMENT NAME: G:\EMCB\Lund\Leakage Guidance Memo Revised.wpd

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

OFFICE	EMCB:DE	EMCB:DE	IPB:DIPM	EMCB:DE	D:DE
NAME	ALLund	EJSullivan	WHMDean	WHBatemans:krw f/	JRStrosnider:jrs
DATE	3 /27 /01	3 /30 /01	3 /30/01	3 /30 /01	3 / 30 /01

OFFICIAL RECORD COPY