

Hitachi-GE Nuclear Energy, Ltd.
UK ABWR GENERIC DESIGN ASSESSMENT
Resolution Plan for RO-ABWR-0058
(Step 3 MSQA Improvement Actions)

RO TITLE:	Step 3 MSQA Improvement Actions	
REVISION :	0	
Overall RO Closure Date (Planned):	31 December 2015	
REFERENCE DOCUMENTATION RELATED TO REGULATORY OBSERVATION		
Regulatory Queries	-	
Linked ROs	-	
Other Documentation	[Ref. 1] "Contact Record" (ONR-GDA-CR-15-027 Rev.0)	

Scope of work :
<p>This Resolution Plan describes Hitachi-GE's current plan to address the RO-ABWR-0058. It contains the detailed strategy, the planned activities, deliverables, milestones, timescales, resources assignment as well as reference to the audit trail. This resolution plan is related to the safety case work stream to support the following technical areas:</p> <ul style="list-style-type: none"> - Internal Hazards - Civil Engineering - External Hazards - PSA - Fault Studies - Control & Instrumentation - Electrical Power Supply - Fuel Design - Reactor Chemistry - Radiation Protection & (Level 3 PSA) - Mechanical Engineering - Structural Integrity - Human Factors - MoS & QA - Radwaste & Decommissioning - Conventional Safety & Decommissioning - Security

- Severe Accident Analysis
- Fire Safety
- Project
- Generic Environmental Permitting

Description of work:

Hitachi-GE agreed with the Regulators to deliver a draft Resolution Plan (this document) by the 12th of June, 2015. Then, Hitachi-GE as necessary revised this Resolution Plan and agreed the final plan with the Regulators by the 29th of June. The official issue of the Resolution Plan will be no later than the 3rd of July, 2015.

Hitachi-GE will issue CARs (corrective action requests) within the Hitachi-GE quality management system and implement improvements by applying corrective actions and preventive measures. Hitachi-GE will summarise the evidence of the results of the actions taken and report this to the Regulators.

The corrective actions and actions to prevent recurrence to be undertaken to resolve the RO are described below for each of the RO actions #1 to #4.

RO-ABWR-0058 Action #1

1.1 Hitachi-GE should review the arrangements for GDA specific training against the regulators expectations to determine if the training is providing Hitachi-GE GDA personnel with sufficient knowledge to enable them to produce good quality GDA submissions for the UKABWR. Hitachi-GE should then take appropriate corrective action.

1.2 Hitachi-GE to review internal audit checklists to ensure the effectiveness of GDA Specific Training is adequately covered and assessed by internal audits.

Resolution required by 31st December 2015

1.1 Hitachi-GE's actions:

Hitachi-GE will review the arrangements for GDA specific training (Safety Case, BAT, ALARP CDM, RWA etc.), taking the IAEA systematic approach to training (SAT) into consideration. **【Corrective Action】**

- 1) The following will be reflected in the SQEP control procedure (SQEP Requirements for Hitachi-GE and Supplier Personnel: GNQA13-0255).
 - a Learning objectives and GDA Specific Training required for each department's role is to be clarified.
 - b A description of the design and the selection of appropriate training methods and media for the GDA Specific Training program.
 - c A description of training courses and associated training materials of GDA Specific Training is to be established.

- d The qualification and experience for the Expert that presents each GDA Specific Training course is to be clarified.
 - e The procedures to evaluate the effectiveness of training are to be specified.
- 2) The followings will be performed based on the revised SQEP control procedure.
- a GDA Specific training programme is to be designed and its appropriate training methods and medias are to be selected.
 - b An Expert in the GDA Specific Training will develop the Training courses and associated training materials.

【Action to prevent recurrence】

The following will be applied to similar items as preventive actions.

- a Training on the revised SQEP control procedure is to be given to responsible personnel (Department Manager, Section Manager or Group Leader) of each Department.
- b The Role Profiles of each Department are to be reviewed in accordance with the revised SQEP control procedure.
- c SQEP Assessment Coversheets of each individual is to be re-evaluated in accordance with the revised Role Profile. For individuals who are considered to have received insufficient GDA Specific Training, re-education and re-training by the relevant Expert is to be delivered.
- d The effectiveness of the re-education and re-training is to be evaluated by responsible personnel.
- e The performance result of the re-education and re-training is to be specified in SQEP Assessment Coversheet, and re-evaluation is to be performed to ensure that the individual is a SQEP for the Role.

1.2 Hitachi-GE's actions:

【Corrective Action】

The evaluation of the effectiveness of GDA Specific Training will be added to the internal audit checksheet in order to make sure that auditors confirm effectiveness of GDA Specific Training for each department.

【Action to prevent recurrence】

Training on the revised check sheet will be given to internal auditors for the UK project.

