

# PRIORITY 1

(ACCELERATED RIDS PROCESSING)

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

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SUBJECT: Deficiency rept re material defects in facility containment  
 penetration modules. Initially reported on 940715. Modules  
 were replaced.

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July 15, 1994

Docket No. 50-397

Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Subject: **NUCLEAR PLANT WNP-2, OPERATING LICENSE NPF-21  
10CFR21 REPORT  
WESTINGHOUSE CONTAINMENT PENETRATION MODULES.  
SCOTCHCAST STRAIN RELIEF AND VARGLAS INSULATED CONDUCTORS**

This is an initial 10CFR21 notification to the NRC Operations Center.

On May 9, 1994, investigation into electrical problems (open wires and low resistance) for the Rod Position Indication System (RPIS) at WNP-2 identified a degraded condition due to corrosion of conductors internal to the strain relief material in primary containment electrical penetration modules. The penetration modules provide both electrical continuity and containment integrity functions. The degraded condition potentially affects electrical continuity but not containment integrity.

The design and construction of the RPIS penetration module are similar to safety related modules. Initial operability assessments limit this problem to the RPIS modules. Six of the 12 RPIS modules have been replaced during this refueling outage (R-9). The remaining RPIS modules which are not replaced are operable.

Containment penetration modules were supplied by Westinghouse and installed in WNP-2 during initial construction. Imaging and Sensing Technology (IST) purchased the manufacturing facility for the modules from Westinghouse in May 1988.

The IST contact is:

Phil Ponzi, Chairman  
Imaging and Sensing Technology  
300 Westinghouse Circle  
Horseheads, NY 14845  
(607) 796-4433

The Westinghouse contact is:

R.B. Miller, Engineer, Nuclear Safety Department  
Westinghouse Electric Corp., Energy Systems Business Unit  
Energy Center  
Pittsburgh, PA 15230  
(412) 374-5953

Westinghouse/IST indicate that they have informed the only other domestic utility to which penetrations containing Scotchcast have been supplied of the presence of Scotchcast in one of their modules. The module uses insulated and jacketed cable but not Varglas. The utility informed the vendor that they have not had any problems with the module.

If the identified condition had gone undetected in certain safety related applications, it could have resulted in a substantial safety hazard due to the loss of electrical continuity.

Should you have any questions or desire additional information, please call me or D. A. Swank at (509) 377-4563.

9407210170 940715  
PDR ADDOCK 05000397  
S PDR

POWER REACTOR

EVENT NUMBER: 27541

FACILITY: WASHINGTON NUCLEAR  
UNIT: [2] [ ] [ ]  
RX TYPE: [2] GE-5

REGION: 4  
STATE: WA

NOTIFICATION DATE: 07/15/94  
NOTIFICATION TIME: 20:51 [ET]  
EVENT DATE: 07/15/94  
EVENT TIME: 00:00 [PDT]  
LAST UPDATE DATE: 07/15/94

NRC NOTIFIED BY: FASCIMILE  
HQ OPS OFFICER: THOMAS ANDREWS

NOTIFICATIONS

EMERGENCY CLASS: NOT APPLICABLE  
10 CFR SECTION:  
CCCC 21.21 UNSPECIFIED PARAGRAPH

UNIT	SCRAM CODE	RX CRIT	INIT PWR	INIT RX MODE	CURR PWR	CURR RX MODE
2	N	N	0		0	

EVENT TEXT

--- MATERIAL DEFECTS IN WESTINGHOUSE CONTAINMENT PENETRATION MODULES ---

THIS IS AN INTIAL 10CFR21 NOTIFICATION TO THE NRC OPERATIONS CENTER.

ON MAY 9, 1994, INVESTIGATION INTO ELECTRICAL PROBLEMS (OPEN WIRES AND LOW RESISTANCE) FOR THE ROD POSITION INDICATION SYSTEM (RPIS) AT WNP-2 IDENTIFIED A DEGRADED CONDITION DUE TO CORROSION OF CONDUCTORS INTERNAL TO THE STRAIN RELIEF MATERIAL IN PRIMARY CONTAINMENT ELECTRICAL PENETRATION MODULES. THE PENETRATION MODULES PROVIDE BOTH THE ELECTRICAL CONTINUITY AND CONTAINMENT INTEGRITY FUNCTIONS. THE DEGRADED CONDITION POTENTIALLY AFFECTS ELECTRICAL CONTINUITY BUT NOT CONTAINMENT INTEGRITY.

THE DESIGN AND CONSTRUCTION OF THE RPIS PENETRATION MODULE ARE SIMILAR TO SAFETY RELATED MODULES. INITIAL OPERABILITY ASSESSMENTS LIMIT THIS PROBLEM TO THE RPIS MODULES. SIX OF THE 12 RPIS MODULES HAVE BEEN REPLACED DURING THIS REFUELING OUTAGE (R-9). THE REMAINING RPIS MODULES WHICH ARE NOT REPLACED ARE OPERABLE.

CONTAINMENT PENETRATION MODULES WERE SUPPLIED BY WESTINGHOUSE AND INSTALLED IN WNP-2 DURING INITIAL CONSTRUCTION. IMAGING AND SENSING TECNOLOGY (IST) PURCHASED THE MANUFACTURING FACILITY FOR THE MODULES FROM WESTINGHOUSE IN MAY 1988.

THE IST CONTACT IS:

PHIL PONZI, CHAIRMAN  
IMAGING AND SENSING TECHNOLOGY  
300 WESTINGHOUSE CIRCLE

(Continued on next page)

HORSEHEADS, NY 14845  
(607) 796-4433

THE WESTINGHOUSE CONTACT IS:

R.B. MILLER, ENGINEER, NUCLEAR SAFETY DEPARTMENT  
WESTINGHOUSE ELECTRIC CORP., ENERGY SYSTEMS BUSINESS UNIT  
ENERGY CENTER  
PITTSBURG, PA 15230  
(412) 374-5953

WESTINGHOUSE/IST INDICATE THAT THEY HAVE INFORMED THE ONLY OTHER DOMESTIC UTILITY TO WHICH PENETRATIONS CONTAINING SCOTCHCAST HAVE BEEN SUPPLIED OF THE PRESENCE SCOTCHCAST IN ONE OF THEIR MODULES. THE MODULE USES INSULATED AND JACKETED CABLE BUT NOT VARGLAS. THE UTILITY INFORMED THE VENDOR THAT THEY HAVE NOT HAD ANY PROBLEMS WITH THE MODULE.

IF THE IDENTIFIED CONDITION HAD GONE UNDETECTED IN CERTAIN SAFETY RELATED APPLICATIONS, IT COULD HAVE RESULTED IN A SUBSTANTIAL SAFETY HAZARD DUE TO THE LOSS OF ELECTRICAL CONTINUITY.