

ArevaEPRDCPEm Resource

From: Tesfaye, Getachew
Sent: Tuesday, October 02, 2012 9:32 AM
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Subject: Draft - U.S. EPR Design Certification Application RAI No. 562 (6825), FSAR Ch. 14
Attachments: Draft RAI_562_RPAC_6825.doc

Attached please find draft RAI No. 562 regarding your application for standard design certification of the U.S. EPR. If you have any question or need clarifications regarding this RAI, please let me know as soon as possible, I will have our technical Staff available to discuss them with you.

Please also review the RAI to ensure that we have not inadvertently included proprietary information. If there are any proprietary information, please let me know within the next ten days. If I do not hear from you within the next ten days, I will assume there are none and will make the draft RAI publicly available.

Thanks,
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Request for Additional Information 562(6825), Revision 0

Issue Date: 10/2/2012

Application Title: U. S. EPR Standard Design Certification - Docket Number 52-020

AREVA NP Inc.

Review Section: 14.03.08 - Radiation Protection Inspections, Tests, Analyses, and Acceptance Criteria

Application Section: Tier 1, Section 2.4.22

QUESTIONS

14.03.08-6

Open Item

Follow-up to RAI 543, Question 14.03.08-5 (Supplement 2 response)

10 CFR 52.47(b)(1) requires that applications contain, "the proposed inspections, tests, analyses, and acceptance criteria that are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analysis are performed and the acceptance criteria met, a facility that incorporates the design certification has been constructed and will be operated in conformity with the design certification, the provisions of the Act, and the Commission's rules and regulations."

Also, SRP Section 14.3.8 states that, "the reviewer should ensure that Tier 1 identifies and describes, commensurate with their safety significance, those SSCs that provide radiation shielding, confinement or containment of radioactivity, ventilation of airborne contamination, or radiation (or radioactivity concentration) monitoring for normal operations and during accidents." It also states that, "Tier 1 contains ITAAC that ensure that the identified SSCs will function in a manner consistent with the certified design."

In the response to Question 14.03.08-5, item e, the applicant identified a series of different ITAAC items, that when combined, provide a series of overlapping tests that provide verification of the functionality of the instrument loop for the safety-related radiation monitors from sensor to actuator. However, successful functionality of the system as a whole is not necessarily ensured by the successful testing of each of the individual parts. NRC Bulletin 74-11 (ML 1117202310) provides one example of past operating experience in which safety related equipment did not function as designed because the system was tested in parts and never tested as a whole.

AREVA is requested to update U.S. EPR FSAR Tier 1, to include an ITAAC which tests the function of the safety-related radiation monitors as a whole, from radiation detection to actual protection system actuation or engineered safety function actuation. This ITAAC is necessary in order to ensure that these safety-related systems will function as designed, and to demonstrate compliance with 10 CFR 52.47(b)(1).