



Serial: RNP-RA/06-0059
JUN 29 2006

United States Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261/LICENSE NO. DPR-23

TECHNICAL SPECIFICATIONS SECTION 5.6.6 POST ACCIDENT MONITORING
INSTRUMENTATION REPORT FOR THE PRESSURIZER SAFETY VALVE INDICATION

Ladies and Gentlemen:

Carolina Power and Light Company, also known as Progress Energy Carolinas, Inc., hereby provides a report in accordance with H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2, Technical Specifications (TS) Section 3.3.3, Post Accident Monitoring (PAM) Instrumentation, and TS 5.6.6, Post Accident Monitoring (PAM) Instrumentation Report.

The report, which is provided as an attachment to this letter, is based on the failure of a position monitor for one of the three pressurizer safety valves.

If you have any questions concerning this matter, please contact C. T. Baucom at (843) 857-1253.

Sincerely,

A handwritten signature in cursive script that reads 'J. F. Lucas'.

J. F. Lucas
Manager – Support Services – Nuclear

Attachment

JFL/cac

c: Dr. William D. Travers, NRC, Region II
NRC Resident Inspector, HBRSEP
C. P. Patel, NRC, NRR

Progress Energy Carolinas, Inc.
Robinson Nuclear Plant
3581 West Entrance Road
Hartsville, SC 29550

A 001

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

TECHNICAL SPECIFICATIONS SECTION 5.6.6 POST ACCIDENT MONITORING INSTRUMENTATION REPORT FOR THE PRESSURIZER SAFETY VALVE INDICATION

Event Description

At approximately 1813 hours on June 12, 2006, during a thunderstorm at H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2, an alarm was received in the control room that indicated a pressurizer safety valve or pressurizer power operated relief valve could be open. Observation of indications on the control board indicated that two of the three pressurizer safety valves (RC-551B and RC-551C) acoustic monitors had actuated. Based on review of other available indications, it was determined that no safety valves had opened. The alarms that had spuriously indicated that the valves had opened were reset, but the low alarm for RC-551C would not reset. A work request was initiated and the position monitor for pressurizer safety valve RC-551C was declared inoperable.

The actions for Technical Specifications (TS) Section 3.3.3, Post Accident Monitoring (PAM) Instrumentation, Table 3.3.3-1, Function 24, requires an inoperable pressurizer safety valve position monitor to be restored to operable status within 7 days. If this indication is not restored within 7 days, a report in accordance with TS 5.6.6 is required within the following 14 days. TS 5.6.6 states that the report shall outline the preplanned alternate method of monitoring, the cause of the inoperability, and the plans and schedule for restoring the channel to operable status. The Plant Nuclear Safety Committee (PNSC) has reviewed the Corrective Action Program investigation for this event in accordance with the Updated Final Safety Analysis Report requirements for PNSC review of reportable events.

Preplanned Alternate Method of Monitoring

The back-up method of position indication consists of a temperature element on the downstream piping for each safety valve and the pressurizer relief tank (PRT) pressure indicator. These parameters are logged and printed hourly in the control room by the Emergency Response Facility Information System (ERFIS) computer and are periodically reviewed by control room personnel. Additionally, alarms are provided in the control room for PRT pressure, temperature, and level, and for the safety valve downstream piping temperature.

The TS Bases for TS 3.3.3, as it pertains to the pressurizer safety valve position monitoring channels, states:

“The consequence of a failure of relief and safety valves to close is a loss of coolant and depressurization of the RCS. A positive indication of the position of these valves can aid the operator in diagnosing a failure and in taking appropriate corrective action. Thus, the consequences of a failure of these valves can be reduced if the operator can reliably determine that a valve has failed to close.

“Each pressurizer safety valve is equipped with a single acoustical position indication system, which is seismically qualified and powered from an emergency power source, to provide the direct (primary) means of valve position indication. This system alarms in the control room to indicate an open safety valve.”

As stated by the TS Bases, the pressurizer safety valve position indication is a diagnostic indication. This monitoring capability does not directly impact safety systems or the ability to mitigate the consequences of an accident. The pressurizer safety valves, unlike the pressurizer power operated relief valves, cannot be isolated. Therefore, the ability to determine the specific safety valve that is leaking or that has failed does not directly result in the ability to stop a reactor coolant system leak via this path.

Cause of the Inoperability

This event has been entered into the HBRSEP, Unit No. 2, Corrective Action Program. Similar malfunctions of this type have previously occurred. One past event that appears to have been similar to the current RC-551C monitor malfunction was described in a report dated August 6, 1997. During the 1997 event, the position monitor for RC-551C became inoperable during a thunderstorm. In a supplemental report dated June 30, 1998, it was stated that the cause of the inoperability could not be definitely determined. For the current event, an action has been initiated in the HBRSEP, Unit No. 2, Corrective Action Program to develop and track to completion an action plan to resolve the long-term issue of the RC-551C acoustic monitoring system susceptibility to lightning.

Plans and Schedule for Restoring the Channel

During the investigation of the current RC-551C pressurizer safety valve position monitor malfunction, it was determined that the failure had most likely occurred in the accelerometer or the preamplifier for the monitoring circuit. Both the accelerometer and the preamplifier are inside the containment. Based on personnel safety and radiation exposure considerations, and the understanding that post-maintenance testing of this monitor is not practical while the unit is operating, it has been judged that repair of the failed channel is not practical during reactor power operation and with the reactor coolant system at or near normal operating conditions. Therefore, it is currently planned that repairs of the RC-551C pressurizer safety valve position monitor will be completed prior to restart from the next refueling outage, which is currently scheduled to begin on April 7, 2007, or during an outage of sufficient duration if one were to occur prior to that time.