

**Washington Public Power Supply System**

P.O. Box 968 3000 George Washington Way Richland, Washington 99352 (509) 372-5000

July 2, 1982  
G01-82-0413

Nuclear Regulatory Commission  
Region V  
1450 Maria Lane, Suite 210  
Walnut Creek, California 94596

Attention: R. H. Faulkenberry

Subject: NUCLEAR PROJECTS 1 AND 4  
DOCKET NOS. 50-460 AND 50-513  
REPORTABLE 10CFR50.55(e)  
ROCKBESTOS CABLE

Reference: 1) Telecon ME Rodin, Supply System to  
PP Narbut, Region V, Nuclear Regulatory Commission,  
dated January 26, 1982  
2) G0-1-82-0060, dated February 26, 1982,  
DW Mazur to RH Faulkenberry  
3) G0-1-82-0152, dated April 21, 1982,  
RW Root to RH Faulkenberry

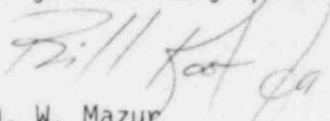
Reference 3) informed your office of a reportable deficiency under 10CFR50.55(e) and transmitted an interim status report on the subject condition.

Attachment A, to this letter, provides the Supply Systems final report on the above caption condition. The attachment includes a restatement of the problem and description of the safety implications associated with failure of the Rockbestos cable in the Reactor Protection System. The only cable involved is that used in the Unit 4 penetrations. A review was performed of the Raychem cable used in the Unit 1 penetrations and it was found that there is not a similar problem with the cable. To date, we have been unable to establish a completion schedule for the replacement of the cables for the Unit 4 penetrations. Due to the construction delay, we will defer our quarterly updates to a yearly basis or more frequently when new information becomes available.

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If you have ~~any~~ questions or desire further information, please advise.

  
D. W. Mazur  
Acting Program Director

DWM:JMS:lm

Attachment

cc: CR Bryant, BPA (399)  
JP Laspa, Bechtel (860)  
V. Mani, UE&C (897)  
A Toth, NRC  
V. Stello, Director of Inspection, NRC  
FDCC (899)

## ATTACHMENT A

WNP-1/4

DOCKET NOS. 50-460 AND 50-513

REPORTABLE CONDITION PER 10CFR50.55(e)

ROCKBESTOS CABLE

FINAL REPORT

### BACKGROUND

The Supply System received a letter from Westinghouse Electric Corporation stating that they have been informed by the Rockbestos Company that their solid dielectric coaxial cable exhibited failures under certain conditions as described below. Westinghouse identified four penetrations (HE2, HH3, H15 and HK3) designated for Unit 4, in which the above type of Rockbestos cable was used. Westinghouse however, did not know if the above penetrations carried any safety related circuit.

The Supply System requested the Architect Engineer of the Project, United Engineers & Constructors, to review the application of the four penetrations in question and determine if they are used for safety related circuits at temperatures where failures are likely to occur.

### DESCRIPTION OF DEFICIENCY

In a letter to Westinghouse, Rockbestos stated that testing confirmed that cable types RSS-6-100 through RSS-6-112 may be subject to failures at temperatures above 230°F. Expansion of the dielectric causes foreshortening of the braided shield which, in turn causes longitudinal compression and kinking of the center conductor, resulting in cracking of the dielectric permitting shorting of the center-conductor to the shield. Westinghouse listed cable type RSS-6-112 as used in Unit 4 penetrations numbered as HE2, HH3, H15 and HK3.

### SAFETY IMPLICATIONS

Rockbestos recommends that the RSS-6-112 type cable not be installed or, if installed, should not be exposed to environments above 230°F. The above type of Rockbestos cable is used for Unit 4 penetrations to connect the Ion chambers to the Reactor Protection System Cabinets (RPS). The RPS initiates a reactor-trip when a sensed parameter (or group of parameters) exceeds a set point value indicating the approach of an unsafe condition. In this manner, the reactor and the reactor coolant system is protected from over pressurization and fuel cladding damage. The scope of the RPS includes all electronics, signal processing equipment and cabling from the system sensors to the input terminals of the Control Rod Drive Control System (CRDCS). The potential to isolate the Reactor Protection System then represents a significant safety problem.

#### CORRECTIVE ACTION PLANNED

The Architect Engineer, United Engineers & Constructors, had notified Westinghouse, the supplier of the penetration, that the four penetrations with Rockbestos RSS-6-112 cable are used for class 1E circuits in an environment exceeding the recommended limit of 230°F and that these cables are to be replaced by a 1E qualified cables. As an added precaution, the Construction Manager, Bechtel Power Corporation, has been notified to write a nonconformance report and red tag the affected penetrations.

In addition to the above identified problem with Rockbestos Cable, Westinghouse was also requested to determine if the Raychem Cable, Raychem being the only other supplier of coaxial cable for penetrations, supplied for Unit 1 penetrations HE2, HH3, H15 and HK3, has a similar failure mode as the Rockbestos RSS-6-112. The Raychem Corporation informed the Supply System that the cables supplied by Raychem has different construction and does not have similar failure mode as the Rockbestos Cable.

#### CURRENT STATUS

The four penetrations designated for Unit 4 have not been installed and are currently on hold. The installation will only be carried out after the present cables are replaced by 1E qualified cables.