



<b>UK EPR GDA PROJECT</b>				
<b>UK EPR</b>	Title: Resolution Plan for GI-UKEPR-CE02			
	RP unique number: <b>GI-UKEPR-CE02-RP</b>	Revision No.: 0	Effective Date: 29/06/2011	Page No.: 1 of 17
Approved for EDF by: A. PETIT  Name/Initials  Date 28/06/2011		Approved for AREVA by: C. WOOLDRIDGE  Name/Initials  Date 28/06/2011		

### Resolution Plan Revision History

Rev.	Description of update	Date issued
0	First issue	29/06/2011

#### 1.0 GDA ISSUE

GDA Issue Title	Main Assessment Area	Related Assessment Area
Use of ETC-C for the design and construction of the UKEPR	Civil Engineering	Not Applicable

<b>GDA Issue</b>	There is not yet sufficient justification of the ETC-C AFCEN 2010 version and UK Companion Document to confirm these can be used for the design, construction and testing of the UK EPR civil works structures.
------------------	---

#### 2.0 OVERVIEW OF SCOPE OF WORK

Justification of the design rules of the UK EPR Safety Class 1 structures has been submitted in GDA Step 4 through ETC-C AFCEN 2010 and the UK Companion Document. A series of ETC-C supporting documents has been submitted by EDF and AREVA, but have not yet been fully assessed by ONR. Moreover, EDF and AREVA believe that these supporting documents, when assessed, will satisfactorily address the comments made end of year 2010.

ONR's assessment of the ETC-C AFCEN 2010 version, the UK Companion Document, and the ETC-C supporting documents has so far been mainly focussed on Parts 1 and 3. The assessment of ETC-C Part 2 has preliminarily been performed, but EDF and AREVA are to submit the final Part 2 change mapping document.

This GDA Issue requests EDF and AREVA to support the ongoing assessment of the documents submitted during GDA Step 4 but not yet fully assessed.

<b>UK EPR</b>	<b>UK EPR GDA PROJECT</b>			
	Title: Resolution Plan for GI-UKEPR-CE02			
	GI unique number: <b>GI-UKEPR-CE02-RP</b>	Revision No.: 0	Effective Date: 29/06/2011	Page No.: 2 of 17

### 3.0 GDA ISSUE ACTIONS AND RESOLUTION PLAN DELIVERABLES

#### 3.1 Action GI-UKEPR-CE02.A1

Action I/D	Action Description
<b>GI-UKEPR-CE02.A1</b>	<p>Support assessment within the following areas by providing adequate responses to any questions arising from assessment by ONR of documents submitted during GDA Step 4 but not reviewed in detail at that time:</p> <ul style="list-style-type: none"> <li>• <math>a_{cc}</math> Coefficient</li> <li>• Load Combination Factors</li> <li>• Biaxial Stress Limits</li> <li>• Shear</li> <li>• Fastenings</li> <li>• Pre-stressing Participation</li> <li>• Shrinkage</li> <li>• Crack Width Control</li> <li>• Pre-stressing Partial Factor</li> </ul> <p>Provide additional supporting documents on the following areas</p> <ul style="list-style-type: none"> <li>• Detailing provisions</li> <li>• Pool Liner Design</li> <li>• Drop Load Analysis</li> </ul> <p>With agreement from the Regulator this action may be completed by alternative means.</p>

<b>UK EPR</b>	<b>UK EPR GDA PROJECT</b>			
	Title: Resolution Plan for GI-UKEPR-CE02			
	GI unique number: <b>GI-UKEPR-CE02-RP</b>	Revision No.: 0	Effective Date: 29/06/2011	Page No.: 3 of 17

### 3.1.1 Deliverables already submitted to HSE/EA in response to GI-UKEPR-CE02.A1

The following documents have already been submitted in response to this action but have not yet been assessed by HSE.

