

No retraction

05/20/2004

U.S. Nuclear Regulatory Commission Operations Center Event Report

Page 1

Power Reactor

Event # 37839

Site: SUSQUEHANNA		Notification Date / Time: 03/14/2001 18:02 (EST)				
Unit: 2	Region: 1	State: PA	Event Date / Time: 03/14/2001 15:08 (EST)			
Reactor Type: [1] GE-4,[2] GE-4		Last Modification: 05/14/2001				
Containment Type: MARK II MARK II						
NRC Notified by: ROBERT R. BOESCH		Notifications: PETE ESELGROTH R1				
HQ Ops Officer: STEVE SANDIN						
Emergency Class: NON EMERGENCY						
10 CFR Section:						
50.73(a)(1) INVALID SPECIF SYSTEM ACTUATION						
Unit	Scram Code	RX Crit	Init Power	Initial RX Mode	Curr Power	Current RX Mode
2	N	No	0	Refueling	0	Refueling

UNIT 2 EXPERIENCED AN UNEXPECTED LOSS OF SHUTDOWN COOLING DUE TO TRIPPING OF VARIOUS POWER SUPPLY BREAKERS

"Unit 2 was in Mode 5 on the fifth day of its 10th Refuel and Inspection Outage. At 1508 hours, the unit experienced an unexpected loss of Division 1 RPS Power supply. The loss of power was a result of the Electrical Protection Assembly (EPA) A & C breakers and motor generator output breaker tripping. The cause is under investigation.

"The loss of power caused the RHR Shutdown Cooling suction valve HV251F009 to close. This is a common suction valve to both divisions of RHR and resulted in the complete loss of RHR Shutdown Cooling. The reactor currently has its head removed with the reactor cavity flooded up with the gates to the spent fuel pool removed. A Supplemental Decay Heat Removal system was in service at the time, but was not considered fully capable of decay heat removal. Reactor coolant temperature increased less than 2 degrees during the 37 minutes SDC was out of service. The RPS power supply was switched to its alternate supply and SDC was restored at 1545 hours. In accordance with 10CFR50.72(b)(3)(v) this represents a loss of a safety system which removes residual heat and requires an 8 hour ENS call. In addition to the isolation of RHR SDC, RWCU isolated due to containment valve HV244F001 closing, and Unit 2 HVAC Zone 3 (refuel floor) isolated. These isolations constitute an actuation of a Containment Isolation signal that affected multiple systems, and is reportable per 10CFR50.72(b)(3)(iv)(A)."

Peak temperature after losing SDC was 105 degrees. The licensee informed the NRC resident inspector.

\*\*\*\*\* UPDATE RECEIVED AT 1542 ON 05/15/01 FROM GORGON E. ROBINSON TO LEIGH TROCINE \*\*\*\*\*

The licensee is updating this event notification to change the event reporting requirements from an 8-hour event notification to a 60-day notification of invalid system actuations. The following text is a portion of a facsimile received from the licensee:

B-13

Power Reactor

Event # 37839

"ENS Notification # 37839 documented that the loss of the Unit 2 Division 1 RPS power supply on 3/14/01 required an 8-hour ENS notification for actuation of a containment isolation signal that affected multiple systems and a loss of a safety function required to remove residual heat (10CFR50.72(b)(3)(iv)(A) and 10CFR50.72(b)(3)(v)(B), respectively). After subsequent evaluation of the event, the reportability determination is being changed to retract the 8-hour notification and provide the required a 60-day ENS notification for an invalid actuation that affected multiple systems. See the discussion below."

"The initial condition was reported per 10CFR50.72(b)(3)(v)(B), loss of safety function that is needed to remove residual heat. A subsequent review of the event and reporting requirements by PPL has concluded that the event is not reportable per this section of the rule. In this case, the 37-minute interruption did not and would not have prevented the fulfillment of the RHR shutdown cooling function."

"The original notification stated that an actuation of a containment isolation signal that affected multiple systems was reportable as an 8-hour ENS notification per 10CFR50.72(b)(3)(iv)(A). For this event, a half-scrum while the unit was shutdown, was the result of an invalid signal since it was due to loss of RPS power. Except for critical scrams, invalid actuations are not reportable by telephone under 10CFR50.72. Therefore, this 60-day optional report, as allowed by 10CFR50.73(a)(1), is being made under the reporting requirement in 10CFR50.73(a)(2)(iv)(A) to describe an invalid actuation of general containment isolation signals affecting isolation valves in more than one system."

"At 15:08 on March 14, 2001, with Unit 2 in Mode 5 at 0% power, the primary power supply to the 'A' Reactor Protection System (RPS) power distribution panel was lost when the Motor-Generator (MG) Set generator in that division failed. This resulted in Primary Containment Isolation System actuations including isolation of [a] Residual Heat Removal shutdown cooling suction valve and other automatic system initiations. RPS as well as other plant systems functioned as designed in response to the event. The 'A' RPS distribution panel was swapped to alternate power, and all isolations were reset by 16:10. The loss of power was due to a failure of the 'A' RPS M-G set generator. The generator failed due to a manufacturing defect of an internal conductor connection. The failed generator was replaced, and other like-in-kind generators will be inspected. There were no safety consequences or compromises to the health or safety of the public. This event has been entered into the site-specific corrective action program for resolution. Internal and industry events were reviewed to assess if a generic problem exists with this type of generator. No evidence of similar failures was found, which indicates that a generic problem does not exist."

"The NRC site Resident Inspector has been notified." The NRC operations officer notified the R1DO (Rogge)

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