UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION
WASHINGTON, D.C. 20555-0001

April 30, 1996

NRC INFORMATION NOTICE 96-25: TRAVERSING IN-CORE PROBE OVERWITHDRAWN AT LASALLE COUNTY STATION, UNIT 1

Addressees

All holders of operating licenses or construction permits for nuclear power reactors.

Purpose

The U.S. Nuclear Regulatory Commission (NRC) is issuing this information notice to alert addressees to a traversing in-core probe (TIP) that was overwithdrawn at LaSalle County Station, Unit 1. It is expected that recipients will review the information for applicability to their facilities and consider actions, as appropriate, to avoid similar problems. However, suggestions contained in this information notice are not NRC requirements; therefore, no specific action or written response is required.

Description of Circumstances

On October 31, 1995, while LaSalle Unit 1 was operating at 96-percent power, a failure occurred on the 1B traversing in-core probe machine. The licensee was running a test for nuclear instrument calibrations. During the insertion of the 1B TIP detector, the operator received indications that the detector was withdrawing. An attempt by the operator to stop the TIP was unsuccessful. The TIP withdrew past its shielded storage location to the drive unit itself. A reactor building area radiation monitor (next to the drive units) pegged upscale (1 rem/hour) and alarmed in the control room. At the surface of the platform supporting the TIP drive machines, radiation surveys showed 7 Rem/hr. Licensee calculations showed potential dose rates of 250 Rem/hr one foot away from the unshielded detector. The operators entered emergency operating procedures for secondary containment control (because of high radiation levels at the 740-foot elevation level of the reactor building). Personnel were warned to stay clear of the area and an ALERT was declared based on the high radiation levels. The operational support center and the technical support center were activated. The licensee subsequently established high radiation and contamination boundaries for restricting access controls in the reactor building. With the plant condition stabilized and the radiological boundaries established, the licensee terminated the ALERT. There was no impact on the operation of Unit 1 or Unit 2, and they remained at full power. The event involved no radiological releases and no exposures of personnel.

Licensee personnel performed an inspection of the 1B TIP on November 7, 1995. The inspection revealed that the drive chain between the drive motor and the feed and takeup reel had separated at the master link. This separation caused

the takeup reel to recoil due to a tensioner spring on the reel and to pull the TIP detector all the way out onto the reel, an unshielded area. The root cause investigation as to why the master link separated is ongoing.

Discussion

The NRC staff discussed this event and the general design of the TIP with a General Electric representative. Because of the design of the TIP, when the drive chain between the drive motor and the feed and take-up reel separates at the master link, the fail-to condition is to recoil the take up reel and pull the TIP detector all the way out onto the reel, which is usually unshielded. The kind of event could occur again because of the way the TIP is designed. The design has been modified to eliminate this type of event at newer designed BWR plants.

Irradiated components, such as BWR TIP and attached drive cables can create substantial radiation fields in accessible RB areas. Without timely worker and control room actions in response to local and remote reactor building area radiation alarms, the local radiation fields outside shielded rooms resulting from an inadvertent activated TIP withdrawal has the potential for inadvertent worker exposures in excess of regulatory limits.

Related Generic Communications and Correspondence

The following generic communications and correspondence discuss previous related events:

Information Notice 88-63, "High Radiation Hazards From Irradiated Incore Detectors and Cable," dated August 15, 1988.

IN 88-63, Supplement 1, dated October 5, 1990.

IN 88-63, Supplement 2, dated June 25, 1991.

This information notice requires no specific action or written response. If you have any questions about the information in this notice, please contact the technical contacts listed below or the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.

