

POLICY ISSUE INFORMATION

August 3, 2004

SECY-04-0141

FOR: The Commissioners

FROM: Luis Reyes
Executive Director for Operations

SUBJECT: ISSUANCE OF NUCLEAR REGULATORY COMMISSION GENERIC LETTER
2004-XX, "REQUIREMENTS FOR STEAM GENERATOR TUBE INSPECTIONS"

PURPOSE:

To inform the Commission of the staff's intention to issue the subject generic letter. In the generic letter, the staff asks all operating pressurized-water reactor (PWR) licensees to provide information that will enable the staff to determine whether their steam generator (SG) tube inspection programs comply with the existing tube inspection requirements (the plant technical specifications (TS) in conjunction with Appendix B to Title 10 of the *Code of Federal Regulations* Part 50 (10 CFR Part 50, Appendix B)).

BACKGROUND:

Steam generator tubes are an integral part of the reactor coolant pressure boundary and, also serve to isolate radiological fission products in the primary coolant from the secondary coolant and the environment. Tube integrity means that the tubes are capable of performing these functions in accordance with the plant licensing basis, including applicable regulatory requirements. Given the importance of SG tube integrity, all current PWR licensees have TS governing the surveillance of SG tubes. SG tube inspections are also subject to the quality assurance requirements of 10 CFR Part 50, Appendix B.

Contacts: Paul Klein, NRR
301-415-4030

Maitri Banerjee, NRR
301-415-2277

The staff learned that several licensees were not fully implementing inspection methods capable of detecting circumferentially-oriented cracks at all locations where the potential for such cracks exists and where, based on available evidence, there was reason to believe such cracks might be present. Each of these licensees had performed an analysis indicating that any circumferential crack in the tubes in these particular areas would not be detrimental to tube structural and leakage integrity. Thus, the analyses effectively changed the acceptance criteria for steam generator tube inspections. Implementation of an alternate acceptance criteria may require a license amendment. These analyses, however, had not been provided to the Nuclear Regulatory Commission (NRC) staff for review and approval.

DISCUSSION:

In the aforementioned cases, tube inspections near the top of the tubesheet clearly indicated the potential for circumferential cracks to occur deeper into the tubesheet, beyond the region inspected with probes capable of detecting such cracks. In each case, the licensee was aware of the potential for such cracks to exist deeper into the tubesheet, but the licensee did not employ techniques capable of reliably detecting such cracks because the licensee's analysis concluded that such cracks did not have safety implications.

The NRC staff's position is that if a tube degradation mechanism is potentially occurring at a specific location within a SG (e.g., has occurred in other tubes, or has occurred at other plants with similarly designed and operated facilities), then the TS, in conjunction with 10 CFR Part 50, Appendix B, require that inservice inspection techniques capable of detecting this type of degradation be used to inspect this region.

In the cases cited above, some licensees have relied on licensee-approved analyses to justify not inspecting with probes capable of detecting certain types of degradation in areas where it had the potential to exist. By not inspecting such areas, the licensees have allowed flaws that might have been detected and that may exceed the repair or plugging limit to remain in service. These inspection practices are contrary to the requirements in the TS in conjunction with 10 CFR Part 50, Appendix B, that conditions adverse to quality be identified by using qualified techniques and adequate test information. Neither the TS nor Appendix B provides for limiting SG tube inspections in the manner described above. In addition, this practice appears contrary to the past practice of amending the TS in cases where existing TS plugging limits are determined to be overly conservative for certain flaw types at certain locations. It is the staff's position that, unless a license amendment has been approved that changes the inspection approach, licensees are required to employ inspection methods capable of detecting all flaw types that may be present at locations that the TS require to be inspected and where flaws may exceed the applicable TS tube repair criteria.

Although this specific example involves inspections in the tubesheet region at plants where cracking had the potential to occur, similar situations could exist at other tube locations for certain degradation mechanisms. As a result, the staff's position applies to all tube locations. In addition, it applies to all PWRs since tube degradation can occur in any SG and similar situations could exist at any plant.

Therefore, the NRC is issuing this generic letter to request addressees to provide information that will enable the staff to make a determination whether the licensees' SG tube inspection

programs comply with the existing requirements (the plant TS in conjunction with 10 CFR Part 50, Appendix B).

A draft of this Generic Letter was placed in the Federal Register and a response to public comments on that draft is provided with the Generic Letter.

COORDINATION:

The staff briefed the Committee To Review Generic Requirements (CRGR) on the proposed generic letter during a meeting on May 11, 2004, and has addressed the Committee's comments. The CRGR has endorsed the proposed generic letter.

The Office of the General Counsel has reviewed the proposed generic letter and has no legal objections to its content.

The Office of the Chief Financial Officer has reviewed the proposed generic letter and has no objections to its content.

The staff intends to issue the attached generic letter on August XX, 2004.

/RA/

Luis A. Reyes
Executive Director
for Operations

Attachments:

1. Generic Letter 2004-XX
2. Resolution of Public Comments

programs comply with the existing requirements (the plant TS in conjunction with 10 CFR Part 50, Appendix B).

A draft of this Generic Letter was placed in the Federal Register and a response to public comments on that draft is provided with the Generic Letter.

COORDINATION:

The staff briefed the Committee To Review Generic Requirements (CRGR) on the proposed generic letter during a meeting on May 11, 2004, and has addressed the Committee's comments. The CRGR has endorsed the proposed generic letter.

The Office of the General Counsel has reviewed the proposed generic letter and has no legal objections to its content.

The Office of the Chief Financial Officer has reviewed the proposed generic letter and has no objections to its content.

The staff intends to issue the attached generic letter on August XX, 2004.

/RA/
Luis A. Reyes
Executive Director
for Operations

Attachments:

1. Generic Letter 2004-XX
2. Resolution of Public Comments

Package No.: ML041690397

Proposed Generic Letter No.: ML041690193

Resolution of Public Comments: ML041690373

ADAMS Memo Accession No.: ML041690141

GL-xxx

SECY-xxx

*SEE PREVIOUS CONCURRENCE

OFFICE	PM:DLPM	LA:DLPM	EMCB:DE	Tech Editor	EMCB:DE	SC:DLPM	PD:DLPM
NAME	MBanerjee*	PCoates*	PKlein*	PKleene*	LLund*	AMendiola*	WRuland
DATE	07/29/04	07/29/04	6/3/04	6/10/04	6/3/04	6/24/04	7/7/04
OFFICE	D:DLPM	BC:EMCB:DE	IROB:DIPM	BC:IROB:DIPM	D:DIPM	D:DE	D:OE
NAME	TMarsh*	WBateman*	CPetrone*	WBeckner*	BBoger* (CCarpenter for)	RBarrett* (CGrimes for)	JLuehman
DATE	7/9/04	6/3/04	7/12/04	7/12/04	7/12/04	6/24/04	6/14/04
OFFICE	OGC	OGC		D:ADPT	D:NRR	EDO	
NAME	BPoole	SCole*		BSheron*	JDyer*	LReyes	
DATE	7/6/04	7/13/04		7/16/04	7/21/04	8/3/04	

OFFICIAL RECORD COPY