

**From:** Steven Long *NRL*  
**To:** Allen Hiser; Gary Demoss; INTERNET:wjshack@anl.gov; William Cullen  
**Date:** 10/8/02 7:04AM  
**Subject:** Fwd: Reactor Coolant System Hot Leg Temperatures

FYI,

Based on some old design info, it appears that Davis-Besse was originally intended to operate with hot leg temperatures at 608°F instead of the current 605°F. Because early operation at the higher temperature has the potential to significantly accelerate crack initiation and growth compared to what we have been calculating, I asked the licensee whether operation had initially occurred at 605° or 608°. It turned out to be a hard question for them to address. Their final response is attached. It looks like they have always been at 605°.

In our cracking rate calculations for other plants, I expect we will find some that have changed operating temperatures in the past. Some went up to increase thermal-hydraulic efficiencies. When stress corrosion cracking of SG tubes appeared to be related to elevated tube temperatures, some plants went to slightly lower hot leg temps. Given the sensitivity of the cracking phenomenon to temperature, we may need to account for these changes in determining EDYs for some plants.

Steve

*B/148*

**From:** <drwuokko@firstenergycorp.com>  
**To:** <jbh1@nrc.gov>  
**Date:** 10/7/02 6:15PM  
**Subject:** Reactor Coolant System Hot Leg Temperatures

*J. Hopkins, NRC*

Jon-

For information only. In an e-mail on 09/19/02, we provided information on past operating history regarding the temperature of the RPV head/hot leg greater than 605 F degrees for the last ~10 5 years. Steve Long requested that we find what similar data we could on the years prior to this. After much searching, we were able to locate Daily Logs on microfiche from 1977-1988 that show the plant was also operated routinely at less than 605 F degrees, i.e., there does not appear to have been any change in the plant operation with regards to the hot leg temperature through the years  
-Dale Wuokko

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