

**PROGRESS REPORT**

**ON**

**NII'S SAFETY MANAGEMENT AUDIT**

**OF**

**B EGL AND BEG(UK)L**

**June 2001**

## **SUMMARY**

This report provides an update on the position reached by NII in its consideration of the responses made by British Energy Generation Limited (BEGL) and British Energy Generation (UK) Limited (BEG(UK)L) in addressing the recommendations arising from the NII Safety Management Audit in 1999. The purpose of the audit was to review the capability of each of the two licensees to continue to discharge its responsibilities in the light of reductions in staff.

Although only a small number of recommendations have been formally closed-out, this is not an accurate reflection of the amount of work that has been undertaken by BEGL and BEG(UK)L and the progress they have made towards resolving the concerns raised in the NII audit report. It was always anticipated that it would take time to close-out the recommendations. The licensees firstly needed to fully consider the issues, then devise, develop and demonstrate the effective implementation of solutions.

BEGL and BEG(UK)L have already undertaken a considerable amount of work to address the recommendations, including the introduction of new or improved ways of working. A key requirement for closing-out recommendations is that the licensees must provide NII with evidence of achievement. This stage is now being approached and NII expects soon to receive the licensees' responses to the bulk of the recommendations.

NII has been largely satisfied with progress to date. The rate of progress at this stage, in terms of the number of recommendations closed-out (6), is not unexpected and is comparable with other major NII audits and team inspections. Taking into account the need for the licensees to demonstrate the success of changes and improvements in key areas, close-out of all the 103 recommendations is unlikely to be achieved until well into 2002.

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## INTRODUCTION

1. In 1999, NII undertook a wide-ranging safety management audit of British Energy Generation Limited (BEGL) and British Energy Generation (UK) Limited (BEG(UK)L), the two nuclear licensees owned by British Energy plc. The purpose of the audit was to review the capability of each licensee to continue to discharge its responsibilities in the light of reductions in staff.

2. The audit addressed the key safety areas of Corporate Management, Engineering Division, Health Safety and Environment Division, and Operations Division. The focus of the audit was the BEGL headquarters and technical centre at Barnwood, Gloucester and the BEG(UK)L centre at Peel Park, East Kilbride. NII teams also made visits to some of the principal contractors who provide technical support to the licensees. NII interviewed a wide cross section of staff to gather information on which to make a judgement regarding the situation in both licensees.

3. A report on the findings and the recommendations arising from the audit was published in January 2000 (Reference 1). The key areas for action by the licensees were:

- BEGL and BEG(UK)L to stop the planned reduction of in-house staff numbers until they can demonstrate their forward work predictions are reliable, and demonstrate that the Management of Change processes will not adversely affect the safety of nuclear plants.
- BEGL and BEG(UK)L to ensure that business plans are matched to the in-house staff capability and perceived work load.
- BEGL and BEG(UK)L to formalise, record and resource the skills base that each requires to underpin the duties of a licensee to retain ownership and control of its operations.
- BEGL and BEG(UK)L to develop and promulgate policies to identify the key considerations and to guide decision making on why, when and how to utilise contractor resource - including their 'intelligent customer' requirements.
- BEGL and BEG(UK)L to investigate the reasons for the high level of overtime worked in certain areas (including estimates of that not reported), and take steps to prevent excessive hours being worked by staff handling nuclear safety related work.
- BEGL and BEG(UK)L, as a matter of urgency, to critically review their Management of Change processes in order to ensure they will incorporate the lessons learned from the change process (including the findings of this audit).

4. In addition, the audit explored the potential impact of the proposed integration of the management and technical teams within the two licensees. NII raised concerns

over the licensing and control requirements that each licensee needed to meet. Concerns were also identified with respect to the state of readiness for integration, should it prove acceptable.

5. Working together, the licensees produced an action plan and programme to address the audit recommendations. Project teams were formed within the licensees to co-ordinate the work required to respond to all the recommendations and NII appointed 'champions' - all members of the 1999 audit team - to take the lead in contacts with the licensees. A staged process for closing-out the recommendations was agreed with the licensees.

6. This report summarises the progress made to date in addressing the audit recommendations. Although only a small number of recommendations have been closed-out, this is not an accurate reflection of the amount of work that has been undertaken by BEGL and BEG(UK)L towards resolving the audit findings. The licensees and NII are seeking effective long term solutions, not quick fixes.

## **CLOSE-OUT PROCESS**

7. Following publication of the audit report, the early interactions between NII and the licensees focused on the requirements for achieving close-out of the recommendations and the approach to be taken. It was agreed that a staged approach would be used. The scope of each stage was defined along with the basis for progressing from one stage to the next. The licensees' programme of work was then based upon this staged approach.

