

**EDF AND AREVA UK EPR GENERIC DESIGN ASSESSMENT**  
**GDA ISSUE**  
**VERIFICATION AND VALIDATION**  
**GI-UKEPR-IH-02 REVISION 2**

<b>Technical Area</b>		<b>INTERNAL HAZARDS</b>	
<b>Related Technical Areas</b>		Structural Integrity Civil Engineering Fault Studies PSA	
<b>GDA Issue Reference</b>	<b>GI-UKEPR-IH-02</b>	<b>GDA Issue Action Reference</b>	<b>GI-UKEPR-IH-02.A1</b>
<b>GDA Issue</b>	Outstanding Verification and Validation for internal flooding, cable routing, high energy line break and missiles forms part of the requisite evidence and will be required in order to demonstrate an adequate internal hazards safety case.		
<b>GDA Issue Action</b>	<p>Provide the requisite evidence in the form of the detailed Flamanville 3 verification and validation analysis and/or other supporting documentation in support of the claims and arguments presented within Chapter 13.2 of the PCSR associated with internal flooding. The response should include analysis that supports the claims and arguments relating to:</p> <ul style="list-style-type: none"> <li>• Civil structures (including surface coatings) claimed as flood barriers.</li> <li>• Watertight doors and penetrations including qualification data.</li> <li>• Drains and sumps claimed to prevent damage to nuclear significant SSCs.</li> <li>• Calculations in place to support any claims made on potential water volumes.</li> <li>• Any further defence in depth and ALARP measures that could be implemented into the design.</li> <li>• Any identified design changes and their implementation within the PCSR.</li> </ul> <p>The list above should not be considered to be exhaustive and the items detailed above are provided as a means to inform EDF and AREVA of my expectations. With agreement from the Regulator this action may be completed by alternative means.</p>		

# Office for Nuclear Regulation

An agency of HSE

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<b>GDA Issue Reference</b>	<b>GI-UKEPR-IH-02</b>	<b>GDA Issue Action Reference</b>	<b>GI-UKEPR-IH-02.A2</b>
<b>GDA Issue Action</b>	<p>Provide the requisite evidence in the form of the detailed Flamanville 3 verification and validation analysis and/or other supporting documentation in support of the claims and arguments presented within Chapter 13.2 of the PCSR associated with the routing of electrical cables within the EPR design in order to prevent a single fire resulting in loss of more than one divisional separation group.</p> <p>The response should include analysis that supports the claims and arguments relating to:</p> <ul style="list-style-type: none"><li>• The routing and identification of protected cable trays.</li><li>• Justification of claims and arguments made relating to geographical separation.</li><li>• The provision of passive protection applied to cables and cable trays specifically.</li><li>• Any further defence in depth and ALARP measures that could be implemented into the design.</li><li>• Any identified design changes and their implementation within the PCSR.</li></ul> <p>The list above should not be considered to be exhaustive and the items detailed above are provided as a means to inform EDF and AREVA of my expectations.</p> <p>With agreement from the Regulator this action may be completed by alternative means.</p>		

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<b>GDA Issue Action</b>	<p>Provide the requisite evidence in the form of the detailed Flamanville 3 verification and validation analysis, specifically, the FA3 1st Stage Pipe Break Analysis and/or other supporting documentation in support of the claims and arguments presented within Chapter 13.2 of the PCSR associated with high energy line break (HELB) within the EPR design. The response should include analysis that supports the claims and arguments relating to:</p> <ul style="list-style-type: none"> <li>• Consequence analysis, where applicable.</li> <li>• Break preclusion.</li> <li>• Identification and qualification of physical restraints, barriers and doors.</li> <li>• Identification and qualification of pressure relief panels/routes.</li> <li>• Any further defence in depth and ALARP measures that could be implemented into the design.</li> <li>• Any identified design changes and their implementation within the PCSR.</li> </ul> <p>The list above should not be considered to be exhaustive and the items detailed above are provided as a means to inform EDF and AREVA of my expectations. With agreement from the Regulator this action may be completed by alternative means.</p>		

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<b>GDA Issue Reference</b>	<b>GI-UKEPR-IH-02</b>	<b>GDA Issue Action Reference</b>	<b>GI-UKEPR-IH-02.A4</b>
<b>GDA Issue Action</b>	<p>Provide the requisite evidence in the form of the detailed Flamanville 3 verification and validation analysis and/or other supporting documentation in support of the claims and arguments presented within Chapter 13.2 of the PCSR associated with internal missiles. The response should include analysis that supports the claims and arguments relating to:</p> <ul style="list-style-type: none"><li>• Identification of all potential sources of internal missile which could result in a threat to nuclear safety significant SSCs.</li><li>• Consequence analysis, where applicable.</li><li>• Break preclusion.</li><li>• Identification and qualification of physical restraints, barriers and doors.</li><li>• Any further defence in depth and ALARP measures that could be implemented into the design.</li><li>• Any identified design changes and their implementation within the PCSR.</li></ul> <p>The list above should not be considered to be exhaustive and the items detailed above are provided as a means to inform EDF and AREVA of my expectations.</p> <p>With agreement from the Regulator this action may be completed by alternative means.</p>		