	<b>Date of submission</b>
<p>ENGSGC100384 Rev. B, Determination of the <math>\alpha_{cc}</math> Coefficient Used in the Formula for the Design Value of the Compressive Strength in Eurocode 2 (submitted by AREVA/EDF Letter EPR00874N)</p> <p><i>This document defines the value of <math>\alpha_{cc}</math> to take into account for the design of the UK EPR.</i></p>	06/06/2011
<p>ENGSGC100394 Rev. B, UK EPR GDA – Presentation and Justification of Factors <math>\Psi_2</math> of ETC-C for Variable Actions in Accidental Situations (submitted by AREVA/EDF Letter EPR00814N)</p> <p><i>This document presents and justifies EDF/AREVA position on <math>\Psi_1</math> coefficient in any situation (accidental and non-accidental) and also justifies the approach for local and global sizing.</i></p>	03/03/2011
<p>ENGSGC100415 Rev. B, Justification of the Concrete Maximum Compressive Stress Under Bi-axial / Tri-axial Behaviour Accidental Thermal Conditions for the Inner Containment (submitted by AREVA/EDF Letter EPR00837N)</p> <p><i>This document presents the justification of the concrete maximum compressive stress under bi-axial – tri-axial behaviour. The inner containment behaves in this manner in accidental conditions (under thermal effects).</i></p>	21/03/2011
<p>ENGSGC100410 Rev. C, EPR UK – Shear Design Proposal, (transmitted 3<sup>rd</sup> May 2011 by AREVA/EDF Letter EPR00862N) (submitted by AREVA/EDF Letter EPR00862N)</p> <p><i>This document deals with shear design of concrete structures for the UK EPR execution studies. It presents and provides the justification of shear design which will be taken into account in the UK EPR projects.</i></p>	03/05/2011
<p>ENGSGC100395 Rev. B, Steel and Concrete Partial Safety Factors for EPR Fastening Systems (submitted by AREVA/EDF Letter EPR00859N)</p> <p><i>This document presents and justifies the ETC-C AFCEN proposal for the design of UK-EPR headed anchorages.</i></p>	21/04/2011
<p>ENGSGC100416 Rev. B, EPR UK – GDA – Prestressing Tendons Participation in Reinforced Concrete Calculations for the Inner Containment (submitted by AREVA/EDF Letter EPR00806N)</p> <p><i>This document discusses the values of the ratio of the bond of prestressing tendons compared to that of reinforcement. The differences between the adopted values in EN 1992-1-1 and in the ETC-C are explained, and the values recommended in the AFCEN 2010 version of the ETC-C are justified.</i></p>	25/02/2011

<b>UK EPR</b>	<b>UK EPR GDA PROJECT</b>			
	Title: Resolution Plan for GI-UKEPR-CE02			
	GI unique number: <b>GI-UKEPR-CE02-RP</b>	Revision No.: 0	Effective Date: 29/06/2011	Page No.: 4 of 17

**Date of submission**

ENSGGC100426 Rev. B, UK EPR – GDA – Methodology for Consideration of Shrinkage for EPR Concrete Structures (submitted by AREVA/EDF Letter EPR00788N) 16/02/2011

*This document describes the shrinkage phenomenon, quantification to be considered and the different methods to be used for the EPR which are equivalent force method, with limitation of total stress, and the strain method, with determination of residual cracking so as to define admissible stress for mechanical loads.*

ENSGGC100428 Rev. B, EPR UK - GDA - Verification of Crack Width for EPR Concrete Structures (submitted by AREVA/EDF Letter EPR00788N) 16/02/2011

*This document assesses the crack width for concrete structures in accordance with EN 1992-1-1 Subsection 7.3 Crack control.*

ENSGGC110025 Rev. A, UK EPR – GDA – Global approach about methodology for consideration of shrinkage and crack limitation (submitted by AREVA/EDF Letter EPR00788N) 16/02/2011

*This document explains the link between two reports delivered during GDA concerning the methodology for consideration of shrinkage (ENSGGC100426) and the methodology for crack limitation (ENSGGC100428).*

### **3.1.2 Planned submissions in response to GI-UKEPR-CE02.A1**

#### **3.1.2.1 Description of Scope of Work**

EDF and AREVA will support the ONR assessment of the documents submitted during GDA Step 4 but not yet assessed.

#### **3.1.2.2 Description of Methodology to be employed**

The engineering reports which have been provided will require review by ONR. This review is anticipated to require at least one (1) face-to-face meeting to facilitate resolution of any residual questions and/or offer clarifications to these responses. Accordingly, a workshop meeting has been planned for AREVA/EDF and ONR on 4-5<sup>th</sup> July 2011 to facilitate this resolution.

No updates to the PCSR are expected since the pertinent submitted documentation provided was incorporated into the PCSR (Sub-chapters 3.3 and 3.8) as part of the March 2011 PCSR submission.

