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T.A. Sullivan  
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October 2, 2002  
JAFP-02-0195

United States Nuclear Regulatory Commission  
Attn: Document Control Desk  
Mail Station P1-137  
Washington, D.C. 20555

**Subject: James A. FitzPatrick Nuclear Power Plant  
Docket No. 50-333**

**10 CFR Part 21 Notification  
EC-1 Overcurrent Sensors Failed Prematurely**

Dear Sir:

This report is being submitted in accordance with 10CFR21.21(d) to address a reportable defect. The defect deals with EC-1 overcurrent sensors for a safety related circuit breaker. The defect was discovered after two overcurrent sensors withdrawn from warehouse stock failed during bench testing in preparation for installation in the plant during the upcoming refueling outage. The failure mode was premature tripping of the magnetic (instantaneous) element of the device, such that the associated circuit breaker would have tripped early and the corresponding loads would not have remained energized to perform their required safety function.

The only application of these specific EC-1 overcurrent sensors would have been in a circuit breaker used in cubicle 71-11510, which is the emergency bus feeder breaker providing 600 VAC power to Motor Control Center (MCC)-151. Electrical loads powered from this MCC include various safety systems such as the Standby Gas Treatment System (SBGT), Residual Heat Removal System (RHR) and High Pressure Coolant Injection System (HPCI). The loss of the MCC could have resulted in the failure of SBGT to perform its safety function. See the Attachment for specific details.

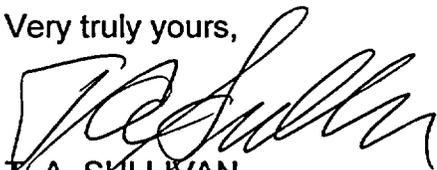
There are no commitments contained in this report.

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Questions concerning this report may be addressed to Mr. Timothy Page at (315) 349-6209.

Very truly yours,



T. A. SULLIVAN

TAS:TP:dmr  
Attachment

cc: USNRC, Region 1  
USNRC, Project Directorate  
USNRC Resident Inspector  
INPO Records Center  
General Electric Nuclear

I. Name and Address

Mr. T. A. Sullivan – Vice President, Operations  
Entergy Nuclear Operations, Inc.  
James A. FitzPatrick Nuclear Power Plant  
P.O. Box 110  
Lycoming, NY 13093

II. Facility, Activity or Component

James A. FitzPatrick Nuclear Power Plant (JAF)

The components in question are EC-1 overcurrent sensors for a safety related circuit breaker. Two overcurrent sensors removed from stock for bench testing tripped prematurely.

GE Model Type EC-1 Trip Device  
225 Amp, 60 Cycle  
Sensor Trip, Characteristic 1B-2C  
GE P/N QEC10225ABCG10N00  
Serial Nos. 77386-3A and 77386-3B

III. Constructor or Supplier

General Electric Nuclear  
M/C 397  
175 Curtner Ave.  
San Jose, CA 95125

IV. Defect and Safety Hazard

A Condition Report (CR-JAF-2002-03255) identified that two new EC-1 overcurrent sensors withdrawn from warehouse stock failed during bench testing in preparation for installation in the plant during the upcoming refueling outage. The failure mode was premature tripping of the magnetic (instantaneous) element of the device, such that the associated circuit breaker would have tripped early. The only application of these specific EC-1 overcurrent sensors is in the circuit breaker used in cubicle 71-11510, which is the emergency bus feeder breaker providing 600 VAC power to Motor Control Center (MCC)-151. Electrical loads powered from this MCC include various safety systems such as the Standby Gas Treatment System (SBGT), Residual Heat Removal System (RHR) and High Pressure Coolant Injection System (HPCI).

IV. Defect and Safety Hazard (continued)

The test information indicates that the circuit breaker would have prematurely tripped based on the starting current of the 'A' SBGT Exhaust Fan and thus the associated MCC would not have remained energized. Assuming a concurrent single failure of the 'B' SBGT subsystem, this could have resulted in the loss of both subsystems and the failure of SBGT to perform its safety function. Therefore, a substantial safety hazard existed in that the potential existed for a major deficiency/major degradation of essential safety-related equipment.

No other safety functions would have been lost.

V. Date

This defect was discovered on August 27, 2002.

VI. Location and Number of Defective Components

The only application of these specific EC-1 overcurrent sensors would have been in a circuit breaker used in cubicle 71-11510, which is the emergency bus feeder breaker providing 600 VAC power to MCC-151. The spare overcurrent sensors that failed had been in parts inventory for approximately 2 years. There are no other spares in the JAF stock system.

The overcurrent sensors currently installed in the plant were tested satisfactorily prior to installation and have not demonstrated the failure mechanism described in this letter (i.e., SBGT System testing which involves starting the 'A' SBGT Exhaust Fan has not resulted in breaker tripping).

VII. Corrective Action

The defective components were placed in a "hold" status to prevent issuance in the plant. Corrective Action Request 02-111 was issued to General Electric for evaluation and corrective action, with a requested response date of October 21, 2002.

VIII. Advice

None.