

Power Reactor

Event # 45334

Site: COOPER		Notification Date / Time: 09/09/2009 14:53 (EDT)	
Unit: 1	Region: 4	State : NE	Event Date / Time: 09/08/2009 09:30 (CDT)
Reactor Type: [1] GE-4		Last Modification: 09/09/2009	
Containment Type: MARK I			
NRC Notified by: DAVID MADSEN		Notifications: DAVID PROULX R4DO	
HQ Ops Officer: PETE SNYDER		PART 21 COORDINATOR NRR	
Emergency Class: NON EMERGENCY			
10 CFR Section:			
21.21	UNSPECIFIED PARAGRAPH		

Unit	Scram Code	RX Crit	Init Power	Initial RX Mode	Curr Power	Current RX Mode
1	N	Yes	95	Power Operation	95	Power Operation

DEFECT FOUND IN BUSSMAN FUSES

"On September 8, 2009, Nebraska Public Power District (NPPD) completed a reportability determination which concluded that a Bussmann fuse with a batch code of R18 contained an underlying fabrication vulnerability consisting of a missing fuse link. NPPD has concluded this condition is reportable per 10 CFR Part 21.

"This fuse is part of a batch of fuses purchased as Commercial Grade items and dedicated by NPPD for use at the Cooper Nuclear Station (CNS). The fuses are shipped directly from an authorized Bussman facility to CNS. The fuse purchasing description is as follows: FUSE; 10 AMP; 250VAC; ONE-TIME; 50KA I.R. ; GENERAL PURPOSE; Manufacturer Part Number NON-10. The missing fuse link was discovered via destructive testing at CNS. The destructive test was prompted when the fuse failed a field continuity test prior to installation. The fuse had passed CNS dedication, which included a continuity test of 100% of the batch by the manufacturer. Although, none of the other fuses in this batch exhibited missing links via continuity testing, the fuse with the missing link is considered to be a continuation of quality problems previously reported to the Nuclear Regulatory Commission (NRC) per Emergency Notification Number 44634, as followed up by a written report from NPPD to the NRC dated December 2, 2008. That report identified that Several Bussmann fuses, Manufacturer Part Number NON-10, batch code J47, contained poor solder joints internal to the fuse assembly.

"Bussmann NON-10 fuses are authorized by NPPD for use in both safety related and non safety related applications. The applicable dedication package identifies one of the safety functions as 'fuses are required to conduct the design basis load current without interruption.' If the fuses were installed without the condition being detected and failed upon valid demand of the associated circuit, the mission of the associated safety related equipment may not have been accomplished. Since the condition was found prior to installation, the safety function of the installed fuses remains unaffected and the supported equipment remains unaffected. Other locations where the batch R18 fuses are installed have been determined to be operable through actual circuit operation or

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measurements across the fuses. Therefore, this condition is NOT reportable under 10 CFR 50.72 or 50.73.

"Vendor testing and current dedication practices should have precluded the possibility of placing a fuse with a similar condition into unrestricted spares. However, these barriers failed. This provided a potential for a Substantial Safety Hazard. This regulation does not credit pre-installation or post-maintenance testing for the detection of a defect. The dedication does not require CNS to perform a continuity check as credit is given to the vendor, per NUPIC survey, for performing the continuity check at the manufacturer's facility.

"Since the fuses were stocked in unrestricted spares for essential applications, 10 CFR 21 applies, and the condition is reportable under 10 CFR 21.21. The responsible Corporate Officer has been notified of this condition per 10 CFR 21.21(d)(3)(i) on September 8, 2009 at approximately 0930 CDT. Pursuant to 10 CFR 21.21 (d)(3)(ii) written notification is due to the NRC within 30 days of this notification."

The licensee will notify the NRC-Resident Inspector.
