

HSE GENERIC DESIGN ASSESSMENT**PROGRESS REPORT****REPORTING PERIOD 1 JANUARY 2009 – 31 MARCH 2009****FOREWARD**

I am pleased to present here the first Generic Design Assessment (GDA) quarterly report. It summarises where we are and what the key challenges are moving forward. HSE's Nuclear Installations Inspectorate (NII) is, first and foremost, recognised as an independent and highly competent nuclear regulator, but to make GDA a success we need to engage closely with government and industry, and this report also summarises some of those exchanges. HSE is working jointly with the Environment Agency on GDA, and future reports will also describe progress on the Environment Agency's assessment activity.

HSE is determined to deliver GDA to time and quality, and to provide more assurance to that successful end point. Following the consideration of recommendations made in two consultants reports I commissioned in this last quarter, I am signalling separately today some organisational changes to my team in HSE which are targeted at improving the focus on Programme and Project Management, and thereby improved planning, delivery and transparency of direction. HSE is also vigorously pursuing a recruitment campaign based on improved salary and benefits for Nuclear Inspectors, and is also addressing other changes recommended in the 'Stone Report'¹. My new role in the process is to improve the senior management focus in HSE on GDA. I intend to deliver publicly available assessment reports at the end of Step 3, in November this year, and the end of Step 4 in June 2011. In producing these reports I will ensure transparency of process and progress, together with the efficient use of all available resource and leverage opportunities to deliver a meaningful GDA on which future decisions can be based. My first impressions of this project have been positive, and although GDA remains a significant challenge, I am confident that the HSE and industry teams can ensure a successful outcome.

Kevin Allars
Director, New Nuclear Build Generic Design Assessment
Health and Safety Executive

For more information on our work to assess new nuclear power stations, visit our website at:
www.hse.gov.uk/newreactors

¹ The Nuclear Regulatory Review produced for the Government by Dr. Tim Stone in 2008.

EXECUTIVE SUMMARY

General progress remains satisfactory towards a June 2011 completion date for GDA of the two designs currently being assessed, the AP1000 and EPR, and also for the update (Step 3) report being issued in November this year. Resource shortage remains a key threat to satisfactory progress, and mitigation measures are being implemented. Extensive interchange with the Requesting Parties (RPs), potential licence applicants, overseas regulators and other stakeholders continues.

REPORT

Programme

Step 3 Reports will be published on 27 November 2009 and Step 4 Reports in June 2011. Other key near-term milestones are shown in Annex 1. This data will be developed further into a plan better reflecting regulator, government and industry milestones. The 'top ten' project issues that threaten achievement of this programme are given in Annex 2.

Key Requesting Party (RP) Interactions

Effective, regular and routine interactions with EDF/AREVA and Westinghouse have continued to take place (a meeting summary is in Annex 3). Technical meetings are a mix between those held in the UK and those in France or USA, with the latter requiring careful planning by both the RPs and ourselves to get the maximum benefit from the long distance travelling involved.

We held our first meeting with EDF (as a potential licensee) on the 26 February, and further meetings are planned over the coming months. EDF produced a draft programme for the construction of its first reactor in the UK, aimed at having the first reactor ready for operation before the end of 2017. For this to be achieved, EDF will need to submit an application for a site licence in parallel to the GDA process, as well as starting the early procurement of key pieces of equipment ahead of GDA completion. This will have significant resource implications for NII, and both ND and the Environment Agency are looking at how these can be accommodated.

We have had a recent discussion with General Electric – Hitachi in which they confirmed that they wish to keep the assessment of their design (the ESBWR temporarily suspended from the GDA process).

GDA 'Confirmation' Outcome

During the GDA process a number of questions have already arisen, and will inevitably continue to arise. These are called Technical Queries (TQs), and there is a formal procedure in place for both raising and clearing these TQs. The precise number at any one time is less important than the quality of the response and the response time, as these can affect our ability to efficiently and effectively carry out our assessment. RP's progress in responding to TQs is shown in Annex 3, which indicates that there have indeed been significant delays in some of the RPs'

responses. For GDA to meet its targets, the full proactive engagement of the RPs will be required.

One difference introduced by GDA, when compared with previous assessment regimes, is that NII and the Environment Agency will issue a Confirmation Certificate or a Statement of Acceptability, at the end of their assessments. Both regulators therefore need to have an assurance that the design and safety case are sufficiently advanced and frozen to form a sound basis on which to issue these documents.

