

**GENERIC DESIGN ASSESSMENT
PROGRESS REPORT
REPORTING PERIOD 1 JULY 2011 – 30 SEPTEMBER 2011**

FOREWORD

This is our latest routine quarterly report on the progress of Generic Design Assessment (GDA) of the AP1000[®] and UK EPR[™] reactors. It follows publication of our GDA Issues and the Requesting Party (RP) resolution plans in July.

The only resolution plans that have not yet been agreed are those that are necessary to address the Fukushima GDA Issue. Now that the HM Chief Inspector's report on Fukushima has been published, the RPs can make progress on developing these. If we judge these to be credible, we will consider, for each reactor design, provision of an interim Design Acceptance Confirmation (DAC) and interim Statement of Design Acceptability (SoDA) and we expect to be in a position to do this by the end of 2011.

The timescale for our forward work plan is largely dependent on the RP work programmes and we will continue to publish regular reports on our progress with this work.

No nuclear island safety-related construction will be allowed until all of the GDA Issues relating to that design have been addressed to our satisfaction and a final DAC and SoDA have been issued. We therefore remain confident that GDA is an effective and efficient process for ensuring that safety, security and protection of the environment can be assured as the new build programme develops and that the Issues can be cleared well in advance of construction of new reactors in this country.

If you have comments on any aspect of this report then please send them to us at: new.reactor.build@hse.gsi.gov.uk.

Kevin Allars

Director for Nuclear New Build
Office for Nuclear Regulation

Joe McHugh

Head of Radioactive Substances Regulation
Environment Agency

PUBLICATION OF GDA ISSUES AND RESOLUTION PLANS

- 1 On 14 July 2011 we achieved the major milestone of publishing all the GDA Issues and the RP resolution plans that were available and which we considered credible (www.hse.gov.uk/newreactors/reports.htm). This was a significant event as it marked the end of our planned assessment and clearly showed what still needed to be done to fully complete GDA. Ahead of this we had successfully completed a significant amount of assessment of the generic safety cases for the two reactor designs, the RPs had worked hard to close-out many of the technical questions we raised, and we accepted many aspects as adequate.
- 2 We have not identified any showstoppers and we now are left with a set of GDA Issues that need to be addressed before we could complete our assessment and decide whether to provide a Design Acceptance Confirmation (DAC, as issued by ONR) or Statement of Design Acceptability (SoDA, as issued by the Environment Agency).
- 3 Our assessment conclusions and GDA Issues were summarised in the last quarterly report and the feedback we have received from stakeholders has supported the openness and transparency of our assessment.

CONSIDERATION OF THE FUKUSHIMA ACCIDENT

- 4 The only resolution plans that have not yet been agreed are those which require the RPs to address the lessons learnt from the Fukushima nuclear accident.
- 5 Following publication of the Chief Inspector's interim lessons learnt report in May (www.hse.gov.uk/nuclear/fukushima/interim-report.pdf), both RPs responded to the invitation to submit information on the implications of the Fukushima nuclear accident. This included initial outlines of what a resolution plan on this topic might contain.
- 6 Production of the Chief Inspector's Fukushima interim and final reports has required assistance from many inspectors across ONR and the Environment Agency and this has included a number from the GDA teams. This did delay completion of our Step 4 assessment reports in some topic areas but will not affect the planned publication of all reports later in 2011.
- 7 Now that the Chief Inspector's final report on Fukushima has been published (www.hse.gov.uk/nuclear/fukushima/final-report.pdf) the RPs can work to develop their resolution plans to demonstrate how they will address the lessons learnt, both from the Chief Inspector's and their own reviews.

PROVISION OF INTERIM DAC AND INTERIM SODA

- 8 We expect to examine the Fukushima-related resolution plan for each reactor design shortly. If we judge these are credible then we will consider provision of an interim DAC and interim SoDA for each reactor design by the end of 2011. In this event, we would publish reports as follows:
 - For ONR, we would publish a report for each reactor design that summarises our GDA work and explains our decision to provide an interim DAC. This would reference the full suite of technical assessment reports that we will publish in parallel.
 - For the Environment Agency, we would publish a decision document for each reactor design that summarises our GDA work and explains our decision to provide an interim SoDA. This would reference the full suite of final assessment reports that we will publish in parallel. The decision documents will explain how we have considered all the comments we received when we consulted on our findings to date in Summer

2010. The responses are available on the Environment Agency website (<https://consult.environment-agency.gov.uk/portal/ho/nuclear/gda>).

- 9 This is in-line with the GDA programme changes that we set out in our January-March 2011 quarterly report (<http://www.hse.gov.uk/newreactors/reports/gda-q1-11.pdf>).