Deliverables:

- 1) Response to RO (RO-ABWR-0058) regarding to Step 3 MSQA Improvement Action#1 and #2

Impacted GDA and GEP Submissions:

- 1) [Ref. 2] "SQEP Requirements for HITACHI-GE and Supplier Personnel" (GX70-1501-0010-00001, GNQA13-0255 Rev.2)

Resources:

Hitachi-GE MSQA SME, MSQA Staff, and Responsible personnel (Department manager, Section manager, and Group Leader), GDA Specific Expert

RO-ABWR-0058 Action #2

- 2.1 To resolve the non-conformities in Role Profiles and SQEP Assessments found during the inspection Hitachi-GE should:
1. Hitachi-GE should review the Role Profile for the Departmental Manager responsible for the Class 1 RPS to ensure it adequately describes the qualifications and experience required for the role. Hitachi-GE should also review the SQEP Assessment and ensure it correctly identifies the nuclear safety significance of the role.
 2. Hitachi-GE to review the SQEP assessment (674195008) for the human factors (HF) Subject Matter Expert to ensure it is consistent with the SQEP assessment in the response to [Ref. 3] RO-ABWR-0005 and the HF integration plan.
 3. Hitachi-GE should review SQEP Assessment Coversheets 310800272 & 310790164 to ensure they record and demonstrate that GDA personnel have undergone the required GDA specific training.
- 2.2 Hitachi-GE should also check and review other Role Profiles and SQEP Assessments to determine if they contain similar shortfalls and take appropriate corrective action by 15th December 2015.

Resolution required by 31st December 2015

2.1 Hitachi-GE's actions:

【Corrective Action】

- 1) Hitachi-GE will review the arrangement as follows, taking the IAEA systematic approach to training (SAT) into consideration.
- a A description of the appropriate analysis of competencies required for each role is to be clarified. In addition, the minimum Qualifications and the required experiences are to be specified in the Role Profile. The preparation procedure and the format of Role Profile are to be reviewed to consider the appropriate experience, training and qualification according to educational backgrounds.
 - b The objective of SQEP Assessment is to be clarified. (The SQEP Assessment is performed to ensure the evaluation of individual's competence.) Additionally, the procedure of SQEP evaluations and the SQEP Assessment Coversheet format are to be reviewed to include the way to record evidence to demonstrate that the individual satisfies requirements specified by Role Profile.
 - c SQEP Records (Role Profiles and SQEP Assessment Coversheet) are to be re-evaluated by December 2015. The specific procedure (a method of the periodic evaluation and a way to record the evaluation result) is to be clearly defined in order to continue to demonstrate that the individual satisfies the competence required by the Role Profile.

2) The following actions will be implemented in accordance with revised SQEP control procedure:

- a The Role Profile for the Department Manager responsible for the Class 1 RPS will be reviewed to ensure it adequately describes the qualifications and experience required for the role The SQEP Assessment Coversheet for the Department Manager responsible for the Class 1 RPS will be reviewed to ensure it correctly identifies the nuclear safety significance of the role.
- b In accordance with the revised SQEP control procedure, SQEP Assessment Coversheet (674195008) is to be reviewed to demonstrate that the HFE SME (SH) has adequate competence for Human Factor Engineer, consistent with the response to [Ref. 3] RO-ABWR-0005 and the HF integration plan.
- c SQEP Assessment Coversheets 310800272 & 310790164 will be reviewed in accordance with the revised SQEP control procedure in order to demonstrate that the required GDA Specific Training has been given to radioactive waste & decommissioning SMEs (ST and SH).

2.2 Hitachi-GE's actions:

Hitachi-GE will review the role profiles of all the Departments and the SQEP assessment cover sheets as an action to contain similar short falls to those described above.

【Action to prevent recurrence】

The following will be applied to similar items as preventive actions.

- a Training on the revised SQEP procedure is to be given to responsible personnel (Department Manager, Section Manager or Group Leader) of each Department.
- b The Role Profiles of each Department are to be reviewed in accordance with the revised SQEP procedure.
- c SQEP Assessment Coversheets for each individual are to be re-evaluated in accordance with the Role profile, and demonstrate that the individual adequately satisfies the requirements specified by the Role Profile.

Deliverables:

- 1) Response to RO (RO-ABWR-0058) regarding to Step 3 MSQA Improvement Action#1 and2

Impacted GDA and GEP Submissions:

- 1) "SQEP Requirements for HITACHI-GE and Supplier Personnel" (GX70-1501-0010-00001, GNQA13-0255 Rev.2)

Resources:

Hitachi-GE MSQA SME, MSQA Staff, all technical areas SME, department manager, and section manager

RO-ABWR-0058 Action #3

Hitachi-GE to develop a method for capturing and logging commitments to update the safety case when RO or RI actions have been completed and ONR has agreed that the RO / RI can be closed subject to the safety case being updated. This method should also be applied to RQ responses when appropriate.

Resolution required by 30th November 2015

Hitachi-GE's actions:

【Corrective Action】

[Ref. 4] "Managing Commitments made to Regulators on GDA Submissions" (XD-GD-0028) will be updated to make it clear how to capture and log commitments to update the safety case, such as to the PCSR, when the ONR has agreed that the RO/RI action can be closed subject to PCSR being updated.

