

Office for Nuclear Regulation

An agency of HSE

Redgrave Court Merton Road Bootle Merseyside L20 7HS

Tel: 0151 951 4000 www.hse.gov.uk/nuclear

EDF AND AREVA UK EPR GENERIC DESIGN ASSESSMENT

GDA ISSUE

CONTAINMENT ANALYSIS

GI-UKEPR-CE-04 REVISION 1

Technical Area	CIVIL ENGINEERING		
Related Technical Areas	None		
GDA Issue Reference	GI-UKEPR-CE-04	GDA Issue Action Reference	GI-UKEPR-CE-04.A1
GDA Issue	The analysis of the UK EPR containment structure has not been demonstrated to capture the behaviour in a sufficiently accurate manner.		
GDA Issue Action	<p>Support assessment within the following areas and provide adequate responses to any questions arising from the assessment by ONR of documents submitted during GDA Step 4 but not reviewed in detail at that time.</p> <p>During the Step 4 assessment, the following areas were highlighted as requiring further justification:</p> <ul style="list-style-type: none">• Inner Containment seismic calculations in relation with ETC-C requirements.• Damping ratio of the pre-stressed concrete containment structure.• Comparison Between Equivalent Static Seismic Analysis of the Pre-stressed Inner Containment and Seismic Spectrum Analysis with Global NI Model• Simplifications over the representation of the foundation <p>The combined rationale for the analysis methodology and associated design basis is insufficient in providing a coherent description of the overall analytical process, and fails to adequately address specific analytical aspects necessary to demonstrate a level of structural performance and reliability commensurate with that expected for inner containment.</p> <p>Based on a high level review of the documents and assurances provided to date I have sufficient confidence in the approach to conclude that it should be possible to provide a suitable demonstration of both the beyond design basis performance.</p> <p>With agreement from the Regulator this action may be completed by alternative means.</p>		