

**NRC Written Exam Item Analysis for Exam  
Administered at Waterford 3 on March 29, 2011**

On March 29, 2011 the site administered an NRC approved examination to 11 applicants. All applicants took the 75 question RO section. Additionally, 6 applicants took the SRO only section of the exam. Independently verified site grading indicates that all applicants passed all required written examination sections.

No questions on the RO section of the examination were missed by 50% or greater of all applicants. Two questions on the SRO ONLY section of the examination were missed by 50% or greater of the SRO applicants. Analysis of the questions follows on pages 2 and 3.

It is the position of Waterford staff that both questions are valid and technically correct, with only one correct answer. References to support this analysis are provided.



## SRO Question 20

Given:

- A full core offload is in progress.
- The Normal Spent Fuel Pool Heat Exchanger is in service.
- The Backup Spent Fuel Pool Heat Exchanger is secured and available.

The RAB Watch has reported a leak on the Normal Spent Fuel Pool Heat Exchanger that requires isolating CCW to the Heat Exchanger.

Based on this report,

- A. The full core off load may continue after placing the Backup SFPHX provided Spent Fuel Pool temperature is maintained  $< 140$  °F.
- B. The full core off load may continue after placing the Backup SFPHX provided Spent Fuel Pool temperature is maintained  $< 155$  °F.
- C. The full core off load must be secured. Both the Normal and Backup Heat Exchangers are required to be available to perform a full core off load.
- D. The full core off load must be secured until a heat load calculation is performed to ensure the heat load does not exceed  $15.3 \times 10^6$  BTU/HR.

This question required the applicants to determine whether core offload could be continued based on the sudden unavailability of the Normal Spent Fuel Pool Heat Exchanger. OP-002-006 Precaution and Limitation 3.2.10 requires that both the Normal and Backup Spent Fuel Pool Heat Exchangers be available for a full core offload. Four candidates selected a distractor that implied the offload could be recommenced after a heat load calculation verifies heat load is within the capacity of the backup heat exchanger. This calculation only applies for partial core offloads per OP-002-006 Precaution and Limitation 3.2.7. The remaining distractors are also incorrect in that they allow the core offload to continue, contrary to procedure OP-002-006.