

As discussed in a letter to ConEd dated August xx, 2000, [Reference 13: NRC special inspection report from Region 1], the NRC staff concluded that ConEd's technical direction and execution of the 1997 steam generator inspection were deficient in several respects. ConEd took no action after identifying, for the first time, a new and significant degradation mechanism (i.e., PWSCC) in the apex region of a row 2 tube. They should have recognized the significance of this flaw and initiated actions to reassess previous assumptions made about the condition of the low row, small radius tubes. Simple actions, such as in situ pressure testing and reanalysis of eddy current data from the U-bends, were not undertaken. **Nor did they recognize or acknowledge that the amount of noise present in the 1997 eddy current data for the low row, small radius tubes could mask a large flaw. This noise level did in fact mask several PWSCC flaws, one of which resulted in the February 15, 2000 tube failure.** The staff observed several other areas of weakness in ConEd's technical management of its steam generators such as analyst training and eddy current probe calibration. These other deficiencies in and of themselves did not directly cause the February 15, 2000 tube failure. They are additional observations the staff made during the special inspection and are discussed fully in the August xx, 2000 letter.

3.5 Proposed Corrective Actions

3.5.1 Failure Mechanism

As previously discussed, the failure mechanism for R2C5 was PWSCC. The potential for PWSCC was increased as a result of abnormal stress levels induced by hourglass deformation of the uppermost support plate flow slots which was, in turn, caused by denting.

The licensee's proposed corrective action is to plug all row 2 tubes, irrespective of whether they were found to contain indications during the inspection. Abnormal stress levels due to hourglass deformation extend beyond row 2, but generally attenuate with increasing row number. The proposed corrective action is not intended to eliminate (correct) abnormal stress levels existing beyond row 2, but simply to remove from service those tubes most likely to contain significant, but undetected flaws (i.e., row 2 tubes) which could potentially impair tube integrity during the requested four month operating interval. The licensee's operational