

NRR-PMDAPEm Resource

From: Wasik, Chris [Chris.Wasik@fpl.com]
Sent: Wednesday, April 11, 2012 4:12 PM
To: Orf, Tracy
Cc: Abbott, Liz; Hale, Steve; Hoffman, Jack; Brain, Sidney; Howard, Angeline
Subject: St. Lucie Unit 1 EPU - Feedwater Pump Recirculation Line

Trace,

Regarding our conversation earlier today, FPL has decided that replacement of the feedwater pump recirculation line is not necessary for EPU. The justification for this decision is documented in the modification package to replace the St. Lucie Unit 1 feedwater pumps (EC 246555). The justification is provided below.

The flow through the piping is increasing from 2,500 gpm to 5,000 gpm. This increase was evaluated by Bechtel and FPL. The fluid velocity through the existing 8-inch diameter schedule 120 lines will be 39.8 ft/s at 5,000 gpm, while the typical industry standard is 25 ft/s. The current operation of the recirculation lines during start-up is observed at flowing near 5,600 gpm which is 44.6 ft/s. The existing MFW Pump recirculation lines are well supported and no excessive vibration was noted during start-up. The system operation is infrequent. Wall thickness measurements were taken to confirm no significant wall thinning. After the evaluation it was determined that the existing piping and system is able to accommodate the 5,000 gpm MCSF requirement for the replacement pump. The operating temperature and pressure were slightly adjusted to align with the EPU MFW Pump operating pressure and temperature during normal operation. These EPU operating conditions are bounded by the design conditions.

Regards,

Chris Wasik

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