<b>UK EPR</b>	<b>UK EPR GDA PROJECT</b>			
	Title: Resolution Plan for GI-UKEPR-CE02			
	GI unique number: <b>GI-UKEPR-CE02-RP</b>	Revision No.: 0	Effective Date: 29/06/2011	Page No.: 5 of 17

**3.1.2.3 Deliverable description**

Not Applicable

**Submission date to HSE/EA**

N/A

<b>UK EPR</b>	<b>UK EPR GDA PROJECT</b>			
	Title: Resolution Plan for GI-UKEPR-CE02			
	GI unique number: <b>GI-UKEPR-CE02-RP</b>	Revision No.: 0	Effective Date: 29/06/2011	Page No.: 6 of 17

### 3.2 Action GI-UKEPR-CE02.A2

Action I/D	Action Description
<b>GI-UKEPR-CE02.A2</b>	<p>Provide a revision of the UK companion document which addresses the observations raised on ETC-C AFCEN Part 0 as a result of our assessment, the key points being:</p> <ul style="list-style-type: none"> <li>• Lack of independent review of the code.</li> <li>• References to French standards, with translations not provided</li> <li>• Loose references to “equivalent standards”</li> <li>• There are no references to national annexes to some standards such as EN13670</li> </ul> <p>In addition, please provide a mapping document (i.e. updated ETC-C assessment file) which identifies how these points have been dealt with.</p> <p>With agreement from the Regulator this action may be completed by alternative means.</p>

#### 3.2.1 Deliverables already submitted to HSE/EA in response to GI-UKEPR-CE02.A2

	<b>Date of submission</b>
ENGSGC110015 Rev. B, UK Companion Document to AFCEN ETC-C (submitted by AREVA/EDF Letter EPR00853N)  <i>This document contains additional information on ETC-C chapters for which EDF intends to allow deviation from the AFCEN 2010 version of the ETC-C specifically for the UK EPR project.</i>	15/04/2011
ENGSGC110035 Rev. B, Assessment File of the UK Companion Document to AFCEN ETC-C (submitted by AREVA/EDF Letter EPR00853N)  <i>This document contains the justifications to the additional information on ETC-C chapters as summarised in report ENGSGC110015.</i>	15/04/2011

The deliverables listed in Section 3.1.1 of this resolution plan are applicable to this Action.

#### 3.2.2 Planned submissions in response to GI-UKEPR-CE02.A2

##### 3.2.2.1 Description of Scope of Work

EDF and AREVA will support the ONR assessment of the documents submitted during GDA Step 4 but not yet assessed. The comments provided thus far by ONR on ETC-C Part 0 and supporting documents will be addressed and formally responded to as part of this resolution plan.

<b>UK EPR</b>	<b>UK EPR GDA PROJECT</b>			
	Title: Resolution Plan for GI-UKEPR-CE02			
	GI unique number: <b>GI-UKEPR-CE02-RP</b>	Revision No.: 0	Effective Date: 29/06/2011	Page No.: 7 of 17

### 3.2.2.2 Description of Methodology to be employed

The questions raised by ONR in their review of ETC-C AFCEN and supporting documents will be responded to as described. The development and use of a spreadsheet will be utilized to track and document the resolution method and justification for the ONR provided questions. In this spreadsheet, the resolution approach will be divided into four (4) categories:

- (1) Update to UK Companion Document
- (2) Comment is addressed in an un-assessed ETC-C Supporting Document
- (3) Development of Dedicated Reports
- (4) Inclusion into "EPR Nuclear Island Civil Engineering Design Process Note" (see GI-UKEPR-CE01)

Based on the review of comments provided thus far, most comments will be resolved through update to existing documentation or assessment of submitted supporting documents. However, the below listed Dedicated Reports are expected and planned to satisfactorily address the following topics. These reports will be issued as formal responses to this resolution plan.

- (1) Detailing Provisions
- (2) Methodology Report for Pool Liners
- (3) Methodology for Dropped Loads (see GI-UKEPR-IH01)

#### **Task 1 of GI-UKEPR-CE02.A2 – UK Companion Document for AFCEN ETC-C**

The UK Companion Document will be updated to account for the resolution of ONR comments applicable to ETC-C and as will be documented in the above mentioned spreadsheet. The updates included will be applicable to UK applications of the UK EPR.

#### **Task 2 of GI-UKEPR-CE02.A2 – UK Companion Document Assessment Files**

The UK Companion Document Assessment Files will be updated to account for changes made to the UK Companion Document (Task 1) such that the changes made are properly documented and justified.

#### **Task 3 of GI-UKEPR-CE02.A2 – Good Practice Guide for Detailing Provisions**

A good practice guide for detailing civil works will be provided to establish and provide specific clear and generic good practices for use by designers. This document will provide an effective method for resolving the ONR provided comments applicable to detailing.

