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Attachment to AECM-86/0200

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Attachment to AECM-86/0200

HRC Form 3664 (9-63)	LICENSEE EVENT REPORT (LER) TEXT CONTINUATION														104		
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On June 3, 1986, Grand Gulf Nuclear Station (GGNS) was informed by the Architect Engineer, Bechtel Power Corporation, of a condition which could potentially cause a loss of the Standby Gas Treatment System (SGTS) safety function during accident conditions. This situation is reportable pursuant to 10CFR50.73(a)(2)(v). A four-hour notification was also made in accordance with 10CFR50.72(b)(2)(ii).

B. INITIAL CONDITIONS

On June 3, 1986, the plant was operating at approximately 85 percent power.

C. DESCRIPTION OF OCCURRENCE

The Architect Engineer notified GGNS by letter dated June 3, 1986 (MPB-86/0391) that postulated environmental effects on a nonqualified circuit located in the SGTS fire detection cabinet, could cause the shutdown of the SGTS fans. The SGTS filter train fans are designed to alarm and trip on high-high temperature of 310 degrees F in the charcoal filter bed. This fan trip interlock should have been provided from a qualified class 1E component. The Architect Engineer in conjunction with MP&L also identified a violation of Regulatory Guide 1.75 separation requirements. Both of the SGTS filter train fire detection cabinets were found to be powered from a common non-class 1E power supply while the class 1E SGTS fan circuits are powered from their respective ESF divisional class 1E power supplies. Utilization of the non-class 1E power to these fire detection cabinets did not meet the Regulatory Guide 1.75 six inch minimum separation requirement.

Material Nonconformance Report (MNCR) 0431-86 was initiated to document the condition. A Limiting Condition for Operation (LCO) was entered at 1855 on June 3, 1986 pursuant to Technical Specification 3.0.3. The LCO was terminated at 1915 after the power supply breakers to the charcoal fire detection circuit were opened to prevent an inadvertent shutdown of the fans.

D. APPARENT CAUSE

The cause of the condition was due to the approved design. The Architect Engineer failed to identify this contact when preparing the original NUREG-0588 equipment list and subsequent 10CFR50.49 list. This finding was identified during the development of Shutdown Logic Diagrams and Safety Function Diagrams which show in a logic fashion the equipment required to be qualified in accordance with 10CFR50.49. GGNS has contracted an independent organization to develop these documents. An inquiry to the Architect Engineer resulted in the described occurrence.

Attachment to AECM-86/0200

RC Form 386A 9-83)	LICENSEE EVENT REPO	LICENSEE EVENT REPORT (LER) TEXT CONTINUATION												
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	An evaluation of other SGTS equipment was environmental Fresh Air Unit filter train qualified. This condition case.	protective circuitry ly qualified to 10CFI was reviewed and de was, therefore, dete	y rev R50.4 termi rmine	eal 9. ned d t	ed that The Co I to be to be an	the ntrol proper isola	Room ly ted	л						
Ε.	SUPPLEMENTAL CORRECTIVE ACTIONS													
	A Design Change Package (DCP 86/3013) is being issued to remove the far trip interlocks from the control circuitry. This will prevent failure the nonqualified circuit from creating a trip of the fans. The existin high temperature (255 degrees F) and high-high temperature (310 degree F) alarms will remain so that, if desired, the operator may shutdown t fans manually.													
	Additionally, the design ch detection cabinets from eac of class 1E circuits within Regulatory Guide 1.75 separ class 1E power systems.	ange will provide cl h respective ESF div the fire detection ation requirements a	ass 1 ision cabin nd re	E p i. iets stai	ower to This ex will m in prote	the f clusiv leet ction	ire e us of	se						
F.	SAFETY ASSESSMENT													
	A common mode failure of th during accident conditions the SGTS filter fans. The justified on the following	circui train lock is	try is of	f										
	The purpose of the temperature detection circuit was to sense a high temperature in the charcoal bed and provide an initial alarm at 255 degrees F and an alarm and trip of the SGTS filter fans at 310 degrees F. This is typically done to satisfy concerns for non-mechanistic fires occurring in charcoal beds. Since there is no credible means for fire in the charcoal beds, there is no fire protection requirement for an automatic trip of the fan. This is supported by the fact that the heater elements in the filter train are sufficiently located away from the charcoal, there are no transient combustibles postulated in this area which would produce a fire, and the decay heat created by radio-iodine loadings are not sufficient to cause any significant temperature increases. The deletion of the interlock would not preclude the alarms at 255 degrees F and 310 degrees F which are well below the ignition temperature of the charcoal (626 degrees F). Also, upon actuation of the alarms, manual shutdown of the fans could be initiated if desirable. The deletion of this interlock would not affect initiation of the fire suppression system for the charcoal bed as it is currently manually													

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MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

P. O. BOX 1640, JACKSON, MISSISSIPPI 39215-1640

July 3, 1986

O. D. KINGSLEY, JR. VICE PRESIDENT - NUCLEAR OPERATIONS

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

Gentlemen:

SUBJECT: Grand Gulf Nuclear Station Unit 1 Docket No. 50-416 License No. NPF-29 File: 0260/L-835.0 Nonqualified Relay Could Cause Loss of SGTS Safety Function LER 86-020-00 AECM-86/0200

Attached is Licensee Event Report (LER) 86-020-00 which is a final report.

Yours truly,

Sem HHobbs for Oliver D. Kingsley

ODK:vog Attachment

cc: Mr. T. H. Cloninger (w/a) Mr. R. B. McGehee (w/a) Mr. N. S. Reynolds (w/a) Mr. H. L. Thomas (w/o) Mr. R. C. Butcher (w/a)

> Mr. James M. Taylor, Director (w/a) Office of Inspection & Enforcement U. S. Nuclear Regulatory Commission Washington, D. C. 20555

Dr. J. Nelson Grace, Regional Administrator (w/a) U. S. Nuclear Regulatory Commission Region II 101 Marietta St., N. W., Suite 2900 Atlanta, Georgia 30323

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