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Your ref: Docket Number 52-006
Our ref: DCP_NRC_003068

October 20, 2010

Subject: Supplementary Information on Proposed Changes for the AP1000 Design Control Document Rev. 18

This letter is submitted in support of the AP1000 Design Certification Amendment Application (Docket No. 52-006). The information provided is generic and is expected to apply to all Combined License (COL) applicants referencing the AP1000 Design Certification and the AP1000 Design Certification Amendment Application.

Westinghouse provided preliminary information on changes which it proposed to include in Revision 18 of the AP1000 Design Control Document (DCD-18) in a January 20, 2010 letter (Reference 1). Supplementary information on some of those changes requested by the NRC was provided in a March 12, 2010 letter (Reference 2). Information was provided in an April 26, 2010 letter (Reference 3) for seven of the changes identified in the January 20, 2010 that were determined to meet one or more of the Interim Staff Guidance-11 (ISG-11) criteria for reporting to the NRC staff. The remaining 50 "elective" items in the January 20 letter are addressed in a letter dated May 21, 2010 (Reference 4). In a letter dated May 10, 2010 (Reference 5), information was provided for seven design changes that met one or more of the ISG-11 criteria and which supported the AP1000 Licensing Finalization schedule. In a letter dated May 25, 2010 (Reference 6), information was provided for two additional design changes that met one or more of the ISG-11 criteria and which supported the AP1000 Licensing Finalization schedule. In letters dated June 14, 2010 (Reference 7), October 18, 2020 (Reference 8), July 6, 2010 (Reference 9), July 8, 2010 (Reference 10), July 28, 2010 (Reference 11) July 29, 2010 (Reference 12), August 12, 2010, (Reference 13), and August 16 (Reference 14) information was provided for additional design changes. Supplementary information for Reference 11 was provided in References 15, 19 and 22. Supplementary information for CN62 (initial information was provided in Reference 5) was provided in Reference 16. Supplementary information for CN05 (initial information was provided in Reference 3) was provided in Reference 17. Supplementary information for Reference 12 was provided in Reference 18. Supplementary information on Reference 14 was provided in Reference 20 and 21.

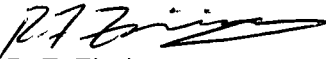
This letter provides supplementary information on the design change (Change Number 64) for Post-DBA transmitter requirements. Information on CN64 was initially provided in Reference 6. Supplementary information for CN64 is provided in Enclosure 1.

As noted previously, the changes described in this and the referenced letters do not constitute all of the changes which Westinghouse proposes to include in DCD-18. Rather, the changes in this letter are in addition to those which Westinghouse either has submitted or will submit to the NRC as responses to Requests for Additional Information or Safety Evaluation Report Open Items.

DO63
NRC

Westinghouse will work with the NRC staff to disposition the changes described in this letter as expeditiously as possible. Questions related to the content of this letter should be directed to Westinghouse. Please send copies of such questions to the prospective COL applicants referencing the AP1000 Design Certification. A representative for each applicant is included on the cc: list of this letter.

Very truly yours,



R. F. Ziesing
Director, U.S. Licensing

References:

1. DCP_NRC_002744, Re-submittal of Proposed Changes for AP1000 Design Control Document Rev.18, January 20, 2010
2. DCP_NRC_002818, Supplementary Information to DCP_NRC_002744 – Re-Submittal of Proposed Changes for AP1000 Design Control Document Rev.18, March 12, 2010
3. DCP_NRC_002850, Final Information on Proposed Changes for the AP1000 Design Control Document Rev. 18, April 26, 2010
4. DCP_NRC_002874, Final Information on Proposed Changes for the AP1000 Design Control Document Rev. 18, May 21, 2010
5. DCP_NRC_002863, Information on Proposed Changes for the AP1000 Design Control Document Rev. 18, May 10, 2010
6. DCP_NRC_002879, Information on Proposed Changes for the AP1000 Design Control Document Rev. 18, May 25, 2010
7. DCP_NRC_002909, Information on Proposed Changes for the AP1000 Design Control Document Rev. 18, June 14, 2010
8. DCP_NRC_002918, Information on Proposed Changes for the AP1000 Design Control Document Rev. 18, October 20, 2010
9. DCP_NRC_002925, Information on Proposed Changes for the AP1000 Design Control Document Rev. 18, July 6, 2010
10. DCP_NRC_002932, Information on Proposed Changes for the AP1000 Design Control Document Rev. 18, July 8, 2010
11. DCP_NRC_002939, Information on Proposed Changes for the AP1000 Design Control Document Rev. 18, July 28, 2010
12. DCP_NRC_002940, Information on Proposed Changes for the AP1000 Design Control Document Rev. 18, July 29, 2010
13. DCP_NRC_002942, Information on Proposed Changes for the AP1000 Design Control Document Rev. 18, August 12, 2010
14. DCP_NRC_002941, Information on Proposed Changes for the AP1000 Design Control Document Rev. 18, August 16, 2010
15. DCP_NRC_003014, Supplementary Information on Proposed Changes for the AP1000 Design Control Document Rev. 18, September 3, 2010.
16. DCP_NRC_003033, Supplementary Information on Proposed Changes for the AP1000 Design Control Document Rev. 18, September 9, 2010.
17. DCP_NRC_003036, Supplementary Information on Proposed Changes for the AP1000 Design Control Document Rev. 18, September 16, 2010.

