

Burkhardt, Janet

From: Benney, Brian
Sent: Friday, November 02, 2012 12:43 PM
To: ccchappell@STPEGS.COM; mpmurray@stpegs.com; jpaul@stpegs.com
Cc: Burkhardt, Janet; Chen, Qiao-Lynn; Markley, Michael; Lyon, Fred; Singal, Balwant; Tsao, John; Alley, David; Lupold, Timothy
Subject: ME9864 RAIs

By letter dated November 1, 2012, South Texas Project submitted for NRC review and approval Relief Request RR-ENG-3-10 for the alternative examinations of reactor vessel head O-ring leakoff lines.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the information provided by the licensee and determined that the additional information identified in the attachment is needed in order for the NRC staff to complete its review. The staff is requesting a written response to the RAIs no later than November 5, 2012.

Please contact me if you would like to have a clarifying conference call.

Thank you,
Brian Benney

REQUEST FOR ADDITIONAL INFORMATION REGARDING SOUTH TEXAS PROJECT RELIEF REQUEST RR-ENG-3-10

1. Section D of Relief Request RR-ENG-3-10 discusses the alternative examination of the O-ring leakoff lines. Please provide more details regarding the VT-2 visual examination of the leakoff lines when the reactor cavity is filled. For example:
 - a. Describe exactly how an operator would visually examine the leakoff line (where and how).
 - b. Confirm that each leakoff line as shown in Figures 1 and 2 consists of a monitor tube of 1-inch in diameter coming off the O-ring area and is connected to a smaller piping of 3/4 inch in diameter.
 - c. Discuss which portion of the piping and monitor tubes the operator will be examining to determine the potential leakage (i.e., discuss which portion of the leakoff line is accessible for visual inspection).
 - d. Discuss which portion of the monitor tube and piping is required to be examined in accordance with the ASME Code, Section XI, IWC-5000 and which portion of the line the alternative examination will be able to visually examined.
 - e. If the length of the leakoff pipe examined per the Relief Request is less than the required examination length per IWC-5000, demonstrate the structural and leakage integrity of the unexamined portion of the leakoff line.
2. Section E of the relief request discusses that for Unit 1, a threaded plug has been installed and seal welded in the reactor vessel flange drain hole for the inner O-ring leakoff line as shown in Figure 1. Please discuss:
 - a. Why the plug is installed.
 - b. If this reduces the capability of O-ring leakoff when the inner leakoff line is removed from service.
 - c. Confirm that with plugged inner leakoff line the O-ring leakoff will be drained through the outer leakoff line and that the outer leakoff line has the capacity to handle all leakoff.
3. Section E, first paragraph, states that "...STP tests the RPV flange O-ring leakoff lines every outage at normal operating temperature and pressure with the RPV flange O-rings installed..."

- a. Please clarify and describe exactly how the test was performed as discussed in the aforementioned statement,
 - b. Since the licensee has tested the RPV flange O-ring leakoff lines every outage at normal operating temperature and pressure with the RPV flange O-rings installed, discuss the hardship for performing such test besides the hardship that is already discussed in the relief request.
4. If during the performance of the alternative VT-2 examination per the relief request, a small through wall flaw is not detect during the refueling outage inspection (and during the normal operation the O-ring degraded and the reactor coolant leaked through the O-ring and flowed into the leakoff line) and subsequently, the reactor coolant in the leakoff line leaks out of the pipe or monitor tube wall. Then please discuss:
 - a. How the leakage from the leakoff pipe/tube wall would be detected,
 - b. How soon the operator will be notified, and
 - c. Discuss the safety significance of this scenario.
5. Please discuss the possibility of performing the pressure test of the leakoff line using the normal reactor coolant system pressure and temperature after a scheduled plant shutdown, but before removing the reactor vessel head per IWC-5000. In this case, the old O-ring may be damaged but it will be discarded as part of the normal maintenance activity. Discuss the hardship, if any, associated with this test evolution.