

DUKE POWER COMPANY
OCONEE UNIT 3

Report No.: AO-287/74-6

Report Date: November 12, 1974

Occurrence Date: October 29, 1974

Facility: Oconee Unit 3, Seneca, South Carolina

Identification of Occurrence: Low Pressure Injection System Sample Line Failure

Conditions Prior to Occurrence: Unit in Cold Shutdown

Description of Occurrence:

On October 29, 1974, an Oconee Unit 3 utility operator discovered a leak in the Low Pressure Injection System piping in the decay heat removal room. The leak was from a common sample line for the A and B low pressure injection discharge headers. The isolation valve for the operating A header, 3LP-38, was closed while the isolation valve 3LP-39 for the idle header was open because sampling was in progress. Valve 3LP-39 was closed to isolate the B header and stop the leakage. Approximately 40 gallons of water had gravity drained from the B discharge header.

Designation of Apparent Cause of Occurrence:

The leak occurred approximately two inches from the A header isolation valve. The piping, 3/8 inch stainless steel, appears to have failed due to vibration of the low pressure injection discharge header.

Analysis of Occurrence:

Oconee Unit 3 was in a cold shutdown condition with the A Low Pressure Injection (LPI) System operating in the decay heat removal mode. The leak in the sample line did not affect operation of the operating LPI train and was isolable from the idle train. The small size of the piping involved would not have affected the decay heat removal operation nor operation of the system in the unlikely event of an Engineered Safeguards actuation. This sample line is normally isolated except when sampling is in progress. It is concluded that this occurrence did not affect the health and safety of the public.

Corrective Action:

The sample line has been repaired and a coil added to absorb vibrational stress. A design evaluation is underway to determine the best solution for eliminating vibratory problems in the LPI System during operation in the decay heat removal mode.

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