18. DCP_NRC_003035, Supplementary Information on Proposed Changes for the AP1000 Design Control Document Rev. 18, September 16, 2010.
19. DCP_NRC_003048, Supplementary Information on Proposed Changes for the AP1000 Design Control Document Rev. 18, September 29, 2010.
20. DCP_NRC_003015, Supplementary Information on Proposed Changes for the AP1000 Design Control Document Rev. 18, September 29, 2010.
21. DCP_NRC_003050, Supplementary Information on Proposed Changes for the AP1000 Design Control Document Rev. 18, October 15, 2010.
22. DCP_NRC_003066, Supplementary Information on Proposed Changes for the AP1000 Design Control Document Rev. 18, October 18, 2010.

/Enclosures

1. Supplementary Information for CN64, Changes to Post-DBA Transmitter Requirements, Revised DCD Changes, Non-Proprietary

cc:	D. Jaffe	- U.S. NRC	1E
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	P. Hastings	- Duke Energy	1E
	R. Kitchen	- Progress Energy	1E
	A. Monroe	- SCANA	1E
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	G. Zinke	- NuStart/Entergy	1E
	R. Grumbir	- NuStart	1E
	M. Melton	- Westinghouse	1E

ENCLOSURE 1

Supplementary Information for CN64, Changes to Post-DBA Transmitter
Requirements, Revised DCD Changes, Non-Proprietary

Table 6.2.3-1 (Sheet 3 of 4)

CONTAINMENT MECHANICAL PENETRATIONS AND ISOLATION VALVES

System	Containment Penetration			Isolation Device						Test		
	Line	Flow	Closed Sys IRC	Valve/Hatch Identification	Pipe Length	DCD Subsection	Position N-S-A	Signal	Closure Times	Type ¹ & Note	Medium	Direction
VFS	Cont. air filter supply	In	No	VFS-PL-V003 VFS-PL-V004	33 :	9.4.7	C-O-C C-O-C	T,HR,DAS T,HR,DAS	10 sec 10 sec	C,5	Air	Forward Forward
	Cont. air filter exhaust	Out	No	VFS-PL-V010 VFS-PL-V009 VFS-PL-V008 VFS-PL-V800A VFS-PL-V800B VFS-PL-V803A VFS-PL-V803B	65 : : 84 82 25 21	9.4.7	C-O-C C-O-C C-C-C C-C-C C-C-C C-C-C	T,HR,DAS T,HR,DAS N/A T, HR (Note 8) T, HR (Note 8) None None	10 sec 10 sec N/A 30 sec 30 sec N/A N/A	C,5,9	Air	Forward Forward Forward Forward
VWS	Fan Coolers out	Out	No	VWS-PL-V086 VWS-PL-V082 VWS-PL-V080	9 : :	9.2.7	O-O-C O-O-C C-C-C	T T None	std. std. N/A	C,3,4,5	Air	Forward
	Fan coolers in	In	No	VWS-PL-V058 VWS-PL-V062	9 :	9.2.7	O-O-C O-O-C	T N/A	std. std.	C,3,4,5	Air	Forward
WLS	Reactor coolant drain tank gas	Out	No	WLS-PL-V068 WLS-PL-V067	49 :	11.2	C-C-C C-C-C	T T	std. std.	C	Air	Forward
	Normal cont. sump	Out	No	WLS-PL-V057 WLS-PL-V055 WLS-PL-V058	39 : :	11.2	C-C-C C-C-C C-C-C	T,DAS T,DAS None	std. std. N/A	C	Air	Forward
SPARE		N/A	No	P40	:	6.2.5	C-C-C	N/A	N/A	B	Air	Forward
SPARE		N/A	No	P41	:	6.2.5	C-C-C	N/A	N/A	B	Air	Forward
SPARE		N/A	No	P42	:	6.2.5	C-C-C	N/A	N/A	B	Air	Forward
CNS	Main equipment hatch	N/A	No	CNS-MY-Y01	:	6.2.5	C-C-C	None	N/A	B	Air	Forward
	Maintenance hatch	N/A	No	CNS-MY-Y02	:	6.2.5	C-C-C	None	N/A	B	Air	Forward
	Personnel hatch	N/A	No	CNS-MY-Y03	:	6.2.5	C-C-C	None	N/A	B	Air	Forward
	Personnel hatch	N/A	No	CNS-MY-Y04	:	6.2.5	C-C-C	None	N/A	B	Air	Forward
PCS	Containment pressure instrumentation lines (four)	N/A	Yes	P46, P47, P48, P49	:	6.2.3.1	N/A	N/A	N/A	A,10	Capillary Fluid	Forward

