Hitachi-GE Nuclear Energy, Ltd.
UK ABWR GENERIC DESIGN ASSESSMENT
Resolution Plan for RO-ABWR-0010
Design Basis Analysis of essential services and support systems

RO TITLE:	Design Basis Analysis of essential services and support systems	
REVISION :	0	
Overall RO Closure Date (Planned):		4.Dec.2015
REFERENCE DOCUMENTATION RELATED TO REGULATORY OBSERVATION		
Regulatory Queries	-	
Linked ROs	-	
Other Documentation	'Topic Report for Fault Assessment' (Document No. UE-GD-0071)	

Scope of work :

Hitachi-GE will demonstrate that it has comprehensive design basis analyses of all initiating events occurring in UK ABWR systems such as heating, ventilation and air conditioning (HVAC) systems, cooling chain systems and compressed gas systems. Partial failure of a system (e.g. failure of a single component or train) and total failure of a system due to a common cause failure (CCF) should be considered.

Hitachi-GE will analyse the impact of the CCF of these systems and will provide a topic report which includes the procedure to approach support system's CCFs and the result of the evaluation of CCF and will describe the overview in the revised PCSR at an appropriate time.

This Resolution Plan describes Hitachi-GE's current plan to address the RO however as the work develops we may choose alternative means to address the RO.

Description of work:

Hitachi-GE will conduct an analysis of the major functions provided by support systems (excluding electrical supply systems as they are covered in RO-ABWR-0008).

The function analysis will include the following support systems and service systems.

* Systems which provide ventilations and air conditioning such as the HVAC
* Systems which supply coolants such as the RCW
* Systems which supply air such as the IA system
* Systems that supply make-up water or clean-up of reactor

Hitachi-GE will identify initiating faults corresponding to these failures of support and service systems and will evaluate any effects on the plant caused by these initiating faults. It is expected that man of these faults will be bounded by existing faults in the Fault Schedule. Any faults not so bounded will be added to the Fault Schedule and protective functions identified along with an estimate of fault frequency.
Hitachi-GE will provide transient analysis for each bounding fault, either using existing analyses or by performing new analyses as required. In this analyses, for each essential function, Hitachi-GE will consider the actions of the major safety functions (Category Class A1), the backup functions (A2 and so on), and will verify that those designs remain

Summary of impact on GDA submissions:

GDA Submission Documents	Related GDA RO Action(s)	Submission Date to ONR
'Topic Report for Fault Assessment' (UE-GD-0071)	RO.A1	30th June 2015

Programme Milestones/ Schedule:

See attached Gant Chart (Table 1).

Reference:

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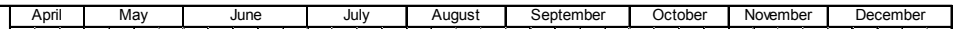
Table 1 RO-ABWR-0010 Gantt Chart

Support System CCF Resolution Plan for RO-ABWR-0010 (2014)

Level	Action Title	Start	Finish
1	Regulator's issue of RO	5-Jun-14	14-Jul-14
1.1	ONR Issue RO	5-Jun-14	5-Jun-14
1.2	Hitachi-GE acknowledge RO & issue Resolution Plan	26-Jun-14	26-Jun-14
1.3	Regulator's confirm credibility of Resolution Plan	30-Jun-14	4-Jul-14
1.4	Regulator's publish RO and Resolution Plan	14-Jul-14	14-Jul-14
2	Preparation of Submissions and Closure of RO Actions	17-Apr-14	4-Dec-15
3	Regulator's Closure of RO	1-Sep-14	4-Dec-15
3.1	Regulators Assessment	1-Sep-14	4-Dec-15
3.2	Regulator's publication of RO closure letter	21-Dec-15	4-Dec-15



Support System CCF Resolution Plan for RO-ABWR-0010 (2015)

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