The present position is that neither design is complete, which makes our assessment more difficult. The greater the shortfall in the content and clarity of the information submitted by the RPs, the more difficult our assessment becomes, with a greater chance of TQs being elevated to become more serious Regulatory Observations or Regulatory Issues. This in turn is likely to lead to more areas being excluded from the GDA Confirmation (using what are presently called Exclusions), and the less meaningful the GDA Confirmation will become as a means of providing design assurance. Our intention is that there should be as few exclusions as possible, but as many as necessary, and with none due to GDA assessment resource constraints.

We recognise that it is very important that there is a robust process for managing and closing any Exclusions which remain beyond the Step 4 report, as we want to reduce the regulatory uncertainty for the RPs, Government decision-makers and potential licensees during the nuclear site licensing assessment process. We also wish to reduce the possibility of licensing timescales being extended significantly. We will shortly be publishing guidance on this topic.

Resources

The NII team for GDA is currently around 80% staffed, with the Environment Agency at full compliment. The NII position has improved through Q1 2009 as some success has been achieved through a combination of recruitment and internal staff moves, although a careful balance has been required between placing new and experienced inspectors in the GDA team. On 23 March, NII launched its new recruitment campaign with revised salaries, and has signalled new working locations in Cheltenham and London. This should, we hope, attract an increased number of new recruits, which will help the GDA programme. The GDA resource plan is based on successful recruitment allowing staff in NII with the necessary skills and experience to be in place and engaged in GDA activity by December 2009. The aim is to provide a stable and properly resourced team through to June 2011 and beyond.

The overall target of completing a substantial GDA assessment by June 2011 remains a significant challenge, but we remain confident it can be achieved given the urgent progress now being made on the recruitment/redeployment of staff and the restructuring of the team.

Technical Issues

As is normal for this kind of project, many technical issues are being progressed. Significant among them are:

- The architecture of the control and instrumentation system
- The level of information available on spent fuel and radwaste
- Pressure boundary component integrity validation
- Protection against internal hazards (eg fire)
- Safety classification of systems
- Reliability claims made in the safety analysis

Use of Technical Contractors and Working with Overseas Regulators

Following an international (EU) tendering exercise, a wide-ranging technical support framework has been put in place by NII. Under this framework, 31 preferred contractors have been chosen to support GDA and other NII assessment activities. The first 8 Technical Support Contracts, with a value of £1.3M, have now been placed for GDA-related work. These will help accelerate our technical assessment.

We are also working with overseas regulators, particularly those in the United States of America, France and Finland, with whom, over many years, there has been good and close liaison. The two designs now being assessed emanate from the USA and France respectively. A meeting summary is included in Annex 3. In the last quarter the interactions have primarily been on the topics of pressure vessel integrity and control and instrumentation.

We will take into account relevant overseas regulators' assessments where these can provide additional assurance to our own assessment work. Input from Technical Support Contractors is treated similarly. To explain our strategy we have published on our website the document *New Nuclear Power Stations GDA – Strategy for working with overseas regulators*. However, the GDA decisions will be made on the basis of our UK regulatory assessment, which will then be taken forward into the detailed site specific phase. Any Nuclear Site Licences will continue to be issued by the UK's NII on the basis of its own detailed assessment.

Stakeholder Engagement

A wide range of stakeholders are interested in GDA, and interaction with them is important. In March we re-launched the Joint Regulators' New Reactors website (which had 1500 hits on the first day) and sent an e:Bulletin to over 2000 people who that have registered their interest. We have also attended several Site Stakeholder Group meetings around the country, and plan to hold further meetings with Non Governmental Organisations.

Security Issues

The Office for Civil Nuclear Security (OCNS), which is part of HSE's Nuclear Directorate, is responsible for approving security arrangements within the industry, and enforcing compliance. OCNS is an integral part of the joint GDA team. There are some sensitivities between maximising public openness and protecting sensitive information, which we are managing. Resolution of some issues around this topic is ongoing, and is delaying our progress in some areas of the GDA project. Mitigation action is underway to improve the situation. Progress towards developing

Conceptual Security Plans for the two designs continues and will be delivered within the GDA assessment window.