GENERAL PROGRESS OVERALL

- 10 Having successfully published the GDA Issues and resolution plans in July, our work entered a transitional phase comprising several separate elements:
- Completion of our Step 4 technical assessment reports in preparation for their publication later this year, and, for ONR, rebranding them to reflect our new organisation.
 - Planning the work required to be able to take a decision and then, if appropriate, provide an interim DAC and interim SoDA.
 - Reorganising our teams following completion of the GDA planned assessment work on both reactor designs, and to take account of the Westinghouse “pause” (see below).
 - Holding a regulators’ workshop to capture the lessons learnt from GDA.
 - Detailed planning of the assessment of the responses to the GDA Issues for the UK EPR™ reactor, and other work that would be required to lead up to decisions on whether to provide a DAC and SoDA (see below).
 - Development of new reporting metrics.
 - Discussion of the funding arrangements to allow our work to continue up to decisions on: the interim DAC and SoDA for the AP1000® reactor; and the full DAC and SoDA for the UK EPR™ reactor.
- 11 This transitional work will come to an end with the publication of our Step 4 reports and interim DAC / SoDA decisions later this year. The remaining work on GDA is developing into two streams progressing at different paces, one for the AP1000® reactor and one for the UK EPR™ reactor.

WESTINGHOUSE PAUSE

- 12 Westinghouse has committed to providing the information required for it to achieve the interim DAC and interim SoDA for its AP1000® reactor design. It has, however, signalled that it will not proceed to address any of the GDA Issues until it is able to secure funding for this work. Therefore, the resolution plans do not have start dates assigned to them, but they are based simply on estimated overall timescales.
- 13 As a result of this pause we have reduced work on the AP1000® reactor and released GDA staff onto other work within ONR and the Environment Agency. This means that should Westinghouse want to re-start the GDA work, and address the GDA Issues, there will have to be a re-mobilisation phase. During this phase Westinghouse would have to re-mobilise its GDA team, re-baseline the resolution plans and provide to us more details so that we could produce project plans for our assessment. In parallel, we would have to re-assemble our regulatory assessment teams, and technical support framework, and make plans to manage and assess the resolution plan outputs.
- 14 We have agreed with Westinghouse financial arrangements sufficient to fund us through to provision of an interim DAC and interim SoDA. Further funding would be required to

remobilise our resource and undertake assessment work related to clearing the GDA Issues.

GDA CLOSE-OUT PHASE FOR THE UK EPR™ REACTOR

- 15 EDF and AREVA are executing their resolution plans without delay and have committed to provide sufficient evidence to us to secure provision of a full DAC and SoDA. We have been planning our assessment of the resolution plan deliverables in detail, and have already started assessment in some topic areas. We refer to this work as the GDA close-out phase for UK EPR™ reactor.
- 16 A significant number of EDF and AREVA's resolution plan deliverables have already been delivered and the remainder are planned to arrive over the next 12 months. A few of the deliverables have been late or do not provide the quality of information or depth of evidence that we expected. We will monitor this situation and if necessary discuss with EDF and AREVA what effects it could have on overall programmes.
- 17 An essential element of our GDA work has been the support work of our technical support contractors (TSCs). We have started the process of engaging TSCs in some topic areas to support our assessment during the GDA close-out phase.

METRICS AND REPORTING

- 18 Our next major reporting milestone will be the publication of our ONR Step 4 assessment reports and EA decision documents and, if we are content with the Fukushima resolution plans, publication of those plans and provision of an interim DAC and interim SoDA, together with supporting summary documents that will describe the conclusions of our planned GDA assessment to date. We expect these to be published before the end of 2011.
- 19 After this, our focus will be fully on the GDA close-out phase for the UK EPR™ reactor. We intend to continue regular progress reporting. In support of this, we have been developing new reporting metrics to help illustrate progress on the GDA Issues. It is our intention to start publishing these in our next quarterly progress report.

INTERACTIONS WITH WIDER NEW BUILD PLANS

- 20 As GDA is running in parallel with some site specific projects, we have had further discussions with EDF, AREVA, NNB GenCo, Horizon Nuclear Power and NuGen about key points from GDA that might have an affect on their licensing and construction plans. Some significant milestones were completed recently in this wider new build programme, notably
 - the Nuclear Site Licence and operational environment permit applications for Hinkley Point C were received in July (see our websites at <http://www.hse.gov.uk/nuclear/hinkley-point-c/index.htm> and <http://www.environment-agency.gov.uk/hinkleypoint>); and
 - the ONR's Chief Inspector and EA's Head of Radioactive Substances Regulation signed the respective Regulatory Nuclear Interface Protocols with NuGen in September.

WORKING WITH OVERSEAS REGULATORS

21 We have continued to work with overseas regulators. Of particular note during this last quarter were several MDEP (Multinational Design Evaluation Programme) meetings including the bi-annual MDEP conference, details of which are available at <http://www.oecd-nea.org/mdep/events/conf-2011/>

MORE INFORMATION ON GDA

To find out more about Generic Design Assessment (GDA) - visit: www.hse.gov.uk/newreactors

To receive the latest news and information on GDA, subscribe to our eBulletin by visiting www.hse.gov.uk/newreactors/ebulletin.htm

ANNEX 1 Summary of Regulator Charges**Regulatory costs charged to Requesting Parties to the end of June 2011**

(One quarter behind the rest of this report):

Office for Nuclear Regulation

Westinghouse: £22.37m

EDF and AREVA: £22.25m

Environment Agency

Westinghouse = £2.2m

EDF and AREVA = £2.19m