#### **Task 4 of GI-UKEPR-CE02.A2 – Methodology Report for Pool Liners**

A methodology report for the design of pool liners will be provided to establish the design principles and requirements which are to be applied by the pool line designers. This document will provide an effective method for resolving the ONR provided comments applicable to the design of pool liners.

<b>UK EPR</b>	<b>UK EPR GDA PROJECT</b>			
	Title: Resolution Plan for GI-UKEPR-CE02			
	GI unique number: <b>GI-UKEPR-CE02-RP</b>	Revision No.: 0	Effective Date: 29/06/2011	Page No.: 8 of 17

The engineering reports which have been provided and will be provided in response to this GDA issue will require review by ONR. This review is anticipated to require at least one (1) face-to-face meeting to facilitate resolution of any residual questions and/or offer clarifications to these responses. Accordingly, a workshop meeting has been planned for AREVA/EDF and ONR on 4-5<sup>th</sup> July 2011 to facilitate this resolution, along with subsequent progress meetings. These meetings have been accounted for in the work programme.

#### **Task 5 of GI-UKEPR-CE02.A2 – PCSR Update – Sub-chapter 3.3**

A minor update to PCSR Sub-chapter 3.3 will be performed to update the references and/or adjust text to account for pertinent information generated from this action.

#### **Task 6 of GI-UKEPR-CE02.A2 – PCSR Update – Sub-chapter 3.8**

A minor update to PCSR Sub-chapter 3.8 will be performed to update the references and/or adjust text to account for pertinent information generated from this action.

#### **3.2.2.3 Deliverable description**

	<b>Submission date to HSE/EA</b>
ENSGGC110015, UK Companion Document for AFCEN ETC-C (Update) <i>This document serves as an addendum to AFCEN ETC-C to delineate UK specific design, analysis, and construction requirements</i>	26/07/2011 (Rev. C Vers.)  27/09/2011 (Final Vers.)
ENSGGC110033, UK Companion Document Assessment Files (Update) <i>This document serves to document and track changes which have been made as the UK Companion Document evolves</i>	11/10/2011
EPR Nuclear Island Civil Engineering Design Process Note (see GDA Issue GI-UKEPR-CE01) <i>This overarching hypothesis note defines the interfaces with other current GDA documents, including reference to design data required from future site specific documentation</i>	See GI-UKEPR-CE01
Good Practice Guide for Detailing Provisions <i>This document serves to establish and provide specific clear and generic good practices for detailing of civil works</i>	09/08/2011 (Rev. A Vers.)  11/10/2011 (Final Version)



<b>UK EPR</b>	<b>UK EPR GDA PROJECT</b>			
	Title: Resolution Plan for GI-UKEPR-CE02			
	GI unique number: <b>GI-UKEPR-CE02-RP</b>	Revision No.: 0	Effective Date: 29/06/2011	Page No.: 9 of 17

**Submission date to HSE/EA**

Methodology Report for Pool Liners

*This documents serves to establish the design principles and requirements which are to be applied by the pool liner designers*

29/07/2011  
(Rev. A Vers.)

14/10/2011  
(Final Version)

ENSGGC100483, Methods with Regard to the Risk of "Dropped Loads" for EPR UK for Concrete Structure

*This documents serves to establish the steps and requirements to determine how postulated dropped loads are to be considered and analysed*

See  
GI-UKEPR-IH01

PCSR Sub-chapter 3.3 – Design of Safety Classified Civil Structures

08/11/2011  
(Adv. Vers.)

17/01/2012  
(Final Vers.)

PCSR Sub-chapter 3.8 – Codes & Standards Used in the EPR Design

08/11/2011  
(Adv. Vers.)

17/01/2012  
(Final Vers.)

<b>UK EPR</b>	<b>UK EPR GDA PROJECT</b>			
	Title: Resolution Plan for GI-UKEPR-CE02			
	GI unique number: <b>GI-UKEPR-CE02-RP</b>	Revision No.: 0	Effective Date: 29/06/2011	Page No.: 10 of 17

### 3.3 Action GI-UKEPR-CE02.A3

Action I/D	Action Description
<b>GI-UKEPR-CE02.A3</b>	<p>Provide a revision of the UK companion document which addresses the observations raised on ETC-C AFCEN Part 1 as a result of our assessment, the key points being:</p> <ul style="list-style-type: none"> <li>• Errors in Formulas</li> <li>• Lack of Clarity/ ambiguity in text</li> <li>• Inconsistency with other sections of the code</li> <li>• Inconsistency with UK National annexe</li> <li>• Lack of guidance to designers on seismic design</li> <li>• Revisions of supporting documents unclear</li> <li>• Lack of guidance on choice of Eurocode value when no recommended value is available</li> <li>• Justification lacking for some revised liner stress limits</li> </ul> <p>In addition, please provide a mapping document (i.e. updated ETC-C assessment file) which identifies how these points have been dealt with.</p> <p>With agreement from the Regulator this action may be completed by alternative means.</p>

#### 3.3.1 Deliverables already submitted to HSE/EA in response to GI-UKEPR-CE02.A3

The deliverables listed in Section 3.1.1 of this resolution plan are applicable to this Action.