Working with Department for Energy and Climate Change (DECC)

DECC, specifically their Office for Nuclear Development (OND), is the sponsoring Government Department for new nuclear development. OND is leading on topics such as strategic siting, justification, and long-term radioactive waste management, and we work closely with DECC officials to ensure their work integrates with GDA. This does not affect our independence as nuclear regulators.

Planning for Site Licensing/Interaction with future Operators

Before construction of nuclear power stations begins, a Nuclear Site Licence and various environmental permits are required. NII and the Environment Agency have been engaging with potential future operators for around 2 years now, to help them understand the requirements of the licensing and permitting process. On 13 May we will host a seminar for requesting parties and potential reactor licensees (this being a follow-up to a similarly targeted seminar held last year). In addition, EDF has signed an Agreement with ND so that we can start giving them formal advice on their preparations for site licensing, and the Environment Agency is pursuing a similar agreement.

We have also been engaging in discussions with industry to help us develop additional guidance about the interface between the end of GDA and the site licensing process, including the definition, content and clearance arrangements for the GDA exclusions mentioned earlier.

ANNEX 1 GDA NEAR-TERM PROGRAMME MILESTONES

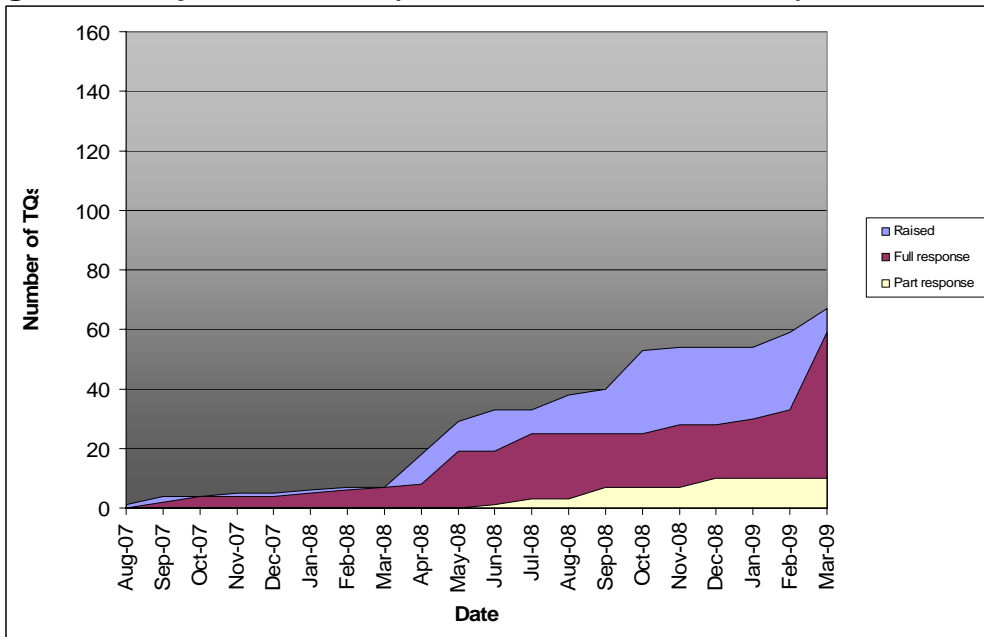
No.	Date	Milestone	Comments
1	Jan 09	Technical Support Framework in place	Complete
2	07/05/09	1 st quarterly report published	
3	30/04/09	Guidance Published for Operators' Workshop	
4	13/05/09	Seminar/Workshop for potential licensees	
5	20/07/09	2 nd quarterly report published	Will be regular thereafter
6	27/11/09	Step 3 Report Published	Also supplies EA with adequate information for their Consultation
7	27/11/09	Confirmation that HSE will move to Step 4	
8	May 2010	Environment Agency public consultation	
9	Mid 10	Comfort statements on EDF long lead items	EDF have requested these in relation to their intended programme for Hinkley Point

