

Hitachi-GE Nuclear Energy, Ltd.
UK ABWR GENERIC DESIGN ASSESSMENT
Resolution Plan for RO-ABWR-0012
(Presence of Single Doors on Class 1 Nuclear Safety Barriers)

RO TITLE:	Presence of Single Doors on Class 1 Nuclear Safety Barriers	
REVISION :	1	
Overall RO Closure Date (Planned):	11 Mar 2016	
REFERENCE DOCUMENTATION RELATED TO REGULATORY OBSERVATION		
Regulatory Queries	RQ-ABWR-0090	
Linked ROs	-	
Other Documentation	"Philosophy for doors in safety class 1 barriers (Response to RQ-ABWR-0090)", GA91-9201-0003-00084, SE-GD-0082 Rev.0	

Scope of work :
<p>Back ground ONR issued Regulatory Query (RQ-ABWR-0090) regarding presence of single doors on class 1 barriers within the Reactor Building in March 2014 and Hitachi-GE responded the RQ with Engineering document (GA91-9201-0003-00084, SE-GD-0082 Rev.0). In August 2014, ONR issued RO (RO-ABWR-0012) requesting double doors where reasonably practicable. This Resolution Plan is prepared to respond the RO-ABWR-0012.</p> <p>Scope of work This Resolution Plan shows actions and milestones for preparation to provide double doors on safety class 1 barriers where reasonably practicable. This describes Hitachi-GE's current plan to address the RO-ABWR-0012.</p>

Description of work:
<p>RO-ABWR-0012.A1 Review the current design and use of the single doors on Class 1 nuclear safety barriers.</p> <p>Hitachi-GE have broken down the above action (RO-ABWR-0012.A1) into the following three actions, which are stated in "Summary" paragraph of "Regulatory Observation" column in RO-ABWR-0012.</p> <p>ACTION 1-a. Demonstrate that the number of doors on class 1 safety barriers is minimised: Hitachi-GE will provide Rev.0 of Topic Report (SE-GD-0160), which includes:</p> <ul style="list-style-type: none"> -Sub-claim about minimisation of number of doors on class 1 barrier -Argument to underpin the sub-claim <ul style="list-style-type: none"> • Identification of current doors on class 1 barrier • Clarification of objective of installation for each door

ACTION 1-b. Provide a second door, where reasonably practicable (for 5 representative doors on class 1 barrier in Reactor Building):

Hitachi-GE will provide Rev.1 of Topic Report (SE-GD-0160), which includes:

- Identification of criteria to specify the “where reasonably practicable”
- Demonstration of the criteria with 5 representative doors
- Sub-claim about providing a second door, where reasonably practicable
- Argument to underpin the sub-claim
 - Considerations of :
 - Space for installing a second door
 - Weight of door on class 1 barrier that may compromise evacuation if it is doubled
 - Consequence of hazard source in the generated lobby space
 - Installation of alarm system for door on class 1 barrier that is not doubled

ACTION 1-c. Provide a second door, where reasonably practicable (for all doors on class1 barrier in Reactor Building):

Hitachi-GE will provide Rev.2 of Topic Report (SE-GD-0160), which includes:

- Sub-claim about providing a second door, where reasonably practicable
- Argument to underpin the sub-claim
 - Considerations of :
 - Space for installing a second door
 - Weight of door on class 1 barrier that may compromise evacuation if it is doubled
 - Consequence of hazard source in the generated lobby space
 - Installation of alarm system for door on class 1 barrier that is not doubled
 - Revised layout drawing

ACTION 1-d. For the remaining single doors, engineer local and remote alarms and provide a robust justification in line with the relevant good practice established in the UK:

Hitachi-GE will provide Rev.1 of Topic Report (SE-GD-0160), which includes:

- Conceptual alarm system

Hitachi-GE will provide Rev.2 of Topic Report (SE-GD-0160), which includes:

- Sub-claim about alarm for remaining single doors and robustness of the alarm system
 - Robust justification for the alarm system

Summary of impact on GDA submissions:GDA Submission DocumentSubmission Date to ONR

Topic Report of Doors on Class 1 Barrier (SE-GD-0160) Rev.0

16 January, 2015

Topic Report of Doors on Class 1 Barrier (SE-GD-0160) Rev.1

24 April, 2015

Topic Report of Doors on Class 1 Barrier (SE-GD-0160) Rev.2

11 December, 2015

Programme Milestones/ Schedule :

See attached Gantt Chart (Table 1).

Reference:

[Ref-1] "Generic PCSR Chapter 7: Internal Hazards" (GA91-9101-0101-07000, SE-GD-0127 Rev A)

[Ref-2] "Presence of single doors on safety Class 1 hazards barriers within the Reactor Building"
(RQ-ABWR-0090)[Ref-3] "Philosophy for doors in safety class 1 barriers (Response to RQ-ABWR-0090)"
(GA91-9201-0003-00084, SE-GD-0082 Rev.0)

