

ATTACHMENT TO LICENSEE EVENT REPORT 75-048/03X-2
COMMONWEALTH EDISON COMPANY (CWE)
DRESDEN UNIT-2 (ILDRS-2)
DOCKET #050-237

On October 7, 1975 at approximately 1500 hours, a local leak-rate test was being conducted on the volume bounded by air-operated valves 1601-21, -22, -55, -56, and manual valve 8502-501. The local leak-rate test had been initiated upon discovery of a cracked seat on valve 1601-22. The test failed, and the subsequent inspection revealed a through-wall crack on line 1604-18". The crack occurred at the tee connection of lines 8503-8" and 1604-18". It extended 180° around the 8" connection on the 18" line, crossing the welded intersection and extending approximately 7" along the 8" line.

It is believed that the crack occurred during the drywell inerting process on Oct. 1, 1975. The heating steam boilers, which vaporize the liquid nitrogen before admission to the drywell, failed temporarily. This allowed liquid nitrogen to pass through the vaporizer and the nitrogen inerting line into 1604-18". The impingement of liquid nitrogen on the tee connection of the two lines caused rapid and uneven contraction, resulting in through-wall cracking.

The immediate corrective action was initiation of an orderly unit shutdown, an extensive magnetic particle examination of the pertinent lines, and replacement of a twenty-inch section of line 1604-18".

A thermocouple and strip chart recorder were installed on the vaporizer discharge to facilitate rapid isolation of the vaporizer in the event of a similar failure. A special operating procedure for start-up has been written, adding precautionary measures to the existing inerting procedure. The new procedure requires:

- 1) that all heating steam boiler alarms are cleared before inerting:
- 2) that personnel must monitor the temperature recorder during inerting:
- 3) that line temperature will be maintained above an established limit

Since this new procedure has proven to be effective in preventing a recurrence of the pipe failures and the ACAD/CAM system will soon be operable, N₂ Inerting Mod's 12-2-75-102 and 12-3-75-92, which would move valves PCV-2-8520 and 2-8503-500 in Unit 2 and PCV-3-8520 and 8503-500 in Unit 3 approximately 20 feet upstream from present location, and Mod 12-2/3-75-50, installation of shutoff temperature control downstream of nitrogen purge vaporizer, were cancelled.