#### 3.3.2 Planned submissions in response to GI-UKEPR-CE02.A3

##### 3.3.2.1 Description of Scope of Work

EDF and AREVA will support the ONR assessment of the documents submitted during GDA Step 4 but not yet assessed. The comments provided thus far by ONR on ETC-C Part 1 and supporting documents will be addressed and formally responded to as part of this resolution plan.

<b>UK EPR</b>	<b>UK EPR GDA PROJECT</b>			
	Title: Resolution Plan for GI-UKEPR-CE02			
	GI unique number: <b>GI-UKEPR-CE02-RP</b>	Revision No.: 0	Effective Date: 29/06/2011	Page No.: 11 of 17

### 3.3.2.2 Description of Methodology to be employed

The methodology to be employed as described in Section 3.2.2.2 will be applied for resolution of this Action. Note that the documents generated and/or impacted are common with what is specified for GI-UKEPR-CE02 Action 2 (Section 3.2 of this resolution plan).

### 3.3.2.3 Deliverable description

See GI-UKEPR-CE02 Action 2 for a listing of common deliverables.

<b>UK EPR</b>	<b>UK EPR GDA PROJECT</b>			
	Title: Resolution Plan for GI-UKEPR-CE02			
	GI unique number: <b>GI-UKEPR-CE02-RP</b>	Revision No.: 0	Effective Date: 29/06/2011	Page No.: 12 of 17

### 3.4 Action GI-UKEPR-CE02.A4

Action I/D	Action Description
<b>GI-UKEPR-CE02.A4</b>	<p>Provide a revision of the UK companion document which addresses the observations raised ETC-C AFCEN Part 2 as a result of our assessment, the key points being:</p> <ul style="list-style-type: none"> <li>• Insufficient information to be the basis of a clear construction specification</li> <li>• Links to French ministerial standards are of no relevance to the UK</li> <li>• Clarification of the intention to demonstrate the equivalence of French standards to other national standards</li> <li>• Provide clarity over the approval of modifications or adaptations to the specification</li> <li>• Provide clarity over how demonstration of equivalence would be achieved</li> </ul> <p>In addition, please provide a mapping document (i.e. updated ETC-C assessment file) which identifies how these points have been dealt with.</p> <p>With agreement from the Regulator this action may be completed by alternative means.</p>

#### 3.4.1 Deliverables already submitted to HSE/EA in response to GI-UKEPR-CE02.A4

	<b>Date of submission</b>
ETDOIG/110305 Rev. A, ETC-C Part 2.10 – Mapping of Changes from ETC-C Revision B to AFCEN ETC-C 2010 (submitted by AREVA/EDF Letter EPR00880N) <i>This document maps the changes made for Part 2, Section 2.10 between ETC-C Revision B and AFCEN ETC-C 2010.</i>	14/06/2011
EDTGC110381 Rev. A, ETC-C Part 2: Construction Update – Mapping of Changes from ETC-C Revision B to AFCEN 2010 ETC-C (Sections 2.2 to 2.5, 2.11, and 2.12) (submitted by AREVA/EDF Letter EPR00881N) <i>This document maps the changes made for Part 2, Sections 2.2 to 2.5, 2.11, and 2.12 between ETC-C Revision B and AFCEN ETC-C 2010.</i>	15/06/2011

The deliverables listed in Section 3.1.1 of this resolution plan are applicable to this Action.

<b>UK EPR</b>	<b>UK EPR GDA PROJECT</b>			
	Title: Resolution Plan for GI-UKEPR-CE02			
	GI unique number: <b>GI-UKEPR-CE02-RP</b>	Revision No.: 0	Effective Date: 29/06/2011	Page No.: 13 of 17

### **3.4.2 Planned submissions in response to GI-UKEPR-CE02.A4**

#### **3.4.2.1 Description of Scope of Work**

EDF and AREVA will support the ONR assessment of the documents submitted during GDA Step 4 but not yet assessed. The comments provided thus far by ONR on ETC-C Part 2 and supporting documents will be addressed and formally responded to as part of this resolution plan.

