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Gentlemen: ULNRC- 2343

CALLAWAY PLANT
DOCKET NUMBER 50-483
GENERIC LETTER 90-06

On June 25, 1990, the NRC issued Generic Letter (GL) 90-06, "Resolution of Generic Issue 70, 'Power-Operated Relief Valve and Block Valve Reliability', and Generic Issue 94, 'Additional Low-Temperature Overpressure Protection For Light Water Reactors', Pursuant to 10 CFR 50.54 (f)". The generic letter required PWR licensees to advise the NRC staff, under oath or affirmation within 180 days of the date of this letter, of our current plans relating to pressurizer power operated relief valves (PORVs) and block valves and to low-temperature overpressure protection.

Union Electric will follow the staff positions presented in Enclosures A and B of the generic letter as discussed below. Enclosure A of GL 90-06 requests the following:

"1. Include PORVs and block valves within the scope of an operational quality assurance program that is in compliance with 10 CFR Part 50, Appendix B. This program should include the following elements:

a. The addition of PORVs and block valves to the plant operational Quality Assurance List.

b. Implementation of a maintenance/refurbishment program for PORVs and block valves that is based on the manufacturer's recommendations or guidelines and is implemented by trained plant maintenance personnel.

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c. When replacement parts and spares, as well as complete components, are required for existing non-safety grade PORVs and block valves (and associated control systems), it is the intent of this generic letter that these items may be procured in accordance with the original construction codes and standards".

At the Callaway Plant the PORVs and block valves are safety-related as described in sections 5.4 and 3.11(B) of the Final Safety Analysis Report (FSAR). This classification subjects the PORVs and block valves to the Callaway Quality Assurance Program. They were designed in accordance with the ASME code and are qualified via the Westinghouse pump and valve operability program which is described in Section 3.10(N) of the FSAR.

The maintenance/refurbishment program for the PORVs and block valves is based on the manufacturer's recommendations. Replacement parts and spares are processed in accordance with the original construction codes and standards.

Item 2 of Enclosure A requests that licensees:

"2. Include PORVs, valves in PORV control air systems, and block valves within the scope of a program covered by Subsection IWV, 'Inservice Testing of Valves in Nuclear Power Plants,' of Section XI of the ASME Boiler and Pressure Vessel Code. Stroke testing of the PORVs should only be performed during Mode 3 (Hot Standby) or Mode 4 (Hot Shutdown) and in all cases prior to establishing conditions where the PORVs are used for low-temperature overpressure protection. Stroke testing of the PORVs should not be performed during power operation. Additionally, the PORV block valves should be included in the licensees' expanded MOV test program discussed in NRC Generic Letter 89-10, 'Safety-Related Motor Operated Valve Testing and Surveillances, dated June 28, 1989".

At Callaway, the PORVs are full stroke tested at a cold shutdown frequency in accordance with the Inservice Test Program (IST) and Callaway Technical Specifications 4.4.4.1, 4.4.4.2, 4.4.9.3.1, and 4.0.5. Additionally, the PORV block valves are

stroke tested quarterly in accordance with the Technical Specifications and have been included in our expanded MOV test program as required by NRC GL 89-10, "Safety-Related Motor Operated Valve Testing and Surveillance".

Item 3 of Enclosure A states:

> "3. For operating PWR plants, modify the limiting conditions of operation of PORVs and block valves in the technical specifications for Modes 1, 2, and 3 to incorporate the position adopted by the staff in recent licensing actions. Attachments A-1 through A-3 are provided for guidance. The staff recognizes that some recently licensed PWR plants already have technical specifications in accordance with the staff position. Such plants are already in compliance with this position and need merely state that in their response. These recent technical specifications require that plants that run with the block valves closed (e.g., due to leaking PORVs) maintain electrical power to the block valves so they can be readily opened from the control room upon demand. Additionally, plant operation in Modes 1, 2, and 3 with PORVs and block valves inoperable for reasons other than seat leakage is not permitted for periods of more than 72 hours."

Attachment A-1 proposes a technical specification for Combustion Engineering and Westinghouse Plants with two PORVs. A request to ammend Callaway Technical Specification 3.4.4 will be submitted per Attachments A-1 and A-3 as follows:

1) ACTION a will require that power be maintained to closed block valves;

2) ACTIONS a, b, and c will be changed to terminate the forced shutdown requirements with the plant being in HOT SHUTDOWN rather than COLD SHUTDOWN because the APPLICABILITY requirements of the LCO do not extend past the HOT STANDBY mode; and,

3) ACTION d will be modified to establish remedial measures that are consistent with the function of the block valves with the following exception:

   Attachment A-3 states that the OPERABILITY of the PORVs is based, in part, on their being able to automatically control reactor coolant system

pressure to reduce challenges to the safety valves. However, Westinghouse standards for transient and accident analyses state that control systems are not assumed to operate unless their operation will cause the results of the transient or accident analysis to be more severe. In keeping with Westinghouse standards, the Callaway accident analyses do not rely on automatic actuation of the PORVs to prevent overpressurization. Therefore, Callaway Technical Specification 3/4.4.4, "Relief Valves," is adequate to ensure that the PORVs are available for manual operation for mitigation of a steam generator tube rupture accident and achieving plant cooldown in accordance with Branch Technical Position RSB 5-1 to Standard Review Plan Section 5.4.7.

