



UK EPR	UK EPR GDA PROJECT			
	Title: Resolution Plan for GI-UKEPR-IH-04			
	RP unique number: GI-UKEPR-IH-04-RP	Revision No.: 0	Effective Date: 30/06/2011	Page No.: 1 of 7
Approved for EDF by: A. PETIT		Approved for AREVA by: C. WOOLDRIDGE		
Name/Initials	 Date 30/06/2011	Name/Initials	 Date 30/06/2011	

Resolution Plan Revision History

Rev.	Description of update	Date issued
0	First Issue	30/06/2011

1.0 GDA ISSUE

GDA Issue Title	Main Assessment Area	Related Assessment Area
Consequences of missile generation arising from failure of RCC-M Components	Internal Hazards	Structural Integrity Civil Engineering Fault Studies

GDA Issue	Consequences of missile generation arising from failure of RCC-M Components
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2.0 OVERVIEW OF SCOPE OF WORK

EDF/AREVA will provide a safety case for consequences of missile generation arising from failure of RCC-M components that are not designated as 'High Integrity Components (HIC)' as defined in the PCSR.

The selection of the components for which consequence analysis will be provided are those that were identified in technical report ENSNDR090183 rev B as being of potential concern when the list of HIC components was identified. This selection will be justified as part of the current work. The consequence analysis will build upon that provided in the Technical Report.

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3.0 GDA ISSUE ACTIONS AND RESOLUTION PLAN DELIVERABLES

3.1 Action GI-UKEPR-IH-04.A1

Action I/D	Action Description
GI-UKEPR-IH-04.A1	<p>Provide substantiation of the claims made within the PCSR associated with the preclusion of missile generation from failure of RCC-M components which are not designated as High Integrity Components (HIC) as defined in the consolidated PCSR. This could be undertaken through detailed analysis of the consequences of failure. The detailed analysis should include consideration of:</p> <ul style="list-style-type: none"> • Identification of those potential sources of internal missile which could result in a threat to nuclear safety significant SSCs. • Analysis of the consequences of failure. • Passive features such as barriers and restraints. • Examination, maintenance, inspection, and testing as a potential part of a multi-legged safety justification for missiles. • Any further defence in depth and ALARP measures that could be implemented into the design. • Any identified design changes and their implementation within the PCSR. • The impact of the changes made to the PCSR relating to the outcome of this substantiation on other safety case submissions such as civil engineering and mechanical engineering. <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 ONR expectations.</p> <p>With agreement from the Regulator this action may be completed by alternative means.</p>

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3.1.1 Planned submissions in response to GI-UKEPR-IH-04.A1

3.1.1.1 Description of Scope of Work

EDF/AREVA will provide a dedicated internal missile case that will include

- The identification of the potential sources of internal missile from RCC-M components which are not designated as High Integrity Components as defined in the PCSR: this identification will be based on the technical report referenced ENSNDR090183 Rev B which screened the different types of mechanical components, identified the components which are High Integrity Components and identified the non-High Integrity Components which could generate internal missiles. EDF/AREVA will provide a justification for the screening and the selection of the components for which detailed consequence analysis will be performed, in an intermediate deliverable.
- The detailed deterministic analysis of the consequences of failure of the non-High Integrity Components (vessels, tanks, exchangers and valves) identified in this technical report in order to build a complete and detailed hazard case. This analysis will be built upon that provided in the Technical Report.
- The details on the passive barriers claimed as part of the non-RCC-M components missile case.

3.1.1.2 Description of Methodology to be employed

Task for GI-UKEPR-IH-04.A1: Internal missile case for the non-HIC components listed in the technical report referenced ENSNDR090183 rev B.

For the non-HIC components listed in this report, EDF/AREVA will provide a technical report which will include consideration of:

- Identification of potential sources of internal missile which could result in a threat to nuclear safety significant Systems, Structures and Components (SSCs).
- Analysis of the consequences of failure.
- Identification of passive barriers and restraints claimed in the safety case.
- Examination, maintenance, inspection, and testing as a potential part of a multi-legged safety justification for missile
- Any further defence in depth and ALARP measures that could be implemented into the design.
- Any identified design changes and their implementation within the PCSR.

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3.1.1.3 Deliverable description

Submission date to HSE/EA

Justification of the selection of the components for which detailed consequence analysis will be performed.	30/10/2011
Specific Internal Missile Technical report (this report will give details on the hazard assessment on RCC-M vessels, tanks and valves that have not been classified as High Integrity Components in the report ENSNDR090183 rev B)	30/12/2011
PCSR – Sub-chapter 13.2 – Internal Hazards Protection – Update (Advance copy)	30/12/2011
PCSR – Sub-chapter 13.2 – Internal Hazards Protection – Update (Final)	28/02/2012

