

PMSTPCOL PEmails

From: Tai, Tom
Sent: Monday, December 23, 2013 10:20 AM
To: 'wemookhoek@stpegs.com' (wemookhoek@stpegs.com)
Cc: STPCOL
Subject: Proposed Survey Table for ABWR-WG.docx
Attachments: Jpn's Proposed Survey Table for Agenda item 3 of 1st ABWR-WG(draft).docx

Bill,

Attached is the spreadsheet asking for ABWR plant-specific design questions. Some of them are simple and easily accessible from either the COL FSAR or DCD. Others are better to be answered as TBD.

Please look at the list and fill in whatever you feel comfortable.

If you can provide your input by Friday, January 3, 2014, it would be helpful.

Have a happy holiday.

Regards

Tom Tai

Hearing Identifier: SouthTexas34Public_EX
Email Number: 3717

Mail Envelope Properties (0A64B42AAA8FD4418CE1EB5240A6FED1014939729B23)

Subject: Proposed Survey Table for ABWR-WG.docx
Sent Date: 12/23/2013 10:19:30 AM
Received Date: 12/23/2013 10:19:31 AM
From: Tai, Tom

Created By: Tom.Tai@nrc.gov

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Tracking Status: None

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Tracking Status: None

Post Office: HQCLSTR02.nrc.gov

Files	Size	Date & Time	
MESSAGE	440	12/23/2013 10:19:31 AM	
Jpn's Proposed Survey Table for Agenda item 3 of 1st ABWR-WG(draft).docx			45804

Options

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

Table The Comparison of ABWRs

No.	Main item	Item	Kashiwazaki -Kariwa 6/7	ABWR in ...	ABWR in ...	ABWR in ...	ABWR in ...	Notes
	Features	—	<ul style="list-style-type: none"> • The first ABWR in the world • Key components Reactor Internal Pump (RIP) Fine Motion CRD (FMCRD) Reinforced Concrete Containment Vessel(RCCV) 52-inch LSB Turbine 					non-existent or minimal / some differences but still comparable / significant differences
1	Main Factor	Main contractor	GE/Hitachi/Toshiba					
		Nuclear Island Supplier	Unit 6 : Toshiba Unit 7 : Hitachi					
		Turbine Island Supplier	Unit 6 : Hitachi Unit 7 : Toshiba					
		Start of Construction Work	Unit 6 : 1991/9 Unit 7 : 1992/2					
		Start of Commercial Operation	Unit 6 : 1996/11 Unit 7 : 1997/7					

No.	Main item	Item	Kashiwazaki -Kariwa 6/7	ABWR in ...	ABWR in ...	ABWR in ...	ABWR in ...	Notes
2	Output	Plant Output	1,356MW					
		Reactor Thermal Output	3,926MW					
3	Reactor Core • Fuel	Fuel Assemblies	9x9 fuel with Debris Filter					
		The Number of Fuel Assemblies	872					
		The Number of Control Rod	205					
4	Reactor Pressure Vessel • Reactor Internals	Core Shroud	1					
		Top Guide	1					
		Core Plate	1					
		Control Rod Guide Tube	205					
		Steam Separator	349					
	Steam Dryer	1						
5	Reactor Recirculation System	Recirculation Method	Reactor Internal Pump					
		Number	10					
6	Control Rod Drive System	Drive type(Output control)	Electric drive (Step motor, sealed driving shaft)					
		Drive type(Scrum)	Hydraulic drive					
7	Main Steam	Safety Relief Valve	18					

No.	Main item	Item	Kashiwazaki -Kariwa 6/7	ABWR in ...	ABWR in ...	ABWR in ...	ABWR in ...	Notes
	System							
		Flow Restrictor	1(per 1 main steam pipe)					
8	Emergency Core Cooling System	Division	3divisions					
		High Pressure Core Flooder system	2 pumps					
		Low Pressure Flooder System	3pumps					
		Automatic Depressurization System	8 Safety relief valves of Automatic depressurization system					
9	Residual Heat Removal System	Division	3divisions					
		Share of the system	Back up the fuel pool cooling function of fuel pool cooling and clean up system					
10	Reactor Core Isolation Cooling System	The Number of the Systems	1					
11	Primary Containment Vessel	Structure	Reinforced concrete containment vessel (Steel liner lining)					
		Overall Height	36m					
		Inner Diameter	29m					

No.	Main item	Item	Kashiwazaki -Kariwa 6/7	ABWR in ...	ABWR in ...	ABWR in ...	ABWR in ...	Notes
12	Turbine System	Main Turbine	Tandem compound, 6-flow exhaust condensate type					
		Heat cycle Turbine bypass capacity	Re-heat type Approx. 33% of rated steam flow					
		Condensate and Feed water System						
		Low pressure condensate pump	3					
		Low pressure drain pump	1					
		High pressure condensate pump	3					
		High pressure drain pump	1					
		Reactor Feed water Pump	2					
		Turbine driven	2					
		Motor driven						
		Condensate Purification System	Hollow fiber type					

No.	Main item	Item	Kashiwazaki -Kariwa 6/7	ABWR in ...	ABWR in ...	ABWR in ...	ABWR in ...	Notes
		Condensate Pre-filter Condensate Demineralizer	Number :3 Mixed-bed type (Regenerative type) Number :6					
13	Instrumentation & Control System	Recirculation Flow Control System	Reactor Internal Pump Adjustable Speed Drive					
		Neutron Monitoring System	Start-up range neutron monitor (Source range and intermediate range) : 10 channel Power range : 208 channel					
		Reactor Protection System Reactor Protection (Trip) System	Safety system logic and control 2 out of 4 logic					
14	Electric Equipment	Diesel Generator	3					
		DC Power Source	For emergency use : Outside batteries 125V 4 sets					

No.	Main item	Item	Kashiwazaki -Kariwa 6/7	ABWR in ...	ABWR in ...	ABWR in ...	ABWR in ...	Notes
			For normal use : Outside batteries 250V 1 set					
15	Radioactive Waste Disposal System	Ground height of Exhaust Opening Location of Main Stack	Approx. 73m Top floor of reactor building					
		The capacity of Solid Waste Storage Facility	Approx. 45,000 of drum cans (It is shared to use for Unit 1, 2 3, 4 5, 6 and 7.)					