

WESTINGHOUSE AP1000® GENERIC DESIGN ASSESSMENT

GDA ISSUE

HYDROGEN DOSING SYSTEM

GI-AP1000-RC-03 REVISION 0

Technical Area		REACTOR CHEMISTRY	
Related Technical Areas		Mechanical Engineering	
GDA Issue Reference	GI-AP1000-RC-03	GDA Issue Action Reference	GI-AP1000-RC-03.A1
GDA Issue	Demonstrate that the hydrogen dosing system in AP1000 has the capacity and capability to provide suitable control over the primary coolant hydrogen concentration during all operating modes and potential faults.		
GDA Issue Action	<p>Westinghouse to present a consistent and structured safety case containing suitable and sufficient evidence to support the AP1000 hydrogen addition system, or other means agreed with the regulator. This evidence should provide confidence that the system will meet the functional requirements of the plant under all modes of operation and anticipated transient conditions.</p> <p>Westinghouse should consider physical testing of the design if sufficient evidence cannot be provided by calculations. The case should include an analysis of the likely faults with the hydrogen addition system. This should include consideration of both under and over dosing of hydrogen.</p> <p>The arrangements, either engineered or administrative, to control these faults should be clearly highlighted. The faults should consider all modes of operation where the hydrogen addition system is required to function.</p> <p>With agreement from the Regulator this action may be completed by alternative means.</p>		