

EDF AND AREVA UK EPR GENERIC DESIGN ASSESSMENT
GDA ISSUE
RADIOLOGICAL ZONING AND BULK SHIELDING
GI-UKEPR-RP-01 REVISION 0

Technical Area		RADIATION PROTECTION	
Related Technical Areas		Civil Engineering	
GDA Issue Reference	GI-UKEPR-RP-01	GDA Issue Action Reference	GI-UKEPR-RP-01.A1
GDA Issue	Radiological zoning for restriction of exposure to ionising radiation of workers is fundamental to the design of the nuclear island, and bulk shielding is inextricably linked with civil engineering aspects of that design. The radiological zoning classification scheme underpinned by design shielding calculations is not referenced in the GDA submission for the UK EPR design.		
GDA Issue Action	<p>Provide an overview document that supplements the claims and arguments presented in the PCSR Chapter 12.3 with additional information on the radiological zoning classification scheme for the nuclear island, including dose rate criteria and predictions for all modes of plant operation, for occupied areas as a direct reference from the PCSR.</p> <p>A radiological zoning classification scheme should be provided to demonstrate that there is adequate shielding provision for all areas of the facility. This should be presented as an overview document that provides information / documentation which summarises the dose rates and radiological classifications within all rooms and for all modes of plant operation (for example, power operation, outages, refuelling). The document should include information / documentation on the Reactor Building, Fuel Building, Safeguard Building, and Auxiliary Building.</p> <p>The overview document should summarise the results of shielding calculations to show that the predicted dose rates within each area of the plant meet the radiological classification. The response should, as a minimum, summarise the following information for each room of the facility:</p> <ul style="list-style-type: none"> • Room descriptor and number / designation. • Radiological classification (namely dose rate criteria). • Dose rate prediction(s) for each room giving the maximum dose rate present during all modes of operation (for example, power operation, outages, refuelling). • Reference to shielding assessments / calculations containing data regarding the assumed radiation sources, shielding provisions and calculated dose rates. <p>With agreement from the Regulator this action may be completed by alternative means.</p>		