8. There are three stages to the close-out process, namely:

- Stage 1 - the licensees develop proposals for implementation, and initial interactions with NII take place regarding the scope of work;
- Stage 2 - the licensees complete their work and submit responses to recommendations, with evidence of achievement, for NII to assess and decide upon close-out status;
- Stage 3 - follow-up work and/or monitoring required by the licensees or NII to achieve full close-out.

9. The initial stage (Stage 1) involves the licensees in developing proposals and solutions to resolve the problems identified by the audit. During Stage 1, NII liaises with the licensees' teams to ensure that the pertinent issues are being addressed for each recommendation and that, if developed and implemented properly, the proposals are likely to satisfy the recommendations. Because the licensees are developing proposals at this stage, NII does not undertake any detailed assessment. If there are no significant concerns or shortfalls identified in the scope of the licensees' proposals, NII indicates that the process may move into Stage 2.

10. Within Stage 2, the licensees fully develop their proposals and complete the necessary work for each recommendation. When the work has been completed for a specific recommendation and any related changes to working practices have been implemented, a response to the recommendation can then be submitted to NII with the evidence of achievement. The response also needs to identify what measures the licensee has in place to demonstrate the effectiveness of an improvement, including any additional scrutiny to be undertaken during the 'bedding in' phase.

11. The Stage 2 submission provides the basis for NII's assessment as to whether or not the requirements of a recommendation have been met. On completion of the assessment, NII will form a judgement regarding close-out. If the submission is satisfactory, either interim or full close-out will be granted. Interim close-out will apply in cases where NII sees the need for further evidence of successful implementation of an improvement or new way of working or wishes to carry out some form of follow-up inspection prior to full close-out.

12. Where interim close-out is granted, the process moves into Stage 3. This stage will encompass work by NII and/or the licensees. For example, where the licensees are applying additional scrutiny to demonstrate to themselves that an improvement has been effective and the benefits realised, NII is likely to include this within Stage 3 and await the result of the licensees' work. If the results are satisfactory to NII, this could provide an adequate basis for close-out. Upon successful completion of Stage 3, recommendations will achieve full close-out.

13. At the conclusion of this close-out process, every recommendation will have to have had a satisfactory response at Stage 2. In addition, where applicable, the Stage 3 work will need to have been undertaken and completed to the satisfaction of NII. When this position has been reached for all the 103 recommendations, the audit work will be at an end and any continuing checks by NII will be undertaken as part of the normal regulatory activities.

14. BEGL and BEG(UK)L have been working together to address the issues raised by the audit and they have developed common solutions and working practices in response to the key issues. This is acceptable to NII; there is nothing wrong in two licensees adopting the same (good) practices where appropriate. However, NII has emphasised that each licensee must provide responses to the recommendations placed upon it and be able separately to meet the necessary requirements.

## **SUMMARY OF PROGRESS**

15. It was always anticipated that it would take time to close-out all the recommendations because the licensees needed to fully consider the issues then devise, develop and implement effective solutions. NII anticipates that close-out of all the 103 recommendations is not likely to be achieved until well into 2002.

16. NII has been largely satisfied with progress to date. So far, 6 out of the 103 recommendations have been closed-out and a further 7 have been submitted to NII for

close-out assessment. This rate of progress in terms of final close-out is not unexpected and is comparable with other major NII audits and team inspections.

17. It is important to recognise that the number of recommendations closed-out at this stage is not an accurate indication of amount of work that has been undertaken by BEGL and BEG(UK)L and the progress they have made towards resolving the concerns raised in the audit report. NII has been continually monitoring progress as part of the staged close-out process described in the section above. Measured against this process the position is as follows: NII has received 13 Stage 2 responses (of which 6 have been fully closed-out); a further 46 recommendations have moved into Stage 2 and NII awaits the submissions at the appropriate time (i.e. when the work is complete and changes have been implemented); there are 14 recommendations still in Stage 1; and NII has yet to see an initial (Stage 1) proposal on the remaining 30 recommendations.

18. The bulk of the outstanding responses are expected over the next few months, albeit of late there have been some delays by the licensees in submitting responses to recommendations in accordance with their programme. These expected submissions will include the responses covering the key issues from the audit. The licensees have put a considerable amount of effort into addressing these issues and have developed new or improved ways of working in these areas. The current position is summarised below.

### **Planned reduction of in-house staff numbers**

19. The audit report identified the need for the licensees to stop further planned reductions in staff until they could demonstrate that forward work load predictions were reliable and that the flaws in the management of change process had been addressed. The licensees have put in place new processes for both work planning and management of change. However, the processes need to be proven before the audit recommendations (R15 and R77) are closed-out.

20. NII recognises that changes need to be allowed to take place to demonstrate that the management of change process is working effectively but this must be done in a controlled manner. Therefore a way forward on staff reductions is under discussion, pending close-out of Recommendations 15 and 77. This places change proposals into one of three types: not safety-related; safety-related but not involving downsizing; and safety-related with downsizing. Only the latter type of change - safety-related with downsizing - would be held by Recommendations 15 and 77.

21. A key aspect of the way forward, and a precursor to NII consideration of further changes involving downsizing in safety-related areas, is for the licensees to collate information on such proposals and to present NII with an overall indication of their intended structure and resources. This will enable NII to consider individual change proposals within the wider context. NII is awaiting the licencees' provision of the necessary information. Until the way forward has been confirmed, or the licensees present a satisfactory alternative, the hold on further staff reductions in safety-related areas should remain in place.

## **Ensure business plans are matched to staff capability and work load**

22. The licensees have stated that, since the audit, they have achieved the work load reductions upon which their original staff reduction targets were predicated. This in turn has reduced the extent of reliance upon contractors to provide additional resources - a concern we highlighted during the audit.

23. More fundamentally, the licensees have undertaken a review of the business planning process and have implemented changes aimed at better matching the work load to the available, in-house resources. The improvements include a new process for categorisation and prioritisation of work - with the highest priority being applied to work necessary to maintain safe operation. The work planning interfaces between the stations and the central technical resources within the licensees have also been improved, building upon the BEG(UK)L approach which was identified as a good practice in NII's report on the audit. A Work Review Board takes an overview of the planned use of resources and ensures that there is the correct emphasis on safety related activities.

24. The revised work planning process has been applied in the business planning round for the current year (2001/2002). The demonstration of its success, including the ability to successfully manage emergent work, prioritisation and resource pinch points will take time and will be factored into the close-out requirements for the relevant audit recommendations (R11 and R73).

## **Formalise, record and resource the skills base**

25. This was one of the key areas in the audit and generated a number of recommendations. In response, the licensees have conducted a 'grass roots' review of their skills requirements. This has led to the introduction of a uniform process for setting down the range of skills required within the licencees' technical centres and the criteria to be met for the appointment of Suitably Qualified and Experienced Persons (SQEPs).

26. The new SQEP process generates a SQEP Register which identifies the different technical roles and the staff qualified to undertake work in each area. To address NII's concerns over vulnerabilities to loss of staff in key areas, the SQEP process requires specific consideration (including contingency plans) and senior management approval where there is only singleton SQEP coverage. The licensees are also seeking to recruit staff in key areas of expertise (e.g. core graphite, human factors, criticality and fire protection).

27. A demonstration that the numbers of in-house technical staff are adequate to meet the predicted work load is a requirement of the SQEP process. This needs to be reviewed and formally recorded on an annual basis taking into account forward plans, technical issues and succession planning requirements. This is an important element of the SQEP process and its ability to satisfy the audit recommendations (notably R5 and R69). To date, NII has received from the licensees a staff baseline which reflects

the numbers employed in April 2000. NII will be looking for a demonstration of the baseline produced in accordance with the new SQEP process as a prerequisite to closing out the audit recommendations.

28. The SQEP process also encompasses the 'intelligent customer' concept (in conjunction with the process for use of contractors). NII has developed a set of principles on intelligent customer requirements. These principles are common to all licensees and have been explained in presentations by NII. BEGL and BEG(UK)L have taken the decision to differentiate between the SQEP requirements for technical expertise and 'informed customer' (their term) roles. NII will be reviewing the acceptability of this approach as part of the assessment and close-out of the audit recommendations.

### **Policy for use of contractors**

29. As explained in the audit report, NII is not opposed to the use of contractors per se - indeed it is established practice within the nuclear industry. However, their use must not undermine the licensees' ability to fulfil their responsibilities in law. The concerns raised in the audit highlighted the lack of a clear policy on the use of contractors and the lack of guidance on factors to be considered from a licensee's perspective. Both aspects have been addressed - the licensees have put in place a policy statement setting out the main principles governing the use of contractors and this is supported by a new procedure.

30. The procedure sets out the key steps in the decision-making process for judging whether or not the use of a contractor is appropriate. This includes specific consideration of reasons why a contractor should not be used, such as the need to maintain in-house technical capability or where the loss of the contractor's services could jeopardise the licensability of BEGL or BEG(UK)L.

31. If use of a contractor is judged to be appropriate, and prior to the contract being let, the procedure requires an internal resource plan to be produced to ensure there are adequate resources available within the licensee to manage the contract (including technical aspects). There are also new requirements with respect to receipt of work from contractors to ensure there is an in-house technical review and ownership by the licensee.

32. On the basis of what NII has seen so far, the work that the licensees have undertaken addresses the key issues raised in the audit regarding the use of contractors. The adequacy of the new procedure and ways of working will be determined when NII receives and assesses the responses to the audit recommendations relating to contractors (in particular R16 and R78).

### **Prevent excessive hours being worked**

33. In response to NII's concerns over excessive working hours, the licensees took action to instruct staff to record all the hours worked and provided their staff with guidance on what should be included (e.g. travelling time when working away from the

normal location). The licensees have produced the guidance to be consistent with the UK Working Time Regulations.

34. The licensees report a greater awareness amongst staff regarding the need to record all hours worked. In addition, there is clearer accountability through the line management for ensuring staff record their working time properly and that working hours are monitored regularly and appropriate action is taken where individual work loads are high.

35. There will be periods of higher than normal work load, notably during station outages. Nevertheless, the processes the licensees have in place should ensure that working hours are recorded and monitored and that corrective action is taken when required.

### **Review the management of change process**

36. The management of change process is used to assess and control changes to organisational structures or resources which may affect nuclear safety. The audit revealed flaws in the change process and in the way in which it was being applied. The licensees have subsequently completed a critical review of the process and its use, taking into account the findings from the audit and the lessons learned from their own knowledge of how the process had been applied.

37. A revised and improved management of change process is now in place. The revisions address the main concerns raised by NII. In particular, it is now made very clear that the requisite enablers must be in place before a change is implemented. If for any reason an enabler cannot be delivered and counter measures need to be invoked, the process requires that the change proposal be reassessed to establish if it is appropriate to proceed.

38. Management of change is covered by Site Licence Condition 36 (LC36). The licensees' arrangements for compliance with LC36 include the categorisation of change proposals in terms of safety significance. The arrangements require that changes of the highest safety significance are submitted to NII for agreement prior to implementation. NII has the power to require that lower category proposals are also submitted for agreement before they can be implemented. NII is satisfied with the high-level arrangements under LC36 and is in the process of 'approving' (i.e. freezing) this part of the arrangements. Once approved, the arrangements cannot be changed by the licensees without a further approval by NII.

39. The adequacy of the revised management of change process and the way in which it is being applied needs to be demonstrated. The licensees are undertaking additional monitoring in the initial phase following roll-out of the new process. NII will also be carrying out a review as part of the audit close-out requirements. NII has informed the licensees that a satisfactory demonstration of the management of change process will be a precondition to the close-out of audit Recommendations 15 and 77.

## **Other Issues**

40. British Energy's proposals to integrate the management and technical teams of the two licensees do not in themselves form part of the audit close-out work. NII has not yet received firm proposals regarding integration. In the discussions subsequent to the audit, NII has reiterated the key issues - namely: impact on the licensing basis; the requirement for each licensee to maintain control of its own operations and meet intelligent customer requirements; and (should a viable proposal be made) the licensees' readiness for integration. The latter will include, as a precursor, the need for both licensees to have addressed all of their audit recommendations and to have closed out Recommendations 100 and 101 in particular. It is important to recognise that, whilst the nuclear licences apply to sites (stations), they are granted on the basis of a licence applicant's safety management prospectus which sets out the capability of the whole organisation. Hence, for BEGL and BEG(UK)L, the central technical resources are a fundamental part of the licensing basis.

41. Although the audit was focused on the licensees' technical centres, many of the findings potentially have wider implications. Consequently, subsequent to the audit, NII actioned all of the nuclear power stations within both licensees to review the audit report and consider the implications from their point of view. NII is awaiting a response from the licensees on the outcome of these reviews. NII will then determine what further action is required, taking into account the work that is already underway to address the audit recommendations.

## **CONCLUSIONS**

42. BEGL and BEG(UK)L have already undertaken a considerable amount of work to address the recommendations arising from the NII safety management audit. The issues raised by the audit have needed careful consideration by the licensees and the development of effective solutions. The rate of progress so far reflects this and is consistent with NII's expectations and with experience from other major NII audits and inspections.

43. In response to the audit, the licensees have developed new or improved ways of working. A key requirement for closing-out recommendations is that the licensees must provide evidence of achievement (for example, that a new process has been fully developed and implemented). They must also identify what measures have been put in place to demonstrate the effectiveness of changes or improvements.

44. A staged approach is being used for the close-out of recommendations. The scope of each stage has been defined, along with the basis for progressing from one stage to the next. NII is expecting the bulk of the licensees' responses to the recommendations over the next few months, including the responses covering the key issues from the audit. These 'Stage 2' responses will provide the basis for NII's assessment as to whether or not the recommendations have been addressed satisfactorily and if they can be closed-out. In some cases there is likely to be a need for further evidence of successful implementation of an improvement or a new way of working prior to full close-out.

45. Taking into account the need for a demonstration of the success of changes and improvements in key areas, NII does not consider that close-out of all the 103 recommendations will be achieved until well into 2002. NII will produce a final report when the work has been completed.

## **REFERENCES**

1. HSE report: Safety Management Audit of British Energy Generation Limited and British Energy Generation (UK) Limited, 1999