ArevaEPRDCPEm Resource

From: Getachew Tesfaye
Sent: Friday, June 05, 2009 4:54 PM
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Cc: Sara Bernal; Timothy Frye; Peter Hearn; Joseph Colaccino; ArevaEPRDCPEm Resource
Subject: U.S. EPR Design Certification Application RAI No. 217 (2573), FSAR Ch. 9
Attachments: RAI_217_CHPB_2573.doc

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on April 14, 2009, and discussed with your staff on April 27 and May 7, 2009. No changes were made to the draft RAI as a result of those discussions except correction of typographical errors. The schedule we have established for review of your application assumes technically correct and complete responses within 30 days of receipt of RAIs. For any RAIs that cannot be answered within 30 days, it is expected that a date for receipt of this information will be provided to the staff within the 30 day period so that the staff can assess how this information will impact the published schedule.

Thanks,
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Request for Additional Information No. 217 (2573), Revision 0

6/05/2009

U. S. EPR Standard Design Certification
AREVA NP Inc.
Docket No. 52-020
SRP Section: 09.03.02 - Process and Post-Accident Sampling Systems
Application Section: 9.3.2 Process Sampling Systems

QUESTIONS for Health Physics Branch (CHPB)

09.03.02-13

RAI 113, Question 09.03.02-8 described the guidelines as stated in 10CR20.1101(b) dealing with procedures and engineering controls to achieve occupational doses that are ALARA. The response to RAI 113 Question 09.03.03-8 identifies that the process sampling stations incorporate shielding and other design features that minimize personnel doses. However, clarification of the response is requested as follows:

1. Part 1 of 9.03.02-8 asked that the licensee verify that the design features of the sampling stations would minimize contamination of the facility and dose to samplers while taking samples. Several parts of the response to this question are noted here:

   a. “Sample stations are placed in a room isolated from the collection disposal of the samples”. Justify locating the sampling stations in a room that is separate from the collection point.

   b. “Formation of crud is reduced through sample velocity, short delay times, and flushing. Deposition of radioactive materials is reduced by sloping of sample lines avoiding stagnant legs and providing low point drains.”

      i) Explain the CRUD reduction by sample velocity or arrangement of sample lines configuration.

      ii) The EPRI Secondary Water Chemistry Guidelines, Chapter 7, has diagrams and a description of the proper configuration of sample lines to prevent sample bias when two phase flow is to be sampled. Such two-phase flow occurs in the primary system sample lines as well. Describe the representative sampling and reduction of "hot spots" during and after sampling resulting from the sloped sample lines during and after sampling.

   c. “Laboratory and sample disposal areas are shielded and are in close proximity to the sampling station, thereby reducing the length of exposure.” Provide clarification for the term “sample disposal area.”

d. Section 9.3.2 of the SRP discusses the need for ALARA considerations in the design of the Sampling System, including shielding. Revise Section 9.3.2 to incorporate the shielding design features that you included in your response to question 9.03.02-8. In addition, provide a reference to section 12.3.1.9.2 of the FSAR for additional discussion on sampling station accessibility and shielding.