Brian K. Grimes, Acting Director
Division of Reactor Program Management
Office of Nuclear Reactor Regulation

Technical contacts: Egan Y. Wang, NRR
(301) 415-1076
Internet:eyw@nrc.gov

James E. Wigginton, NRR
(301) 415-1059
Internet:jew2@nrc.gov

Attachment: List of Recently Issued NRC Information Notices

Attachment filed in Jacket

LIST OF RECENTLY ISSUED NRC INFORMATION NOTICES

Information Notice No.	Subject	Date of Issuance	Issued to
96-24	Preconditioning of Molded-Case Circuit Breakers Before Surveillance Testing	04/25/96	All holders of OLs or CPs for nuclear power reactors
96-23	Fires in Emergency Diesel Generator Exciters During Operation Following Undetected Fuse Blowing	04/22/96	All holders of OLs or CPs for nuclear power reactors
96-22	Improper Equipment Settings Due to the Use of Nontemperature-Compensated Test Equipment	04/11/96	All holders of OLs or CPs for nuclear power reactors
96-21	Safety Concerns Related to the Design of the Door Interlock Circuit on Nucletron High-Dose Rate and Pulsed Dose Rate Remote Afterloading Brachytherapy Devices	04/10/96	All U.S. NRC Medical to the Licensees authorized to use brachytherapy sources in high- and pulsed-dose-rate remote afterloaders
96-20	Demonstration of Associated Equipment Compliance with 10 CFR 34.20	04/04/96	All industrial radiography licensees and radiography equipment manufacturers
96-19	Failure of Tone Alert Radios to Activate When Receiving a Shortened Activation Signal	04/02/96	All holders of OLs or CPs for nuclear power reactors
96-18	Compliance with 10 CFR Part 20 for Airborne Thorium	03/25/96	All material licensees authorized to possess and use thorium in unsealed form
95-03 Supp. 1	Loss of Reactor Coolant Inventory and Potential Loss of Emergency Mitigation Functions While in a Shutdown Condition	03/25/96	All holders of OLs or CPs for PWR power plants

OL = Operating License
CP = Construction Permit

This information notice requires no specific action or written response. If you have any questions about the information in this notice, please contact the technical contacts listed below or the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.

Original signed by Brian K. Grimes

Brian K. Grimes, Acting Director
Division of Reactor Program Management
Office of Nuclear Reactor Regulation

Technical contacts: Egan Y. Wang, NRR
(301) 415-1076
Internet:eyw@nrc.gov

James E. Wigginton, NRR
(301) 415-1059
Internet:jew2@nrc.gov

Attachment: List of Recently Issued NRC Information Notices

Tech Editor reviewed 02/27/96
*See previous concurrence
DOCUMENT NAME: 96-25.IN

To receive a copy of this document, indicate in the box: "C" = Copy without enclosures "E" = Copy with enclosures "N" = No copy

OFFICE	TECH CONTS		PECB:DRPM		AD:DRPM:NRR					
NAME	EWang* JWigginton*		AChaffee*		BKGrimes					
DATE	03/11/96 03/11/96		04/17/96		04/26/96					

OFFICIAL RECORD COPY

This information notice requires no specific action or written response. If you have any questions about the information in this notice, please contact the technical contacts listed below or the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.

Dennis M. Crutchfield, Director
Division of Reactor Program Management
Office of Nuclear Reactor Regulation

Technical contacts: Egan Y. Wang, NRR
(301) 415-1076
Internet:eyw@nrc.gov

James E. Wigginton, NRR
(301)-415-1059
Internet:jew2@nrc.gov

Attachment: List of Recently Issued NRC Information Notices

DOCUMENT NAME: G:\EYW\96-XX-IN.TIP

To receive a copy of this document, indicate in the box: "C" = Copy without enclosures "E" = Copy with enclosures "N" = No copy

OFFICE	PECB:DRPM	C	BC:PERB:DRPM		PECB		BC:PECB:DRPM		DD:DRPM	
NAME	EWang*		CMiller*		RLDennig		AChaffee		DCrutchfield	
DATE	03/11/96		03/14/96		04/08/96		04/ 17/96		03/ /96	

OFFICIAL RECORD COPY

recew 4-17-96

TAC # 94470

This information notice requires no specific or written response. If you have any questions about the information in this notice, please contact the technical contacts listed below or the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.

