PMHarrisCOL PEmails

From: Stephen Campbell
Sent: Thursday, December 04, 2008 2:19 PM
To: Stephanie Coffin
Cc: Chang Li; John Segala; Peter Wilson; Tanya Simms; HarrisCOL Resource; Manny Comar
Subject: SUBMITTAL - P2 Harris 9.3.3
Attachments: P2 SER w_OI-9 2 9-Final.doc

Stephanie:

John Segala and I approive of the attached Harris P2 SER Section 9.2.9 submittal. Confirmatory Item 9.2.9-1 was opened to address DCD COL Item 9.2-2.

Stephen Campbell
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Hearing Identifier: ShearonHarris_COL_Public
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From: Stephen Campbell

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Options
Priority: Standard
Return Notification: No
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9.2.9 WASTE WATER SYSTEM

9.2.9.1 Introduction

The waste water system is a non-safety system that collects and processes the waste water from the equipment and floor drains in the nonradioactive building areas during plant operations and outages. The design of the system precludes inadvertent discharge of radioactively contaminated drainage.

9.2.9.2 Summary of Application

In the Harris Combined License (COL) Final Safety Analysis Report (FSAR) Section 9.2, "Water Systems," the applicant incorporated by reference Section 9.2, "Water Systems," of the AP1000 Design Certification Documentation (DCD), Revision 16 without any departures. Section 9.2 of the AP1000 DCD includes subsection 9.2.9, "Waste Water System" which addresses NUREG 0800, "Standard Review Plan [SRP] for the Review of Safety Analysis Reports for Nuclear Power Plants," Revision 3, Section 9.3.3, "Equipment and Floor Drainage System."

In addition, in the Harris FSAR Section 9.2, the applicant provided the following:

- Harris COL Item 9.2-2 to resolve COL Information Item 9.2-2 listed in Table 1.8-2, "Summary of AP1000 Standard Plant Combined License Information Items' in the DCD.

9.2.9.3 Regulatory Basis

The regulatory basis of the information incorporated by reference is documented in NUREG 1793, "Final Safety Evaluation Report Related to Certification of the AP1000 Standard Design," September 2004. Regulatory basis of the subsequent change will be documented in NUREG-1793, Supplement 2.

In addition, the regulatory bases for Harris COL Item 9.2-2 addressing the design of the plant waste water retention basin is based on 10 CFR Part 50, Appendix A, General Design Criteria (GDC) 4, "Environmental and Dynamic Effects Design Bases" and GDC 60, "Control of Releases of Radioactive Materials to the Environment." The applicable criteria are identified in SRP Section 9.3.3.

9.2.9.4 Technical Evaluation

The NRC staff reviewed conformance of Section 9.2.9 of the Harris COL FSAR to the guidance in SRP Section 9.3.3. The NRC staff's review finds that the applicant appropriately incorporates by reference Section 9.2 of the AP1000 DCD, Revision 16. Section 9.2.9 of the AP1000 DCD was revised in Revision 16 and is being reviewed by the staff under docket number 52-006. The NRC staff's technical evaluation of the information incorporated by reference related to the waste water system will be documented in a supplement to NUREG-1793.

The staff review of this application is limited to the following COL Information Item:

- Harris COL Item 9.2-2 involving waste water retention basins.

The applicant provided additional information in Harris COL Item 9.2-2 to resolve DCD COL Information Item 9.2-2. DCD COL Information Item 9.2-2 states:

> "The Combined License applicant will address the final design and configuration of the plant waste water retention basins and associated discharge piping, including piping design pressure, basin transfer pump size, basin size, and location of the retention basins."

The NRC staff reviewed the resolution to the Harris COL Item 9.2-2 on the design of the plant waste water retention basin included under Section 9.2.9.2.2, "Component Descriptions," and Section 9.2.12.2, "Waste Water Retention Basins," of the Harris COL, and determined that it needs additional information before it is able to conclude the adequacy of the of the site-specific waste water retention basin. In the request for additional information (RAI) 09.03-03-1 (RAI ID 482), the staff requested the applicant to provide a justification for not providing a description of basin transfer pumps, water level instrumentation, and radiation monitoring in the waste water retention basin. These design features were included and approved in the AP1000, Revision 15, DCD, as documented in NUREG-1793. In Revision 16, Westinghouse removed the waste water retention basin from the DCD and identified it as COL Information Item 9.2-2.

By a letter, dated October 20, 2008, Progress Energy responded the RAI by providing the description of the waste water retention basin transfer pumps, water level instrumentation, and radiation monitoring for the waste water retention basins. In addition, Progress Energy committed to add the description to the FSAR in a future amendment. The RAI response states the following.

> Add the following information in DCD Subsection 9.2.9.2.2.
>
> "Basin Transfer Pumps
> Two 100% pumps are provided to transfer water from the neutralization basins to the settling basin. Only one of the pumps will operate at any given time. In addition, two 100% pumps are provided to transfer water from the settling basin to the CWS blowdown line. Like the neutralizing basin transfer pumps, only one of the settling basin pumps will operate at any given time. Both sets of pumps will have separate feeds from the 480VAC distribution system. In the event of a LOOP, power will not be supplied to the neutralization and settling basin transfer pumps."
>
> Add the following new subsection:
>
> "9.2.9.5 Instrument Applications
> Level indication is provided for each of the neutralization basins and high level alarms alert operators to take action. A level indicator and level transmitter are provided for the settling basin to automatically control flow out of the settling basin.
>
> Radiation monitors are also provided between the neutralization basin and the settling basin and in the common discharge line of the settling basin transfer pumps (upstream of CWS blowdown line). A high radiation signal at either of

these locations will trip both the neutralization basin transfer pumps and the settling basin transfer pumps."

The staff reviewed the description in the RAI response, and found it to be consistent with what was removed from Revision 15 of the DCD. Therefore, the staff determined that the information provided by the applicant to address DCD COL Item 9.2-2 is acceptable. **RAI 09.03-03-1** is resolved. Incorporation of this information in the next COL FSAR revision is **Confirmatory Item 9.2.9-1**.

9.2.9.5 Post Combined License Activities

Not applicable.

9.2.9.6 Conclusion

The NRC staff concludes that the information pertaining to the Harris COL FSAR Section 9.2 is within the scope of the design certification and adequately incorporates by reference Section 9.2.9 of the AP1000 DCD, and is, thus, acceptable.

In addition, the staff has compared the additional COL information within the application to the relevant NRC regulations, acceptance criteria defined in NUREG-0800, Section 9.3.3, and other NRC regulatory guides. The staff finds that the information provided by the applicant to address COL Item 9.2-2 is acceptable and does not change the conclusions reached in NUREG-1793 pending resolution of Confirmatory Item 9.2.9-1.