KHNPDCDRAIsPEm Resource

From: Ciocco, Jeff
Sent: Monday, July 27, 2015 10:13 AM
To: apr1400rai@khnp.co.kr; KHNPDCDRAIsPEm Resource; Harry (Hyun Seung) Chang; Yunho Kim; Christopher Tyree
Cc: Bousquet, Earl; Dias, Antonio; Wunder, George; Lee, Samuel
Subject: APR1400 Design Certification Application RAI 118-8072 (10.04.04 - Turbine Bypass System)
Attachments: APR1400 DC RAI 118 SPSB 8072.pdf; image001.jpg

KHNP

The attachment contains the subject request for additional information (RAI). This RAI was sent to you in draft form. Your licensing review schedule assumes technically correct and complete responses within 30 days of receipt of RAIs. However, KHNP requests, and we grant, the following days to respond to the RAI's questions. We may adjust the schedule accordingly.

10.04.04-1: 30 days
10.04.04-2: 60 days
10.04.04-3: 60 days

Please submit your RAI response to the NRC Document Control Desk.

Thank you,

Jeff Ciocco
New Nuclear Reactor Licensing
301.415.6391
jeff.ciocco@nrc.gov

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

Hearing Identifier: KHNP_APR1400_DCD_RAI_Public
Email Number: 127

Mail Envelope Properties (b07f8bcf9d0d4de8a55e657086eecac6)

Subject: APR1400 Design Certification Application RAI 118-8072 (10.04.04 - Turbine Bypass System)
Sent Date: 7/27/2015 10:12:55 AM
Received Date: 7/27/2015 10:12:56 AM
From: Ciocco, Jeff

Created By: Jeff.Ciocco@nrc.gov

Recipients:
"Bousquet, Earl" <Earl.Bousquet@nrc.gov>
Tracking Status: None
"Dias, Antonio" <Antonio.Dias@nrc.gov>
Tracking Status: None
"Wunder, George" <George.Wunder@nrc.gov>
Tracking Status: None
"Lee, Samuel" <Samuel.Lee@nrc.gov>
Tracking Status: None
"apr1400rai@khnp.co.kr" <apr1400rai@khnp.co.kr>
Tracking Status: None
"KHNPDCDRAIsPEm Resource" <KHNPDCDRAIsPEm.Resource@nrc.gov>
Tracking Status: None
"Harry (Hyun Seung) Chang" <hyunseung.chang@gmail.com>
Tracking Status: None
"Yunho Kim" <yshh8226@gmail.com>
Tracking Status: None
"Christopher Tyree" <Christopher.tyree@aecom.com>
Tracking Status: None

Post Office: HQPWMSMRS08.nrc.gov

Files	**Size**	**Date & Time**
MESSAGE	725	7/27/2015 10:12:56 AM
APR1400 DC RAI 118 SPSB 8072.pdf	89923	
image001.jpg	5040	

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

REQUEST FOR ADDITIONAL INFORMATION 118-8072

Issue Date: 07/27/2015
Application Title: APR1400 Design Certification Review – 52-046
Operating Company: Korea Hydro & Nuclear Power Co. Ltd.
Docket No. 52-046
Review Section: 10.04.04 - Turbine Bypass System
Application Section:

QUESTIONS

10.04.04-1
10 CFR 52.47(a)(2) requires that a standard design certification applicant provide a description and analysis of the structures, systems, and components (SSCs) of the facility, with emphasis upon performance requirements, the bases, with technical justification therefor, upon which these requirements have been established, and the evaluations required to show that safety functions will be accomplished.

Section 10.4.4.5,"Instrumentation Requirements," of the DCD Tier 2 indicates that the turbine bypass system (TBS) controls are provided in the main control room (MCR) and the remote shutdown room (RSR). The DCD also indicates where the valve position indicators and the pressure indicators are located in the MCR along with information related to the leak monitoring system.

The staff finds the DCD Tier 2, Section 10.4.4 lacking information related to the details of the TBS instrumentation.

The applicant is requested to describe in detail the TBS instrumentation. The DCD is to be modified accordingly.

10.04.04-2
10 CFR 52.47(b)(1) requires the application to contain the proposed inspections, tests, analyses, and acceptance criteria that are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses 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.

DCD Tier 1, Table 2.7.1.3 has the ITAAC information for the many of the systems within the APR1400 design.

The staff finds that, somehow, DCD Tier 1, Table 2.7.1.3 has no entry for the turbine bypass system. The bases for no ITAAC entry is not provided.

The applicant is requested to explain the reasoning for the lack of an entry for an ITAAC for the turbine bypass system (TBS). If necessary, the DCD is to be modified accordingly.

REQUEST FOR ADDITIONAL INFORMATION 118-8072

10.04.04-3

10 CFR 52.47(b)(1) requires the application to contain the proposed inspections, tests, analyses, and acceptance criteria that are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses 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.

DCD Tier 2, In Section 10.4.4.4, "Inspection and Testing Requirements," states that, before the system is placed in service, all the turbine bypass valves (TBVs) are tested for operability and the pipelines are hydrostatically tested to verify leak tightness.

The staff finds the DCD unclear whether the turbine bypass system (TBS) itself is also hydrostatically tested and how this test is performed.

The applicant is requested to clarify what type of test is performed in the TBS and how it is performed.


U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment