

# **The Civil Nuclear Reactor New Build Programme - Generic Design Assessment -**

## **Second Report**

from

**The GDA Process Review Board**

to

**Her Majesty's Chief Inspector of Nuclear Installations\***

**22<sup>nd</sup> December 2008**

## **1. Introduction**

The Project Review Board (PRB), an established part of the governance framework for the Generic Design Assessment (GDA) process, presented its first report to HM Chief Inspector of Nuclear Installations in March 2008. Among its various recommendations, the report suggested that it would be helpful to review progress again later in the year. Following acceptance of this suggestion, the PRB was asked in November 2008 to prepare a further short review report for HM Chief Inspector to provide an assessment of the responses to the recommendations made in the first report, to up-date on the context for GDA and to consider the implications of developments since March. In undertaking this second review, we consulted with a number of key parties over the course of a two day visit to HSE headquarters at Bootle, as well as reading and assessing various documents and other materials prepared since our initial review. The following report summarises our findings in relation to the following five issues considered to be especially important at the time of writing:

- I. The public involvement process
- II. Interagency relationships and partnership working
- III. Project management
- IV. Recruitment, resourcing & meeting the schedule
- V. Strategic leadership and change management

Before discussing each of these in turn, however, we begin with a brief overview of progress and developments since our initial report.

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\* This report by the Process Review Board has been commissioned by, and prepared for, HM Chief Inspector of Nuclear Installations. In the spirit of 'openness' to which the NII is committed, we hope that in due course it will be made widely available, for example by publication on the HSE website.

## **2 Progress since March 2008 and the changing context for GDA**

Much progress has been made since our first report in March 2008, and indeed most of our recommendations were subsequently accepted. Moreover, significant progress has also been made in implementing many of those recommendations, in addition to the core task of progressing the programme from Step 2 into Step 3. Among the highlights here have been:

- The completion of Step 2 broadly to the intended timetable, and culminating in the publication of some 50 reports.
- Agreement being reached with the Requesting Parties on a new fees schedule for NII's work.
- Progress in identifying technical subcontract specialists and in preparing a set of work packages, each with a Project Initiation Document (PID) and with a draft contract for a Technical Service Contract (TSC).
- Conduct of a series of theme-based reviews of the Step 2 process with various actions being implemented.
- Completion of negotiations to secure enhanced salary package arrangements for professional staff to enhance recruitment and retention prospects in the very competitive labour market for nuclear engineering expertise.
- Commissioning of two specialist recruitment agencies to assist in finding potential candidates to fill vacancies, and reaching of agreement to establish two satellite offices - in Cheltenham and in London – which should also assist in attracting more applications for assessor posts (i.e. by those preferring to work in the south of the country).
- Collaboration with the Environment Agency in the preparation of a new 'combined risk register', and agreement to develop appropriate action plans.

But a further conclusion we have reached is that there is still a long way to go in ensuring that the GDA process stays on track and that its objectives are indeed achieved to time and to the high standards expected. In this context we have noted that a number of the issues raised in our previous report, (particularly in relation to resourcing constraints and issues with overall management of the programme), remain unresolved and of course are becoming more urgent and potentially problematical as time goes by. Furthermore, since March, there have been some significant changes in the wider context within which GDA is operating and with further developments 'in the wind' concerning the organizational status of the Nuclear Installations Inspectorate which are likely to have implications for the programme. Such changes and developments include the fact that:

- there are now just two Requesting Parties and reactor designs left in the GDA frame (compared with four when we reported last).
- Governmental and ministerial oversight for the civil nuclear reactor, new build programme has moved from the Department for Business Enterprise and Regulatory Reform (DBERR) to the new Department for Energy and Climate Change (DECC).

- A review of nuclear regulation (The Stone Review) is shortly to report and is likely to recommend changes to the organizational and governance arrangements for the NNI. A post of ‘Transition Manager’ has already been created, and although the future and its implications are not yet fully clear, the prospect of change will itself present an additional challenge for the NII and require careful management to ensure that the organization stays focused on GDA and delivers step 4 to schedule.

### **3. Public Involvement**

- 3.1 ‘Public Involvement’ has been an important plank of the GDA process from the outset, and the underlying values and philosophy, together with some of the particular initiatives taken in this context, have provided a ground-breaking benchmark for the Nuclear Directorate more generally. We have been impressed by the strong commitment within ND6 to the principles of openness and transparency, and to the determination to engage with key stakeholder groups in the nuclear new build programme – notably communities and citizens in local areas being considered as possible sites for new civil nuclear plants, local authorities in those areas, and also non-governmental organisations concerned about the new build programme. It will be helpful now for this commitment to become embedded more widely through ND.
- 3.2 It is our understanding that, to date, no market research has yet been undertaken to assess the impact of the public involvement work undertaken thus far and of public aspirations and expectations in this context. Such market research would be valuable in providing strong foundations for planning the next steps and, importantly, in informing the development of a more comprehensive strategy for ‘public involvement’ – to guide the translation of the high-level values of openness, transparency and public involvement into a co-ordinated and coherently-devised programme of actions.
- 3.3 Now, more than previously during Steps 1 and 2, we think it important that ND is very clear about its strategy in relation to public involvement – and particularly about its purposes and the limits here. While various initiatives and actions have taken place, or are planned, in this context, and while the overriding values of openness and transparency etc. have been well articulated, it would be helpful for these to be more clearly based on a framework of principles and purposes for public involvement that give stronger coherence to the actions, and that provide strong rationale and objectives for what is inevitably a diverse set of activities – for example, seminars with NGOs, website development, workshops with local authorities, and the public comments process (run by the JPO).
- 3.4 Above all, we consider that a key objective and purpose for public involvement should be to protect and enhance the reputation of NII as an independent regulatory body in which the public can have confidence as to its commitment to safety, its specialist expertise, and the robustness of its assessment and inspectoral processes. These, we are sure, are the all-important messages that should underpin

initiatives in its public relations work and in pursuing an openness policy more generally. At the same time, it is vital that NII is not misunderstood as being a leader or promoter of the Government's policy to develop and use of nuclear power nor, indeed, as unduly 'industry-friendly'. '*Reputation-building for independence and expertise*' should, we are sure, be the key driver for the NII's public involvement efforts.

- 3.5 One early strand of the public involvement work was to achieve from each of the Requesting Parties (RPs) a public-friendly website explaining their design. In our February report we made the recommendation that the web-pages then available for public viewing should be further developed and enhanced for improved accessibility and value to lay audiences. Nine months later, however, and now with just two RPs currently committing to GDA, no obvious progress has been made in this respect and, indeed, the RPs have signalled their intention to suspend further web-site development work and instead simply to upload a series of safety report documents in pdf format. This is disappointing from the viewpoint of public involvement. But it seems there is little that NII can do beyond continuing to emphasise to the RPs the value to themselves and their reputations of committing to the policy and to helping to build good public relations through user-friendly web-pages.
- 3.6 The templates we have seen for new HSE web-pages for the nuclear new build assessment process (which begin with a focus on the 'new build' programme rather than on the GDA process) look to be a great improvement on the current ones, especially with regard to user-accessibility and overall design. However, unless the DECC and the EA also soon develop similarly dedicated and informative web pages, with direct links to the HSE pages (and vice versa), there is a danger that the ND could be mistakenly perceived as providing the policy leadership for new build, as opposed to its proper role as guardian of public safety. This needs discussing and resolving with the DECC and the EA as a matter of priority.
- 3.7 There has been some slippage on the timetable for the website development project. But this is surely justified by the strong emphasis that has been given to ensuring high quality communication in 'plain English' on each web-page (for which purpose, specialist consultants have been providing valuable advice). In much the same vein, we also welcome the work currently in progress with a consultant to simplify and make the Safety Assessment Principles (SAPs) more accessible and comprehensible to a lay readership
- 3.8 Another seminar for NGOs interested in the new build programme was held in June 2008 – and with a good number of NGO delegates participating... We understand this to have been a generally worthwhile event, despite the delegates' deep-rooted antipathy towards a new build programme. However, there seems to have been unfortunate delay in follow-up actions – i.e. circulating the notes of the meeting and in providing, as previously agreed, written answers to a series of questions tabled on the day by the NGOs. While several of those questions were evidently more appropriately directed towards

government than the NII or the JPO, the delay is likely to have been damaging to the goodwill and trust-building that the event had engendered and, worse, perhaps also denting the credibility of the commitment to openness and public involvement policy as a whole. There are lessons to be learned here both about giving priority to ensuring timely follow-up for such events, however challenging the circumstances, and also about the need to avoid being cast by the NGOs in a role that is properly that of government, i.e. by being placed in the position of having to field questions about aspects of policy on new nuclear build that are beyond the remit of NII.

- 3.9 In the light of the above observations, we welcome the initiative of ND6 to seek assistance in relation to communications planning by calling on the wider ND Communications & Stakeholder Engagement Team (CASE). However, here again, we think it will be helpful if a rather more strategic approach were to be adopted to steer and locate the particular action plans that are being developed. We also have some reservations about the resource levels currently committed to their current programme and therefore to the potential impact of the work.

#### **4. Inter/Intra-organisational relations and partnerships**

- 4.1 The establishment of collaborative working relationships for GDA between ND6 and the EA, and particularly through the shared commitment to the Joint Programme Office has been a considerable achievement to date in terms of institutional development. Moreover, as well as the EA and NII now talking to the RPs more as an entity - as the 'UK regulators' – another recent milestone in joint-working has been the preparation of a new shared risk register and the intention to develop shared responses to the issues it includes.
- 4.2 But we sense that the relationship between EA and NII can usefully be developed further in pursuit of a still more integrated approach to the new build programme. It will be important to take all opportunities to emphasise 'jointness' wherever appropriate, for the benefit of RPs, the public and other stakeholders. We were surprised, for example, to learn that ND6 is currently carrying the lion's share of responsibility for the JPO and think that, as the work programmes develop, EA ought to grow its resourcing contribution accordingly.
- 4.3 There are inter-organisational issues to be addressed concerning site licensing, which will become increasingly significant from now on. In this regard, there is an urgent need to clarify the detail impact of the licence process within ND. A decision has already been taken to continue the Division 3 licensing role for new build and to use the JPO for interfacing with the operators, but detailed plans as to how exactly the arrangements will work still need to be developed, for example, concerning operator responsibilities where technical GDA issues are intertwined with site licensing issues. We also think it will be important to work out exactly 'who is to do what?' between ND and EA. This is something on which we think the NCRB should give an early steer and perhaps assign the task of detailed planning to a small subgroup (e.g.

one from each of ND3 and ND6) who would report back with proposals and a workplan as soon as possible)

- 4.4 Another key task to be undertaken is the development of a protocol between the ND, RPs and operators covering mechanisms for addressing specific issues such as 'long lead time components' and 'supply chain capacity'. This work, which would logically be led by the project technical inspector and supported by the JPO, is also a priority to assist in handling any changes of plans on the part of RPs and operators, and to minimise the possibility of assessors wasting their time considering designs and plans that happen subsequently to be modified.

## **5. Project Management**

- 5.1 Our recommendation to strengthen the skill mix in ND6 with the addition of dedicated project management expertise, has been acted upon and, to this end, a new specialist team has been established in ND6.
- 5.2 However, there needs to be greater clarity about respective roles and closer co-ordination between the new team and the existing programme management and inspection team. From our viewpoint, the project technical inspectors have a key role to undertake in pulling together the assessment of the designs from each particular RP and of course they have the technical capability to liaise between the ND assessors and the RPs. The project management team, on the other hand, needs to be focused on ensuring coherent plans and highlighting the progression issues (shortcomings as well as achievements) to senior management in a timely fashion to inform decisions on any corrective action needed.
- 5.3 Good progress has been made since March in developing a more managed approach to GDA, for example, with the project management team providing the extra capacity to administer the TSO contracts, creating PIDs for each of the fifteen assessment element functions to guide the assessors' work programmes; developing a standard flow chart for an assessment process, and establishing more focused and routine reporting systems. That said, we still think a greater sense of urgency is called for in relation project management; with a stronger sense of working to clear and frequently-set milestones, with active monitoring and routine reporting to ensuring delivery as intended for each.
- 5.4 We suggest that monthly reporting against each such milestone is preferable to quarterly reports (as had been envisaged) – a point accepted by the head of project management in discussions about the process.
- 5.5 It is our view, moreover, that the approach to project management would benefit from closer conformance with the OGC model that we had recommended in March. This, for example, specifies regular 'Phase Gate Reviews', as key testing steps in the process, and we propose that a first such review should be conducted in February/March 2009 – to take stock of progress on the GDA process,

and particularly to consider in detail the implications of the staffing resources in place by then – an issue which everybody regards to be the most critical factor in determining capacity to complete GDA as intended.

- 5.6 We welcome the fact that our recommendation made in March for the establishment of a monthly Project Director's Control meeting has been accepted. However, unfortunately, it is too early to know how effective this new control process is being, given that the first meeting was not held until the end of September 2008.
- 5.7 Whilst generally staff seem aware of the broad resource/ programme issues, we think there needs to be more timely reporting to senior management and more pace shown in resolving the various issues that hinder completion of projects to the intended schedule. In this respect, we think that the project management team needs to give further consideration to the key control reports that it will be presenting to management.
- 5.8 As indicated earlier, there has been good progress since March with regard to developing a new Risk Register jointly with the EA, and also including within this some 'direction of travel' indicators and an 'action column' (where the risk-minimising actions will be documented). To be useful, this new risk register needs, of course, to be treated as a live document, and as such, being subject to constant review and updating to accommodate new emerging risks (including implications from the Stone Review). The various project boards and panels will also need to take care to scrutinize progress on the actions regularly and in detail (not just approving the chart at the outset on a 'once-and-for-all' basis).
- 5.9 The acceptance of the PRB's recommendation to strengthen the resourcing of the Project Assurance function is welcome. However, we understand that the appointment to this post has been made only quite recently and is still very part time. It is thus too early to know yet how much influence and benefit this is having.
- 5.10 Finally with regard to project management, we would emphasize our view that there is still some way to go in developing and fully detailing the programme of work to be undertaken for Step 3 i.e. an integrated plan that highlights the actions to be undertaken by the ND, the 'deliverables' expected of the RPs and the activities to be undertaken as TSCs.

## **6. Recruitment, Resourcing & Meeting the Schedule**

- 6.1 The recruitment and resourcing problems surrounding the professional side of the organization that were of great concern when we first reviewed arrangements at the beginning of the year remain the most worrying challenge to successful completion of the GDA process. A recent recruitment drive is reported to have produced just 8 new recruits from 140 applicants. Agreement was reached within HSE for additional flexibility on 'starting pay offers' (to make NII more competitive in this highly specialised labour market). However, there remain concerns that this still leaves the Inspectorate struggling to

- attract the high level of talent and experience it requires for GDA and to maintain its strong reputation for excellence.
- 6.2 It is hoped that the plans for two 'satellite' offices to open (in Cheltenham and London) – will provide some attractive alternative work-location choices for would-be-recruits (as well as helping to improve access to nuclear facilities in the south and to government in London). It is also hoped that there is success with the strategy to commission two headhunters to help build interest and applications.
  - 6.3 However, progress on this recruitment issue has been slow and disappointing, and looking ahead from now, there will be increasing risk to the Step 4 completion to timetable in Summer 2011 unless the current vacancies are successfully filled soon. Indeed, failure to recruit a full complement of staff, with the consequence of an incomplete or delayed GDA process, represents a major risk to reputation for the NII.
  - 6.4 There are also continuing issues to be addressed regarding succession planning, with a number of key senior staff now approaching retirement. These must be addressed as well as the overall numbers.
  - 6.5 Moreover, there must be questions about the capacity of Division 6 (as with any organisation) to absorb and develop the number of new recruits, while at the same time engaging effectively with the Technical Support Contractors and keeping the programme on schedule.
  - 6.6 While we understand that there has always been a certain amount of flexibility between what is achieved under Step 3 and under Step 4 respectively, it is of concern to us that so many issues might well become rolled over into Step 4 and that the system could easily become overwhelmed and certification delayed. As indicated, failure to complete Step 4 by Summer 2011 (which marks the end of Phase 1) could be a major 'risk to reputation' - especially so if the EA completes their examination to time (and also given that there are now just two, rather than three, designs in the frame).
  - 6.7 Finally on resources, we were concerned to learn that the JPO, too, is now feeling heavily pressured, not only because of the expansion of its own work, but also because of the demands now being placed on it from other quarters, for example work generated by the IRRS and NSS. The demands of such additional work, risk undermining the capacity of the JPO to maintain high standards in its core business, which will increasingly involve work in preparing for, attending, and following-up on all the public meetings in prospect, as well as the co-ordination of the operator licensing work.

## **Strategic Leadership and Change Management**

- 7.1 As discussed above, there are now some new tensions and pressures developing in the organisation, particularly those being brought about by differential pay levels and by the prospect of change through the Stone Review. Although the final conclusions of that review are, at the time of writing, still awaited, a recent internal bulletin to staff within the NII indicated the possible reformation of ND as an agency. The appointment to an interim post of 'transition manager' must also have intensified the sense of 'change in the air' for all staff.

- 7.2 In such a context, inevitably, some of the attention of senior management risks becoming diverted from the internal issues of programme leadership to managing external affairs, and this in turn implies further resourcing loss from the GDA process, risking both delays and the derogation of policy-formulation and decision-making responsibility to others perhaps less appropriately positioned or qualified.
- 7.3 While we know that the Chief Inspector holds a very clear vision for ND and for its learning capacity and development as a respected and influential regulatory body, it is clear from our review (and despite its limited duration and depth) that there is much to be done in communicating that vision throughout the organisation and in putting in place the foundations upon which it can be built and come to realisation. Moreover, particularly at a time when the Stone Review is raising new agendas and challenges for the organisation, it seems imperative that senior management gives priority to providing the necessary close steer and active leadership to the organisation and to ensure that, whatever institutional changes are called for, these do not distract from the primary business of progressing and completing the new nuclear build programme work to time and to those high standards on which the Inspectorate's reputation for excellence depends.

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