

PMTurkeyCOLPEm Resource

From: Comar, Manny
Sent: Wednesday, May 25, 2011 10:15 AM
To: Comar, Manny; orthen, Richard; Steve Franzone; STEVEN.HAMRICK; TurkeyCOL Resource; William Maher; Maria Morell; Russell Shearer
Subject: REVISED: Draft RAI 5399 related to SRP Section 09.02.1- Station Service Water System for the Turkey Point Units 6 and 7 combined license application
Attachments: draft RAI 5399_TPN.doc

Folks:

Sorry for the mix up. Attached is the draft RAI5399.

Maria: Thanks for catching the error

From: Comar, Manny
Sent: Wednesday, May 25, 2011 9:37 AM
To: orthen, Richard; Steve Franzone; STEVEN.HAMRICK; TurkeyCOL Resource; William Maher; Maria Morell; Russell Shearer
Cc: Comar, Manny
Subject: Draft RAI 5399 related to SRP Section 09.02.1- Station Service Water System for the Turkey Point Units 6 and 7 combined license application

To All,

Attached is the Draft RAI 5399 related to SRP Section 09.02.1- Station Service Water System for the Turkey Point Units 6 and 7 combined license application

If you need a conference call to discuss the question(s) of the draft RAIs please contact me at 301-415-3863. Unless you request additional clarification we will normally issue the RAI as final within 3 to 5 days, from today.

Thanks

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Request for Additional Information No. 5399

Turkey Point Units 6 and 7
Florida P and L
Docket No. 52-040 and 52-041
SRP Section: 09.02.01 - Station Service Water System
Application Section: 9.2.1 - Service Water System

QUESTIONS for Balance of Plant Branch 1 (SBPA)

09.02.01-***

Explain whether the cooling capability of the service water system (SWS) mechanical draft cooling towers for the PTN units could be adversely affected by interactions that exist between the SWS two mechanical draft cooling towers between units. In addition, explain whether interactions between different cooling towers (i.e., circulating water system (CWS) versus SWS) may adversely affect the cooling capacity of the SWS. Since PTN is utilizing mechanical induced-draft towers for the CWS versus natural draft cooling towers as submitted by other COL applicants, explain whether interactions with the SWS cooling towers could occur due to the difference in height of the discharge plume. For example, consider whether adverse interactions could occur due to localized atmospheric influences caused by siting considerations, the locations of major structures, the locations of the mechanical draft cooling towers, mechanical draft cooling tower fan speed, and wind effects. Because AP1000 utilizes only one SWS mechanical draft cooling tower in its design, interaction effects between the mechanical draft cooling towers of multi-unit sites was not evaluated by the staff as part of the AP1000 design certification review.

In PTN COL FSAR Section 9.2.1.2, the applicant addressed potential impacts due to yard equipment layout and tower operation in an adjacent unit. Provide the detailed analysis with respect to standard plant layout and siting criteria, standard plant design margin, site specific meteorological and siting considerations, interactions with CWS cooling towers, and interactions with adjacent units. In addition, in PTN COL FSAR Section 10.4.5.2.2, the applicant provided information on the site-specific phenomenon of cooling tower "interference" and stated that proper cooling tower placement and orientation can minimize the effect of the phenomenon. Further, the applicant stated that since the PTN SWS and CWS towers are located remotely to each other and the saturated effluent dissipates before it interferes with the intake of the SWS, the CWS towers would not adversely affect the performance of the SWS towers. Identify the detailed information in the PTN COL FSAR supporting these statements, or provide additional information to do so.

In summary, in order to confirm that the design meets GDC 4 criteria with respect to cooling tower interference, provide detailed justification in the FSAR to address potential adverse interactions between the mechanical draft SWS cooling towers and mechanical draft CWS cooling towers for the two PTN units, as well as adjacent Turkey Point Unit 5 mechanical draft cooling towers.

09.02.01-***

In PTN COL FSAR Section 9.2.1.2, "System Description," the applicant proposed changes to the plant cooldown phase description in DCD Section 9.2.1.2.3.4. This change is identified as PTN DEP 2.0-2, and is described as a Tier 2 departure from the AP1000 DCD site parameters as summarized in PTN COL FSAR Table 2.0-201, "Comparison of DCD Site Parameters and Turkey Point Units 6 & 7 Site Characteristics." However, there is no left margin annotation in the PTN COL FSAR Section 9.2.1.2 indicating this is associated with PTN DEP 2.0-2. If the section is associated with PTN DEP 2.0-2, add PTN DEP 2.0-2 in the left margin for FSAR Section 9.2.1.2 and state if there are any other changes (such as a PTN SUP or another PTN DEP) affecting this section.

The AP1000 DCD site parameter value for the maximum normal air temperature wet bulb (noncoincident) in DCD Tier 2, Table 2-1 is 80.1 °F, and the PTN site value was revised to 81.5°F, as identified in PTN COL FSAR Section 2.3.1.5. Although the proposed change was evaluated in PTN Part 7, Departures and Exemption Requests, it is not clear what the aggregate effects on other affected systems are. Provide analysis in the FSAR of the aggregate effects of PTN DEP 2.0-2 on integrated plant operation, specifically for the effect of the SWS cooling water functional capability during the plant cooldown phase.