Table 6.2.3-1 (Sheet 4 of 4)

CONTAINMENT MECHANICAL PENETRATIONS AND ISOLATION VALVES

Explanation of Heading and Acronyms for Table 6.2.3-1		
System:	Fluid system penetrating containment	Closure Time:
Containment Penetration:	These fields refer to the penetration itself	Required valve closure stroke time
Line:	Fluid system line	std: Industry standard for valve type (≤ 60 seconds)
Flow:	Direction of flow in or out of containment	N/A: Not Applicable
Closed Sys IRC:	Closed system inside containment as defined in DCD Section 6.2.3.1.1	Test:
Isolation Device:	These fields refer to the isolation devices for a given penetration	These fields refer to the penetration testing requirements
Valve/Hatch ID:	Identification number on P&ID or system figure	Type:
Pipe Length:	Nominal length of pipe to outboard containment isolation valve, feet	Required test type
Subsection Containing Figure:	Safety analysis report containing the system P&ID or figure	A: Integrated Leak Rate Test
Position N-S-A:	Device position for N (normal operation)	B: Local Leak Rate Test -- penetration
	S (shutdown)	C: Local Leak Rate Test -- fluid systems
	A (post-accident)	Note:
Signal:	Device closure signal	See notes below
	MS: Main steam line isolation	Medium:
	LSL: Low steam line pressure	Test fluid on valve seat
	MF: Main feedwater isolation	Direction:
	LTC: Low T_{cold}	Pressurization direction
	PRHR: Passive residual heat removal actuation	Forward: High pressure on containment side
	T: Containment isolation	Reverse: High pressure on outboard side
	S: Safety injection signal	
	HR: High containment radiation	
	DAS: Diverse actuation system signal	
	PL2: High 2 pressurizer level signal	
	S+PL1: Safety injection signal plus high 1 pressurizer level	
	SGL: High steam generator level	
	HRCPI[mk107]: High reactor coolant pump bearing water temperature trip	

Notes:

- Containment leak rate tests are designated Type A, B, or C according to 10CFR50, Appendix J.
- The secondary side of the steam generator, including main steam, feedwater, startup feedwater, blowdown and sampling piping from the steam generators to the containment penetration, is considered an extension of the containment. These systems are not part of the reactor coolant pressure boundary and do not open directly to the containment atmosphere during post-accident conditions. During Type A tests, the secondary side of the steam generators is vented to the atmosphere outside containment to ensure that full test differential pressure is applied to this boundary.
- The central chilled water system remains water-filled and operational during the Type A test in order to maintain stable containment atmospheric conditions.
- The containment isolation valves for this penetration are open during the Type A test to facilitate testing. Their leak rates are measured separately.
- The inboard valve flange is tested in the reverse direction.
- These valves are not subject to a Type C test. Upstream side of RNS hot leg suction isolation valves is not vented during local leak rate test to retain double isolation of RCS at elevated pressure. Valve is flooded during post-accident operation. Not used.
- Refer to DCD Table 5.0-4b for PORV block valve closure time.
- [\[mk109\]:](#) These valves also receive a signal to open on Low-2 containment pressure.
- [\[mk110\]:](#) Valves V800A/B are tested in the reverse direction. This test method is acceptable per ANSI 56.8 since the test pressure is applied in the conservative direction.
- [\[mk111\]:](#) The containment pressure instrumentation lines are sealed, fluid-filled, and closed inside and outside the containment, without containment isolation valves. They are not vented or drained during Type A testing.