Mail Envelope Properties (3F9EAC1F.AA1 : 18 : 20163)

Subject:	Staff Comments on OI 5.2.3-3
Creation Date:	10/28/2003 12:49PM
From:	Joelle Starefos
Created By:	JLS1@nrc.gov

Recipients	**Action**	**Date & Time**
nrc.gov		
owf2_po.OWFN_DO	Delivered	10/28/03 12:49PM
EJS BC (Edmund Sullivan)	Opened	10/28/03 12:51PM
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JPS1 CC (John Segala)	Opened	10/28/03 12:50PM
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JXC1 CC (Joseph Colaccino)	Opened	10/28/03 12:49PM
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westinghouse.com	Transferred	10/28/03 12:49PM
Vijukrp (Vijukrp@westinghouse.com)		

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owf2_po.OWFN_DO	10/28/03 12:49PM	nrc.gov
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Open Item 523-3 Staff Comments.wpd	2997	10/28/03 12:46PM
MESSAGE	994	10/28/03 12:49PM

Options

Auto Delete:	No
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To Be Delivered:	Immediate
Status Tracking:	All Information

From: Joelle Starefos
To: Vijukrp@westinghouse.com
Date: 10/28/2003 12:49PM
Subject: Staff Comments on OI 5.2.3-3

Ron,
Please see attached comments on Open Item 5.2.3-3. Please contact me if you need further clarification.
Thanks, Joelle

Joelle L. Starefos
Project Manager, AP1000
NRC/NRR/DRIP/RNRP
Mail Stop: OWFN 4D9A
(301) 415-8488
jls1@nrc.gov

CC: Colaccino, Joseph; Segala, John

Open Item 5.2.3-3 Staff Comments

The staff has reviewed your September 8, 2003, response on lowered fracture toughness of Alloy 690/52/152 materials after exposure to hydrogenated water. For the staff to evaluate this information, the staff needs the following additional information.

a. Provide the H_2 concentration of the reactor coolant at normal plant operating conditions.

b. For a simulated Pressurized Thermal Shock transient, what temperature levels would the most susceptible bi-metallic welds reach? What bi-metallic welds in the reactor coolant system would experience the most significant cooldown effect?

c. Provide a schematic drawing of welds at these locations. For example, describe whether these welds would consist of Alloy 52 material through the entire wall, or Alloy 52 in contact with the reactor coolant and Alloy 82/182 for the remainder of the wall thickness.

d. Assume a small ID surface breaking flaw in the bi-metallic weld identified in parts b. and c. above. Evaluate what conditions and effects the flaw would see as a result of a simulated Pressurized Thermal Shock transient (i.e., hydrogen concentration, final temperature, loading rate, and failure potential).