

**From:** Ron Young  
**To:** Jonathan Rowley  
**Date:** 09/10/2007 5:12:23 PM  
**Subject:** VY License Renewal SER - Draft Section 2.3.3.13XX, "Hydrogen Water Chemistry"

Jonathan,

FYI..... As noted in my earlier e-mail, attached is the subject item.

Ron

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### **2.3.3.13AA Hydrogen Water Chemistry**

#### **2.3.3.13AA.1 Summary of Technical Information in the Application**

The hydrogen water chemistry (HWC) system mitigates the chemical conditions that allow IGSCC in the recirculation piping and reactor vessel internals. The HWC system injects hydrogen into the reactor feedwater at the suction of the feedwater pumps.

The failure of nonsafety-related SSCs in the hydrogen water chemistry system potentially could prevent the satisfactory accomplishment of a safety-related function.

LRA Table 2.3.3-13-51 identifies the following hydrogen water chemistry system component types within the scope of license renewal and subject to an AMR:

- bolting
- piping
- tubing
- valve body

The hydrogen water chemistry system component intended function within the scope of license renewal is to provide pressure boundary.

#### **2.3.3.13AA.2 Staff Evaluation**

The staff reviewed LRA Section 2.3.3.13.2 and UFSAR Sections 4.25, 11.8.3.1 and K4.7 using the Tier-1 evaluation methodology described in SER Section 2.3 and the guidance described in SRP-LR Section 2.3.

In conducting its review, the staff evaluated the system functions described in the LRA and UFSAR to verify that the applicant has not omitted from the scope of license renewal any components with intended functions as required by 10 CFR 54.4(a). The staff then reviewed those components that the applicant has identified as within the scope of license renewal to verify that the applicant has not omitted any passive and long-lived components subject to an AMR as required by 10 CFR 54.21(a)(1).

#### **2.3.3.13AA.3 Conclusion**

The staff reviewed the LRA to determine whether the applicant failed to identify any SSCs within the scope of license renewal or subject to an AMR. The staff finds no such omissions. On the basis of its review, the staff concludes that there is reasonable assurance that the applicant has adequately identified the hydrogen water chemistry system components within the scope of license renewal, as required by 10 CFR 54.4(a), and those subject to an AMR, as required by 10 CFR 54.21(a)(1).