EDF and AREVA will issue the remaining Change Mapping Document (stating differences between ETC-C Rev. B and ETC-C AFCEN) for sections related to concrete structures and steel works structures in Part 2.

#### **3.4.2.2 Description of Methodology to be employed**

The methodology to be employed as described in Section 3.2.2.2 will be applied for resolution of this Action. Note that the documents generated and/or impacted are common with what is specified for GI-UKEPR-CE02 Action 2 (Section 3.2 of this resolution plan).

Note that the remaining Change Mapping Documents for Part 2 of ETC-C have been issued and effectively document the changes which have occurred between ETC-C Rev. B and ETC-C AFCEN 2010 for Sections 2.2 to 2.5 and 2.10 to 2.12. As delineated in AREVA/EDF Letter ND(NII) EPR00836N, Sections 2.1, 2.6, 2.8, 2.11, 2.12, and 2.13 of ETC-C Part 2 are outside of GDA scope (site dependency).

ONR has provided preliminary comments on portions of Part 2 of ETC-C; however, ONR assessment needs to be finalized and comment officialised.

#### **3.4.2.3 Deliverable description**

See GI-UKEPR-CE02 Action 2 for a listing of common deliverables.

<b>UK EPR</b>	<b>UK EPR GDA PROJECT</b>			
	Title: Resolution Plan for GI-UKEPR-CE02			
	GI unique number: <b>GI-UKEPR-CE02-RP</b>	Revision No.: 0	Effective Date: 29/06/2011	Page No.: 14 of 17

#### 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

<b>GDA Submission Documents</b>	<b>C/U</b>	<b>Related GDA Issue Action(s)</b>	<b>Submission Date to HSE/EA</b>
<b>SSER Sub-chapters</b> PCSR Sub-chapter 3.3 – Design of Safety Classified Civil Structures	<b>U</b>	GI-UKEPR-CE02.A2 to A4	08/11/2011 (Adv. Vers.) 17/01/2012 (Final Vers.)
PCSR Sub-chapter 3.8 – Codes & Standards Used in the EPR Design	<b>U</b>	GI-UKEPR-CE02.A2 to A4	08/11/2011 (Adv. Vers.) 17/01/2012 (Final Vers.)
<b>GDA reference design documents</b> ENGSGC110015, UK Companion Document for AFCEN ETC-C	<b>U</b>	GI-UKEPR-CE02.A2 to A4	26/07/2011 (Rev. C Vers.) 27/09/2011 (Final Vers.)
EPR Nuclear Island Civil Engineering Design Process Note (see GDA Issue GI-UKEPR-CE01)	<b>C</b>	See GI-UKEPR-CE01	See GI-UKEPR-CE01
Good Practice Guide for Detailing Provisions	<b>C</b>	GI-UKEPR-CE02.A2 to A4	09/08/2011 (Rev. A Vers.) 11/10/2011 (Final Version)
Methodology Report for Pool Liners	<b>C</b>	GI-UKEPR-CE02.A2 to A4	29/07/2011 (Rev. A Vers.) 14/10/2011 (Final Version)
ENGSGC100483, Methods with Regard to the Risk of "Dropped Loads" for EPR UK for Concrete Structure	<b>C</b>	See GI-UKEPR-IH01	See GI-UKEPR-IH01

<b>UK EPR</b>	<b>UK EPR GDA PROJECT</b>			
	Title: Resolution Plan for GI-UKEPR-CE02			
	GI unique number: <b>GI-UKEPR-CE02-RP</b>	Revision No.: 0	Effective Date: 29/06/2011	Page No.: 15 of 17

<b>GDA Submission Documents</b>	<b>C/U</b>	<b>Related GDA Issue Action(s)</b>	<b>Submission Date to HSE/EA</b>
<b>Other GDA submission supporting documents</b> ENGSGC110033, UK Companion Document Assessment File	<b>U</b>	GI-UKEPR-CE02.A2 to A4	11/10/2011

<b>UK EPR</b>	<b>UK EPR GDA PROJECT</b>			
	Title: Resolution Plan for GI-UKEPR-CE02			
	GI unique number: <b>GI-UKEPR-CE02-RP</b>	Revision No.: 0	Effective Date: 29/06/2011	Page No.: 16 of 17

## 5.0 JUSTIFICATION OF ADEQUACY

Accordingly, EDF and AREVA will support the ONR assessment of the engineering documentation and justification associated with the listed issued reports in Section 3.1.1 of this resolution plan. Additionally, the resolution of this GDA issue will result in the development and issuance of additional dedicated reports such that complete clarity and understanding is achieved and the provided ONR comments are satisfactorily resolved.