Dennis M. Crutchfield, Director
Division of Reactor Program Management
Office of Nuclear Reactor Regulation

Technical contacts: Egan Y. Wang, NRR
(301) 415-1076
Internet:eyw@nrc.gov

James E. Wigginton, NRR
(301)-415-1059
Internet:jew2@nrc.gov

Attachment: List of Recently Issued NRC Information Notices

DOCUMENT NAME: G:\EYW\96-XX-IN.TIP

To receive a copy of this document, indicate in the box: "C" = Copy without enclosures "E" = Copy with enclosures "N" = No copy

OFFICE	PECB:DRPM	C	BC:PERB:DRPM		PECB		BC:PECB:DRPM		DD:DRPM	
NAME	EWang*		CMiller*		RLDennig		AChaffee		DCrutchfield	
DATE	03/11/96		03/14/96		04/08/96		03/ /96		03/ /96	

OFFICIAL RECORD COPY

mkw

This information notice requires no specific or written response. If you have any questions about the information in this notice, please contact the technical contact listed below or the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.

Dennis M. Crutchfield, Director
Division of Reactor Program Management
Office of Nuclear Reactor Regulation

Technical contacts: Egan Y. Wang, NRR
(301) 415-1076
Internet:eyw@nrc.gov

James E. Wigginton, NRR
(301)-415-1059
Internet:jew2@nrc.gov

Attachment: List of Recently Issued NRC Information Notices

DOCUMENT NAME: G:\EYW\96-XX-IN.TIP

To receive a copy of this document, indicate in the box: "C" = Copy without enclosures "E" = Copy with enclosures "N" = No copy

OFFICE	PECB:DRPM	C	BC:PERB:DRPM		PECB		BC:PECB:DRPM		DD:DRPM	
NAME	EWang*		CMiller*		RLDennig*		AChaffee		DCrutchfield	
DATE	03/11/96		03/14/96		04/08/96		03/ /96		03/ /96	

OFFICIAL RECORD COPY

mkm

This information notice requires no specific or written response. If you have any questions about the information in this notice, please contact the technical contact listed below or the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.

Dennis M. Crutchfield, Director
Division of Reactor Program Management
Office of Nuclear Reactor Regulation

Technical contacts: Egan Y. Wang, NRR
(301) 415-1076
Internet:eyw@nrc.gov

James E. Wigginton, NRR
(301)-415-1059
Internet:jew2@nrc.gov

Attachment: List of Recently Issued NRC Information Notices

DOCUMENT NAME: G:\EYW\96-XX-IN.TIP

To receive a copy of this document, indicate in the box: "C" = Copy without enclosures "E" = Copy with enclosures "N" = No copy

OFFICE	PECB:DRPM	C	BC:PERB:DRPM		BC:PECB:DRPM		DD:DRPM	
NAME	EWang*		CMiller*		AChaffee		DCrutchfield	
DATE	03/11/96		03/14/96		03/ /96		03/ /96	

OFFICIAL RECORD COPY

This information notice requires no specific or written response. If you have any questions about the information in this notice, please contact the technical contact listed below or the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.

Dennis M. Crutchfield, Director
Division of Reactor Program Management
Office of Nuclear Reactor Regulation

DOCUMENT NAME: G:\EYW\96-XX-IN.TIP

To receive a copy of this document, indicate in the box: "C" = Copy without enclosures "E" = Copy with enclosures "N" = No copy

OFFICE	PECB:DRPM	C	BC:PERB:DRPM	C	BC:PECB:DRPM		DD:DRPM	
NAME	EWang		CMiller		AChaffee		DCrutchfield	
DATE	03/11/96		03/14/96		03/ /96		03/ /96	

concur w/comments

OFFICIAL RECORD COPY