【Action to prevent recurrence】

The members of GDA team (administration) will be educated to be familiar with the new procedure.

Deliverables:

- 1) Response to RO (RO-ABWR-0058) regarding to Step 3 MSQA Improvement Action#3

Impacted GDA and GEP Submissions:

- 1) [Ref.4] Managing Commitments made to Regulators on GDA Submissions, (GA91-0512-0006-00001, XD-GD-0028 Rev.1)

Resources:

Hitachi-GE GDA Project Team

RO-ABWR-0058 Action #4

Hitachi-GE to consider improvements to the readiness review report so that it captures and takes credit for planned improvements.

Resolution required by 31st July 2015

Hitachi-GE's actions:

【Corrective Action】

[Ref. 5] "Implementation Procedure for Readiness Review" (XD-GD-0016) will be updated for the purpose of instructing the readiness review report to capture and take credit for planned improvements and the check sheet to be filled with detailed reasoning in order to capture planned improvements.

【Action to prevent recurrence】

The members who will engage in writing the report will be trained in order to be familiar with the new procedure.

Deliverables:

- 2) Response to RO (RO-ABWR-0058) regarding to Step 3 MSQA Improvement Action #4

Impacted GDA and GEP Submissions:

- 1) [Ref. 5] "Implementation Procedure for Readiness Review" (GA10-0511-0001-00001, XD-GD-0016 Rev.3)

Resources:

Hitachi-GE Project Team and the member who will engage in writing the readiness review report.

Summary of impact on GDA submissions:

The GDA submissions that will be affected by the actions to resolve this RO are summarised below. These documents will be originated and/or revised in accordance with the corresponding actions.

GDA Submission Document	Submission Date to ONR
1)Response to RO (RO-ABWR-0058) Action#1 and #2 regarding to Step 3 MSQA Improvement Actions	31 December, 2015
2) SQEP Requirements for HITACHI-GE and Supplier Personnel	31 October, 2015
3)Response to RO (RO-ABWR-0058) Action#3 regarding to Step 3 MSQA Improvement Actions	30 November, 2015
4)Managing Commitments made to Regulators on GDA Submissions	31 October, 2015
5)Response to RO (RO-ABWR-0058) Action#4 regarding to Step 3 MSQA Improvement Actions	31 July, 2015
6)Implementation Procedure for Readiness Review	24 July, 2015

Programme Milestones/ Schedule:

Refer to the attached Gantt Chart (Table 1) for the programmed activities and the schedule for the resolution of the RO.

Reference:

[Ref. 1] "Contact Record" (ONR-GDA-CR-15-027 Rev.0)

[Ref. 2] "SQEP Requirements for HITACHI-GE and Supplier Personnel" (GX70-1501-0010-00001, GNQA13-0255 Rev.2)

[Ref. 3] "Hitachi-GE Nuclear Energy Ltd. Human Factors Specialist Resource and Organisation" (RO-ABWR-0005 Rev.0)

[Ref. 4] "Managing Commitments made to Regulators on GDA Submissions" (GA91-0512-0006-00001, XD-GD-0028 Rev.1)

[Ref. 5] "Implementation Procedure for Readiness Review" (GA10-0511-0001-00001, XD-GD-0016 Rev.3)

Table 1 RO-ABWR-0058 Gantt Chart

Gantt Chart for UKABWR Draft Resolution Plan (Corresponding to RO-ABWR-0058 Rev.0)

Step 3 MSQA Improvement Actions Resolution Plan for RO-ABWR-0058 Rev.0				2015												2016		
				April	May	June	July	August	September	October	November	December	January	February	March			
Level	Action Title	Start	Finish	6/13/2017	4/11/18/25	1/8/15/22/29	6/13/20/27	3/10/17/24/31	7/14/21/28	5/12/19/26	2/9/16/23/30	7/14/21/28	4/11/18/25	1/8/15/22/29	7/14/21/28			
1	Draft Resolution Plan	1-Jun-15	12-Jun-15															
2	Final Resolution Plan	15-Jun-15	3-Jul-15															
3	Response to RO (RO-ABWR-0058) Action#1 and 2 regarding to Step 3 MSQA improvements Actions	15-Jun-15	31-Dec-15															
4	SQEP Requirements for HITACHI-GE and Supplier Personnel	15-Jun-15	31-Oct-15															
5	Response to RO (RO-ABWR-0058) Action#3 regarding to Step 3 MSQA Improvements Actions	15-Jun-15	30-Nov-15															
6	Managing commitments made to Regulators on GDA Submissions	15-Jun-15	31-Oct-15															
7	Response to RO (RO-ABWR-0058) Action#4 regarding to Step 3 MSQA Improvements Actions	15-Jun-15	31-Jul-15															
8	Implementation Procedure for Readiness Review	15-Jun-15	24-Jul-15															