As indicated in the write-up of GDA Issue GI-UKEPR-CE02, ONR has stated that based on their full assessment of the earlier reports and a limited, high level review of the reports sent most recently in GDA Step 4, they have sufficient confidence in the approach to conclude that it should be possible to provide a suitable demonstration of adequacy. With the issuance of additional dedicated reports and updates to previously submitted documentation as part of ONR comment resolution, a suitable demonstration will be achieved.

The engineering documentation which makes up the totality of the response to the seismic analysis methodology and this GDA Issue support the below listed relevant HSE SAPs.

**Engineering principles: safety Standards classification and standards**

**ECS.3**

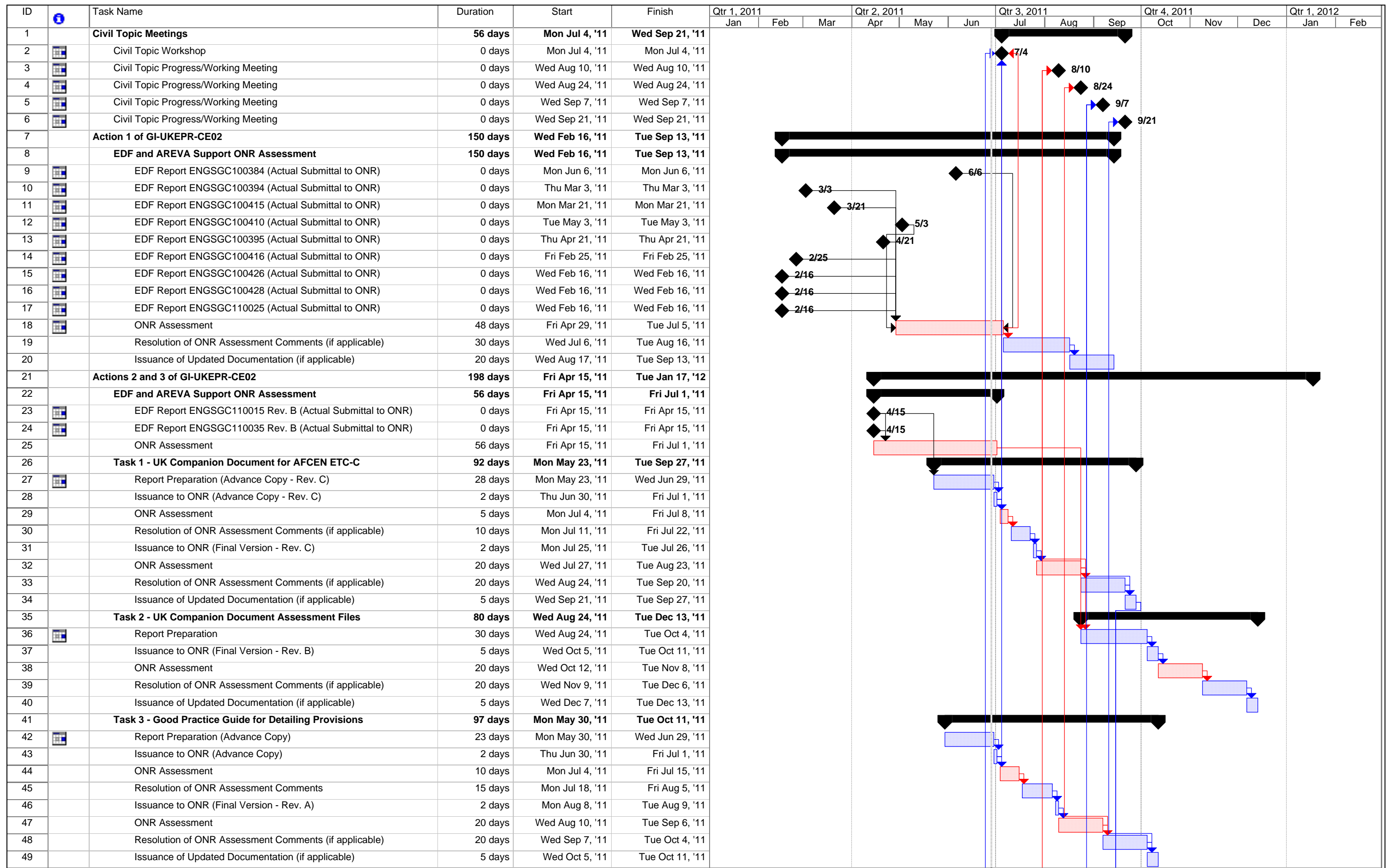
Structures, systems and components that are important to safety should be designed, manufactured, constructed, installed, commissioned, quality assured, maintained, tested and inspected to the appropriate standards.



