

4.5.2.b.1. As stated previously, the unit has been operating under a NOED granted by the staff on May 23, 1997. The staff has been reviewing the licensee's request for an exigent amendment; however, this recent shutdown occurred before the staff could complete its review of that request. Approval of the licensee's May 24, 1997, exigent amendment request would have precluded the need for this emergency request. ComEd anticipates that the equipment will be repaired and Unit 1 will be ready to commence heatup at 0000 (CDT) on June 2, 1997. Therefore, ComEd requested that the pending exigent amendment request for Byron, Unit 1, be approved as an emergency amendment request. The technical justification for this emergency amendment request for Byron, Unit 1, is identical to Attachment A of the May 24, 1997, exigent amendment request.

2.0 EVALUATION

TS 4.5.2.b.1 requires that the ECCS pump casings and discharge piping high points outside of containment be vented at least once per 31 days. The ECCS is comprised of the CV pumps, Safety Injection (SI) system pumps, Residual Heat Removal (RH) pumps and associated piping. The SI and RH pumps are provided with pump casing vents. The CV pumps are of a self-venting design with both suction and discharge piping on the top of the pump casing. No casing vents were provided with the CV pumps in this design. The ECCS discharge piping for Byron, Unit 1, is provided with vents located at high points throughout the system; both inside and outside containment.

During power operations, one CV pump is in operation and the other pump is in standby. The operating pump is continuously vented via flow through the system. The non-operating pump is designed to be self-venting since both the suction and discharge piping are located at the top of the pump casing. The discharge piping containing the high point vent (1/2SI045) is at full CV pump discharge pressure and, therefore, it is not appropriate from an equipment reliability and personnel safety standpoint to open the valve for venting purposes.

By letters dated March 17, 1989, August 25, 1989, March 12, 1990, and June 10, 1991, ComEd submitted a TS amendment request to discontinue the performance of the venting SR for the ECCS piping inside containment for Byron. The staff reviewed and approved that request in the Safety Evaluation (SE) related to Amendment No. 47 for each of the Byron Units, dated June 22, 1992.

In the submittals, the licensee provided results of water hammer analyses that were performed to support the proposed changes. Based on their analyses, the licensee concluded that if air is present in the ECCS piping inside containment, the system is capable of withstanding the resulting water hammer event. However, the Illinois Department of Nuclear Safety (IDNS) had concerns regarding the consequences of the licensee's proposed changes. An analysis performed by IDNS determined the maximum pressure peak as a function of voided pipe volume. The analysis indicated that when a relatively small void volume