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4.0 SUMMARY OF IMPACT ON GDA SUBMISSION DOCUMENTATION

4.1 GDA submission documents impacted by GDA Issue and scheduled to be created (C) or updated (U) within GDA

GDA Submission Documents	C/U	Related GDA Issue Action(s)	Submission Date to HSE/EA
SSER sub-chapters PCSR – Sub-chapter 13.2 – Internal Hazards Protection – Update (Final)	U	GI UKEPR-IH-04.A1	28/02/2012
GDA reference design documents (SDM in UKEPR-I-002) Not Applicable		Not Applicable	Not Applicable
Other GDA submission supporting documents			
Justification of the selection of the components for which detailed consequence analysis will be performed	C	GI UKEPR-IH-04.A1	30/10/2011
Specific Internal Missile Technical report	C	GI-UKEPR-IH-04.A1	30/12/2011

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5.0 JUSTIFICATION OF ADEQUACY

EDF/AREVA will provide a safety case for consequences of missile generation arising from failure of RCC-M components that are not designated as 'High Integrity Components (HICS)' as defined in the PCSR.

The selection of the components for which consequence analysis will be provided are those that were identified in technical report ENSNDR090183 rev B as being of potential concern when the list of HICS components was identified. The screening criteria used to determine the components that were identified in the Technical Report will be justified and their application will be checked, so as to ensure that the list of components for which Consequence Analysis will be performed is adequately justified.

The consequence analysis for missile generation arising from failure of the selected components will build upon that performed within Technical Report ENSNDR090183 rev B. The methodology and the assumptions used in the analysis will be justified as part of this work.

It is expected that the analysis will show that the consequences of missile generation arising from failure of RCC-M components that are not designated as HICS is acceptable. In the case that it is not possible to show this, then further consideration will be given as to how to develop a satisfactory safety justification.

The methodology that will be used for this internal missile Safety case is consistent with the SAPs, the relevant good practices in the UK and the approach adopted for the other internal hazards safety cases. The proposed study is adequate to show that the significant risks from the occurrence of missiles have been reduced to ALARP.









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6.0 TIMETABLE AND MILESTONE PROGRAMME LEADING TO THE DELIVERABLES

Consult the following page for the associated timetable and milestone programme.

ID	Task Name	Duration	Start	Finish	Timeline											
					'11	Apr '11	May '11	Jun '11	Jul '11	Aug '11	Sep '11	Oct '11	Nov '11	Dec '11	Jan '12	Feb '12
1	GI-UKEPR-IH04 - Consequences of missile generation arising from failure of RCC-IH	174 days	Fri Jul 1, '11	Tue Feb 28, '12	[Summary bar]											
2	Task 1 for GI-UKEPR-IH-04.A1	107 days	Fri Jul 1, '11	Fri Nov 25, '11	[Summary bar]											
3	Justification of the selection of the components for which detailed consequence	76 days	Fri Jul 1, '11	Fri Oct 14, '11	[Task bar]											
4	Transmission to ONR	0 days	Fri Oct 14, '11	Fri Oct 14, '11	[Milestone]											
5	ONR Assessment	16 days	Mon Oct 17, '11	Fri Nov 4, '11	[Task bar]											
6	Update following resolution of ONR comments (if applicable)	15 days	Mon Nov 7, '11	Fri Nov 25, '11	[Task bar]											
7	Submission of finalised report (if applicable)	0 days	Fri Nov 25, '11	Fri Nov 25, '11	[Milestone]											
8	Task 2 for GI-UKEPR-IH-04.A1	118 days	Thu Sep 1, '11	Fri Feb 10, '12	[Summary bar]											
9	Specific Internal Missile Technical report	88 days	Thu Sep 1, '11	Fri Dec 30, '11	[Task bar]											
10	Transmission to ONR	0 days	Fri Dec 30, '11	Fri Dec 30, '11	[Milestone]											
11	ONR Assessment	15 days	Tue Jan 3, '12	Mon Jan 23, '12	[Task bar]											
12	Update following resolution of ONR comments (if applicable)	14 days	Tue Jan 24, '12	Fri Feb 10, '12	[Task bar]											
13	Submission of finalised report (if applicable)	0 days	Fri Feb 10, '12	Fri Feb 10, '12	[Milestone]											
14	SSER sub-chapters	64 days	Thu Dec 1, '11	Tue Feb 28, '12	[Summary bar]											
15	PCSR – Sub-chapter 13.2 – Internal Hazards Protection – Update (Advanced c)	22 days	Thu Dec 1, '11	Fri Dec 30, '11	[Task bar]											
16	Transmission to ONR	0 days	Fri Dec 30, '11	Fri Dec 30, '11	[Milestone]											
17	ONR Assessment	21 days	Tue Jan 3, '12	Tue Jan 31, '12	[Task bar]											
18	Update following resolution of ONR comments (if applicable)	20 days	Wed Feb 1, '12	Tue Feb 28, '12	[Task bar]											
19	PCSR – Sub-chapter 13.2 – Internal Hazards Protection – Update (Final)	0 days	Tue Feb 28, '12	Tue Feb 28, '12	[Milestone]											

Project: Template - GDAI Resolution P
Date: Thu Jun 30, '11

Task  Progress  Summary  External Tasks  Deadline 
 Split  Milestone  Project Summary  External Milestone 