<b>UK EPR</b>	<b>UK EPR GDA PROJECT</b>			
	Title: Resolution Plan for GI-UKEPR-CE02			
	GI unique number: <b>GI-UKEPR-CE02-RP</b>	Revision No.: 0	Effective Date: 29/06/2011	Page No.: 17 of 17

## 6.0 TIMETABLE AND MILESTONE PROGRAMME LEADING TO THE DELIVERABLES

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



Project: GI-UKEPR-RC02 Schedule  
Date: Tue Jun 28, '11

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

ID	Task Name	Duration	Start	Finish	Qtr 1, 2011			Qtr 2, 2011			Qtr 3, 2011			Qtr 4, 2011			Qtr 1, 2012	
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
50	<b>Task 4 - Methodology Report for Pool Liners</b>	<b>100 days</b>	<b>Mon May 30, '11</b>	<b>Fri Oct 14, '11</b>														
51	Report Preparation	40 days	Mon May 30, '11	Fri Jul 22, '11														
52	Issuance to ONR (Final Version Rev. A)	5 days	Mon Jul 25, '11	Fri Jul 29, '11														
53	ONR Assessment	25 days	Mon Aug 1, '11	Fri Sep 2, '11														
54	Resolution of ONR Assessment Comments	25 days	Mon Sep 5, '11	Fri Oct 7, '11														
55	Issuance of Updated Documentation (if applicable)	5 days	Mon Oct 10, '11	Fri Oct 14, '11														
56	<b>Task 5 - PCSR Update – Sub-chapter 3.3</b>	<b>85 days</b>	<b>Wed Sep 21, '11</b>	<b>Tue Jan 17, '12</b>														
57	PCSR Update Preparation (Advance Copy)	30 days	Wed Sep 21, '11	Tue Nov 1, '11														
58	Issuance to ONR (Advance Copy)	5 days	Wed Nov 2, '11	Tue Nov 8, '11														
59	ONR Assessment	20 days	Wed Nov 9, '11	Tue Dec 6, '11														
60	Resolution of ONR Assessment Comments (if applicable)	20 days	Wed Dec 7, '11	Tue Jan 3, '12														
61	Issuance of Updated Documentation (if applicable)	10 days	Wed Jan 4, '12	Tue Jan 17, '12														
62	<b>Task 6 - PCSR Update – Sub-chapter 3.8</b>	<b>85 days</b>	<b>Wed Sep 21, '11</b>	<b>Tue Jan 17, '12</b>														
63	PCSR Update Preparation (Advance Copy)	30 days	Wed Sep 21, '11	Tue Nov 1, '11														
64	Issuance to ONR (Advance Copy)	5 days	Wed Nov 2, '11	Tue Nov 8, '11														
65	ONR Assessment	20 days	Wed Nov 9, '11	Tue Dec 6, '11														
66	Resolution of ONR Assessment Comments (if applicable)	20 days	Wed Dec 7, '11	Tue Jan 3, '12														
67	Issuance of Updated Documentation (if applicable)	10 days	Wed Jan 4, '12	Tue Jan 17, '12														
68	<b>Action 4 of GI-UKEPR-CE02</b>	<b>86 days</b>	<b>Tue Jun 14, '11</b>	<b>Tue Oct 11, '11</b>														
69	<b>EDF and AREVA Support ONR Assessment</b>	<b>86 days</b>	<b>Tue Jun 14, '11</b>	<b>Tue Oct 11, '11</b>														
70	EDF Report ETD0IG/110305 (Actual Submittal to ONR)	0 days	Tue Jun 14, '11	Tue Jun 14, '11														
71	EDF Report EDTGC110381 (Actual Submittal to ONR)	0 days	Wed Jun 15, '11	Wed Jun 15, '11														
72	ONR Assessment	40 days	Wed Jun 15, '11	Tue Aug 9, '11														
73	Resolution of ONR Assessment Comments (if applicable)	30 days	Wed Aug 10, '11	Tue Sep 20, '11														
74	Issuance of Updated Documentation (if applicable)	15 days	Wed Sep 21, '11	Tue Oct 11, '11														

Project: GI-UKEPR-RC02 Schedule  
Date: Tue Jun 28, '11

Task: Progress: Summary: External Tasks: Deadline:

Split: Milestone: Project Summary: External Milestone:

Page 2