The Callaway Technical Specification surveillance requirements for the PORVs and block valves do not need to be changed because:

1) the IST Program requires full stroke testing of the PORVs at a cold shutdown frequency and full stroke testing of the block valves every 3 months (The Callaway IST Program has been approved by NRC);

2) there are no pneumatic components associated with the PORVs or block valves; and,

3) the Callaway PORVs and block valves were originally designed as safety-related components. Therefore, their normal power supplies are from 1E busses with no emergency power supply transfer required.

In Enclosure B of GL 90-06, the Staff provides an extended discussion of positions resulting from the resolution of Generic Issue 94, "Additional Low-Temperature Overpressure Protection For Light-Water Reactors". Low temperature overpressure protection is discussed in subsections 5.2.2.10 and 5.2.2.11 of the FSAR.

At Callaway, the operability of two PORVs, or two RHR suction relief valves, or a reactor coolant system vent opening of at least 2 square inches ensures that the RCS will be protected as required by 10CFR50, Appendix G. Either PORV or either RHR suction relief valve has been shown by plant specific analysis to have adequate relieving capability to protect the RCS from overpressurization when the transient is limited to either:

1) the start of an idle reactor coolant pump (RCP) with the secondary water temperature of the steam generator less than or equal to 50°F above the RCS cold leg temperatures, or

2) the start of a single centrifugal charging pump and its injection into a water-solid RCS.

In addition, Callaway has deleted the Auto Closure Interlock (ACI) Function as part of Callaway License Amendment 42. The deletion of the ACI circuitry helps to insure the availability of the RHR suction relief valves to provide cold overpressure protection.

Union Electric believes that the protection provided by the PORVs and/or RHR suction relief valves in addition to the limitations on safety injection pump operability, starting of RCPs and other administrative controls are adequate to meet the intent of GL 90-06 (i.e., to minimize the potential for cold overpressurization events).

Union Electric is cooperating with six other utilities in developing a common approach to GL 90-06, Enclosure B. The plants involved in this effort are: Wolf Creek, Vogtle, Comanche Peak, Millstone 3, Seabrook, Byron, Braidwood, and Callaway. A joint effort is possible due to the similarity of plant types and technical specifications. All the plants are Westinghouse PWRs which utilize the PORVs and RHRS suction relief valves for low-temperature overpressure protection.

Callaway Plant Cold Overpressure Technical Specification 3.4.9.3 currently allows use of either the PORVs or RHR suction relieve valves. A sample specification for this configuration was not provided in the GL. A revised Technical Specification which reflects this configuration will propose a 24-hour allowed outage time when only one means of cold overpressure protection is available. The proposed Technical Specifications will require that at least two of these devices must be operable. That is, 2 PORVs or 2 RHR Suction Relief Valves or 1 PORV and 1 RHR Suction Relief Valve must be operable when cold overpressure protection is required.

For Callaway, the overpressure protection system is required to be operable in Mode 3 below 368°F and in modes 4, 5 and 6. An additional ACTION statement will be proposed to address Mode 3 (below 368°F) and Mode 4 when only one pressure relief device is operable. This is consistent with GL 90-06 Attachment B-1. No changes to the surveillance requirement are required.

Union Electric anticipates that a revision to Callaway Technical Specifications 3/4.4.4, Relief Valves and 3.4.9.3, Overpressure Protection System will be submitted by the end of the first refueling outage that starts six months or later from the date of the Generic Letter (Spring, 1992).

Very truly yours,

Donald F. Schnell

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STATE OF MISSOURI)
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CITY OF ST. LOUIS)

Donald F. Schnell, of lawful age, being first duly sworn upon oath says that he is Senior Vice President-Nuclear and an officer of Union Electric Company; that he has read the foregoing document and knows the content thereof; that he has executed the same for and on behalf of said company with full power and authority to do so; and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

By Donald F. Schnell
Donald F. Schnell
Senior Vice President
Nuclear

SUBSCRIBED and sworn to before me this 18th day of December, 1990.

Barbara J. Pfaff

BARBARA J. PFAFF
NOTARY PUBLIC, STATE OF MISSOURI
MY COMMISSION EXPIRES APRIL 22, 1993
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