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April 20, 2011
U7-C-NINA-NRC-110065

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

South Texas Project
Units 3 and 4
Docket Number PROJ0772
Supplemental Responses to Request for Additional Information

Reference: Request for Additional Information Regarding South Texas Project Nuclear
Operating Company Topical Report WCAP-17116-P Revision 0, Supplement 5 –
Application to the Advanced Boiling Water Reactor (TAC NO. RG0007)
(ML110730488)

Attached are responses to NRC staff questions included in the reference. The following RAI
questions are addressed:

RAI-38 Supplement 1
RAI-40 Supplement 1

There are no commitments in this letter.

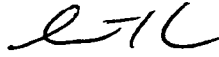
If you have any questions, please contact me at (361) 972-7136, or Bill Mookhoek at (361) 972-
7274.

STI 32856989

T007
MRO

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 4/20/11



Scott Head
Manager, Regulatory Affairs
South Texas Project Units 3 & 4

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Attachments:

1. RAI-38 Supplement 1
2. RAI-40 Supplement 1

cc: w/o enclosure except*
(paper copy)

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RAI-38 Supplement 1:**QUESTION:**

- a) The response to RAI-38(a) indicates that two control rod designs, CR 82-M1 and CR 99, are intended to be used in the ABWR with SVEA-96 Optima2 fuel. Please identify how many of each control rod design (CR 82-M1, CR 99) is modeled in the Westinghouse methodology ABWR applicability reports and provide a map of the corresponding locations.
- b) The information provided in response to RAI-38(b) and (c) is insufficient. Please provide the lattice physics input decks and the user's manual for the lattice physics code. In addition, provide the following control blade parameters sufficient for 2-D lattice physics calculations including:
- The response to RAI-38(b) referenced Table 8-1 of WCAP-17275 for control blade dimensions. However, some of the terms associated with certain dimensions provided in Tables 6-1 and 8-1 of WCAP-17275 are not clearly defined. Please provide all dimensions for both control rod designs and include corresponding drawing(s) or figure(s).
 - Table 5-1 of WCAP-17275 provides material composition, but does not provide complete material specifications for all materials. Please provide the material composition and specifications modeled in the Westinghouse methodology ABWR applicability reports for all control rod materials.
 - Please provide the material density modeled in the Westinghouse methodology ABWR applicability reports for all control rod materials.

SUPPLEMENT 1 RESPONSE:

- a) Studies using different control rod types were not performed in support of the core design used for analysis in WCAP-17116-P, because Westinghouse has only modeled the CR 82M-1 control blades in the ABWR LOCA methodology applicability report. The final core design may use CR 99 for power control and CR 82M-1 in shut down positions. The exact distribution will be defined based on the final design for the initial and planned equilibrium core loading. The CR 82M-1 and CR 99 designs for the ABWR are shown in the docketed WCAP 17275-P.
- b) The response to Item b will be provided by June 14, 2011.

RAI-40 Supplement 1:

QUESTION:

How many condensate storage tanks (CST) are present in an ABWR?

SUPPLEMENT 1 RESPONSE:

There is one condensate storage tank present in an ABWR. (Reference ABWR DCD Tier 2, Figure 1.2-1, Subsections 9.2.9.1(5) and 9.2.9.2, Tables 1C-2 and 9.2-3 and Tier 1, Subsection 2.11.2)