ANNEX 2 TOP TEN PROJECT ISSUES

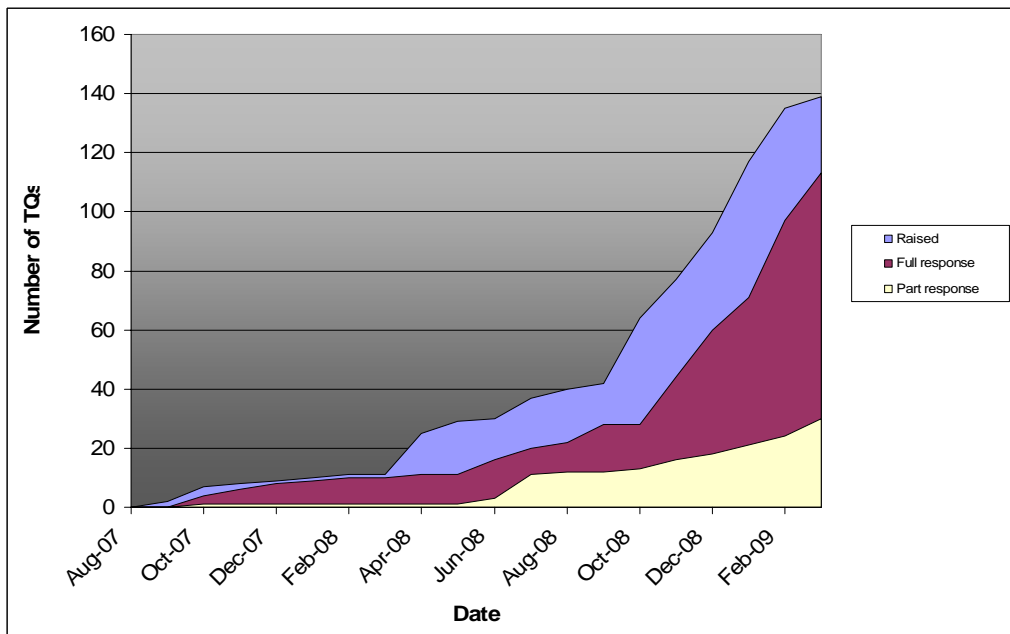
Issue	Description	Actions
1	Lack of sufficient, suitable assessment resource for Steps 3 and 4.	<ul style="list-style-type: none"> - Improved recruitment/redeployment with new terms and locations. - Support from contractors. - Removal of non-GDA distractions (non-GDA work undertaken by GDA staff). - Increased Project Management resources to be deployed.
2	Phase 2 Site Licensing in parallel with GDA.	<ul style="list-style-type: none"> - Plans being developed to address this. - GDA Joint Programme office used as gateway for RPs, with non-GDA NII providing assessment resource.
3	Large number of issues remain at end of GDA.	<ul style="list-style-type: none"> - TQ, RO, RI process in place for early identification of issues: RPs need to respond. - Well-signalled exclusions. - Design completion to be progressed. - Exclusion guidance being developed.
4	Lack of clarity on security issues.	<ul style="list-style-type: none"> - Revised OCNS guidance being developed for information publication.
5	Effectiveness of communication to key stakeholders.	<ul style="list-style-type: none"> - Quarterly reports to be introduced. - Website improved & re-launched. - HSE and EA both inputting to improved communications.
6	Suitable metrics for effective monitoring and control of the GDA programme.	<ul style="list-style-type: none"> - Increased Project Management resources being introduced. - Additional metrics being developed.
7	No agreement in place with the RPs (and potential licensees) for the preferred management and quality assurance process for the design and manufacture of long lead items.	<ul style="list-style-type: none"> - Long lead item guidance under development by NII, in discussion with industry.
8	Governance arrangements for the Site Licensing process and its interface with the GDA programme not formalised.	<ul style="list-style-type: none"> - Management arrangements for GDA and site licensing being developed. - NII to resource licensing from wider non-GDA pool.
9	Detailed assessment plans are not yet available for all of the 15 NII technical assessment areas.	<ul style="list-style-type: none"> - Plans are in place, and are being further developed. - Resource to be allocated to meet the detailed plans.
10	Overseas regulator interface not providing anticipated benefits.	<ul style="list-style-type: none"> - New strategy published. - Continue current efforts and review use of overseas regulators information to ensure it's maximised.

ANNEX 3 GDA INTERACTION METRICS

Westinghouse response to TQs (correct at end March 2009)



EDF/AREVA response to TQs (correct at end March 2009)



MEETING SUMMARY DURING Q1 2009

Westinghouse	19, of which 15 were in the UK, and 3 in USA
EDF/AREVA	20, of which 11 were in the UK, and 9 in France
GE-Hitachi	1

Overseas regulators meetings:

France – 1; USA – 1; Finland – 1; Multi-National - 4