

WESTINGHOUSE AP1000® GENERIC DESIGN ASSESSMENT

GDA ISSUE

STRUCTURAL INTEGRITY – CONTAINMENT VESSEL

GI-AP1000-SI-04 REVISION 0

Technical Area		STRUCTURAL INTEGRITY	
Related Technical Areas		None	
GDA Issue Reference	GI-AP1000-SI-04	GDA Issue Action Reference	GI-AP1000-SI-04.A1
GDA Issue	Fracture Analysis of Containment Vessel.		
GDA Issue Action	<p>Provide sufficient evidence to show that the containment vessel has adequate tolerance to the thermal shock due to the flow of PCS water onto the top head.</p> <p>Activities required to be carried out by Westinghouse are:</p> <ul style="list-style-type: none"> • Provide a report with the structure proposed during GDA to show that the containment vessel has adequate tolerance to the thermal shock due to the flow of PCS water onto the top head. • Provide adequate responses to any questions arising from assessment by ONR of documents submitted. <p>With agreement from the Regulator this action may be completed by alternative means.</p>		

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Technical Area		STRUCTURAL INTEGRITY	
Related Technical Areas		None	
GDA Issue Reference	GI-AP1000-SI-04	GDA Issue Action Reference	GI-AP1000-SI-04.A2
GDA Issue Action	<p>Provide sufficient evidence to show that the containment vessel has adequate tolerance to small defects given the high residual stress associated with welds which have not undergone post weld heat treatment.</p> <p>It is anticipated that simple fracture mechanics calculations will be required to show adequate defect tolerance. It may be necessary to critically review the input parameters (design temperatures, pressures, residual stresses, likely manufacturing flaws etc) to ensure that they are self consistent and realistic.</p> <p>Activities required to be carried out by Westinghouse are:</p> <ul style="list-style-type: none"> • Provide sufficient evidence to show that the containment vessel has adequate tolerance to small defects in the absence of post weld heat treatment. • Provide adequate responses to any questions arising from assessment by ONR of documents submitted. <p>With agreement from the Regulator this action may be completed by alternative means.</p>		