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DUANE ARNOLD ENERGY CENTER

Iowa Electric Light and Power Company

Licensee Event Report - Supplemental Data

Docket No. 050-0331

Licensee Event Update Report Date: April 23, 1982

Reportable Occurrence No: 80-054

Event Description:

At 1613 hours during a normal reactor startup on November 10, 1980 with reactor power at 7%, a higher than normal temperature indication was noted in the discharge line from main steam pressure relief valve PSV-4405. In an attempt to reseal the valve and stop the valve from leaking, operations personnel manually cycled the valve at rated pressure. The relief valve stuck in the open position and remained open for approximately 7.5 minutes. Reactor pressure dropped rapidly causing the reactor to automatically scram due to MSIV closure from low main steam line pressure (less than 880 psig while the reactor mode switch was in the RUN position). Reactor water level reached a low of 7.5 inches below instrument zero. (150.5 inches above the top of the active fuel) The reactor water level was restored without need for ECCS initiation and the reactor was subsequently placed in cold shutdown.

Relief valve PSV-4405 is a Target Rock Model 67F-6X10 valve. No similar event reports have been submitted.

Cause Description:

The failed valve pilot assembly was removed and shipped to Wyle Laboratories in Huntsville, Alabama for disassembly and inspection. No cause for the pilot assembly failure was found. The pilot and second stage discs were replaced by Target Rock. The pilot seat required machining. The second stage seat was replaced. The valve was reassembled, tested and did not meet the requirements. Further examination resulted in replacement of the second stage piston liner and machining of the new pilot and second stage discs. The valve pilot was again tested and met all test requirements.

Corrective Action:

A spare pressure relief valve pilot assembly, identical to the failed Target Rock relief valve pilot assembly was sent to Wyle Laboratories. This second pilot assembly was reworked, setpoint tested, and returned to DAEC for use on PSV-4405. The failed valve pilot assembly was repaired by Wyle Laboratories and returned to DAEC.

At 1000 hours on November 15, 1980, the plant was restarted and PSV-4405 performed satisfactorily.