AP1000DCDFileNPEm Resource

From: Loza, Paul G. [lozapg@westinghouse.com]
Sent: Thursday, January 15, 2009 4:12 PM
To: Phyllis Clark
Cc: Perry Buckberg; Rhonda Carmon
Subject: FW: Transmittal of RAI SRP17.4-SPLA-04
Attachments: DRAP ITAAC RAI 20090109 (2a).doc

Importance: High

Hi Phyllis,

I acknowledge receipt of this RAI for Westinghouse, and as discussed, agree to change the number to RAI-SRP17.4-SPLA-04. I have contacted our SME Chris Steuck, and will arrange a conference call.

Thanks,
Paul Loza

From: Phyllis Clark [mailto:Phyllis.Clark@nrc.gov]
Sent: Monday, January 12, 2009 4:03 PM
To: Loza, Paul G.; Behnke, Donald H.
Cc: Phyllis Clark
Subject: Transmittal of RAI SRP17.4-SPLA-01
Importance: High

Hi Paul,

Attached is RAI SRP17.4-SPLA-01 and background information.

Don, the staff would like to have a conference call on this RAI as soon as possible. Please let me know when a conference call can be setup. Please provide several dates and times that would be good for the conference call.

Thanks,

Phyllis

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Hearing Identifier: AP1000_DCD_Review
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Subject: FW: Transmittal of RAI SRP17.4-SPLA-04
Sent Date: 1/15/2009 4:11:42 PM
Received Date: 1/15/2009 4:11:46 PM
From: Loza, Paul G.

Created By: lozapg@westinghouse.com

Recipients:
"Perry Buckberg" <Perry.Buckberg@nrc.gov>
Tracking Status: None
"Rhonda Carmon" <Rhonda.Carmon@nrc.gov>
Tracking Status: None
"Phyllis Clark" <Phyllis.Clark@nrc.gov>
Tracking Status: None

Post Office: SWEC9966.w-intra.net

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MESSAGE	1016	1/15/2009 4:11:46 PM
DRAP ITAAC RAI 20090109 (2a).doc	32320	

Options
Priority: High
Return Notification: No
Reply Requested: No
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RAI SRP17.4-SPLA-01

D-RAP ITAAC should provide assurance that the reliability and availability of risk-significant SSCs are consistent with the certified design (subject to deviations and plant-specific features approved in the COL and reflected in the FSAR) by

- concluding that the list of SSCs within the scope of D-RAP is complete and correct
- concluding that the design products for each risk-significant SSC have been prepared correctly (i.e., were subject to adequate controls)
- describing the activities on which these conclusions are based, as well as the other reliability assurance activities providing confidence that at the time of initial fuel loading, the plant will be as described in the FSAR

Please explain how the proposed D-RAP ITAAC would accomplish this, or propose an alternative that provides reasonable assurance that the plant is designed and will be constructed in a manner that is consistent with the key assumptions and risk insights for risk-significant SSCs within the scope of D-RAP.

About the D-RAP ITAAC RAI to Westinghouse

Responding to APP-GW-GLE-007
Not part of the RAI

Purpose of D-RAP ITAAC

The D-RAP comprises all of the licensee's reliability assurance activities prior to initial fuel load. D-RAP is applicable to all risk-significant SSCs. The ITAAC program as a whole confirms that the plant conforms to its license before fuel is loaded for the first time. The licensing basis of the plant includes the FSAR, which includes site-specific information and may reflect deviations from a standard design. D-RAP ITAAC should provide confidence that risk-significant SSCs of a plant will be as reliable and available as assumed when its COL is issued.

Background

The ITAAC approved in the AP1000 FSER called for an analysis. This was to compare the reliability assumed during design certification (found in the design-specific PRA) with the reliability estimated for the plant-specific PRA. When this ITAAC was approved, it was expected that such estimates would be available as part of a plant-specific PRA submitted to the staff at the time of COL application.

In 2007, 10 CFR 52 was revised. The plant-specific PRA is no longer required until initial fuel load. Analysis based on it would no longer be timely. In APP-GW-GLE-007, Westinghouse proposed an alternative method of analysis. It is not clear that either analysis would satisfy the intended purpose of this ITAAC. An inspection may be simpler and yet provide greater assurance that the D-RAP is effective.

The reliability of SSCs is based on the type of component (selected in the design process) and their arrangement into subsystems and systems. Components are assumed to have reliabilities consistent with others of the same type. System availabilities are a function of technical specifications and availability controls. The reliability and availability of risk-significant SSCs will remain acceptable so long as (a) the plant is built as it was designed and licensed (b) reliability assurance activities are effective from COL application to initial fuel load.

Other ITAAC will compare the plant (as built) with the plant design. They confirm that risk-significant SSCs are correctly manufactured, fabricated, installed, and tested. However, this comparison relies on detailed design products (for procurement, fabrication, installation, testing, etc.). It is likely that most of these design products will be developed after licensing, not before. One way to assure that reliability and availability of risk-significant SSCs is consistent with the licensed design is to confirm that their design (as described in the FSAR) is correctly translated into design products.

For safety-related SSCs, licensees rely on 10 CFR 50 Appendix B programs. These form an acceptable basis for concluding that design products reflect the design as described in the FSAR. Analogous assurance (not necessarily as stringent) is required for non-safety-related yet risk-significant SSCs. D-RAP ITAAC should document the basis for concluding that adequate controls have been applied to the development of design products for all risk-significant SSCs.

The licensee must implement other reliability assurance activities prior to initial fuel load. These would include, for example, quality assurance, controlling modifications after the initial issuance of design, and maintenance of risk-significant SSCs after construction. These must be described in sufficient detail to permit a conclusion that they will be effective.