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United States Nuclear Regulatory Commission  
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**SPECIAL REPORT 354/05-001-01  
HOPE CREEK GENERATING STATION  
FACILITY OPERATING LICENSE NPF-57  
DOCKET NO. 50-354**

Special Report 354/05-001-00 was submitted on February 16, 2005 pursuant to the requirements of Hope Creek Technical Specification (TS) 3.3.7.5, "Accident Monitoring Instrumentation" Action 81, due to the Filtration, Recirculation and Ventilation System (FRVS) radiation monitoring system (RMS) being inoperable for greater than 72 hours. This supplement provides information with respect to the cause of failure and channel restoration.

On February 2, 2005 at 0807, TS 3.3.7.5 was entered due to the FRVS RMS being inoperable. TS 3.3.7.5, Action 81 requires that "With the number of OPERABLE accident monitoring instrumentation channels less than required by the Minimum Channels OPERABLE requirement, either restore the inoperable channel(s) to OPERABLE status within 72 hours, or: (a) Initiate the preplanned alternate method of monitoring the appropriate parameter(s), and (b) Prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status."

The preplanned alternate method of sampling was implemented within the 72 hours required by the technical specification; however the accident monitoring channel could not be returned to operable status within the required 72 hours due to the catastrophic failure of the flow control electronic circuit board.

During a scheduled surveillance, it was found that the FRVS effluent sample pump failed to start as expected. Troubleshooting of the control circuit found the flow control circuit card with shorted components. Further troubleshooting of the circuit found the linear mass flow meter, a diode, a solid-state relay, and an alarm circuit card with shorted components. Attempts to repair these components were unsuccessful. The board was returned to the Manufacturer (KURZ); however, due to the condition of the failed board, a specific failure mode for the board could not be discerned. Although a definitive cause for the failed circuit could not be determined, it is believed that this event was caused by a failed diode across

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the solid- state relay (possibly caused by a high voltage spike) that subsequently propagated failures of the other components.

The failure to restore the channel to operable status was due to lack of available parts. The flow control electronics are obsolete and there were no spare part available. Replacement components were received, installed and tested successfully. TS Action Statement TSAS 05-083 was exited at 17:25 on February 23, 2005 following post maintenance testing.

Technical Specifications compensatory actions remained in effect until the channel was returned to operable status.

Should there be any questions regarding this matter please contact R. Yewdall at 856-339-2469.

Sincerely,



Michael J. Massaro  
Plant Manager – Hope Creek

RFY

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