

Nuclear Safety Advisory Committee (NuSAC)

Issues potentially requiring NuSAC advice

Introduction

1. This paper discusses several issues, which in the opinion of the HSE's Nuclear Directorate (ND), may potentially benefit from advice from NuSAC over the coming year.

Background

2. At the beginning of August 2007, ND Division 6 (which is undertaking Generic Design Assessment of candidate Nuclear Power Stations) commissioned a paper to NuSAC that considered topics related to New Nuclear Build on which it might be helpful to have NuSAC's advice.
3. The remit of the commissioned paper was extended to include issues from all ND Divisions.

Consultation

4. All ND Heads of Division were asked to predict which foreseeable issues may potentially require advice from NuSAC. Following their responses, ND nuclear topic specialists were approached to clarify the predicted issues.

New Build of UK Nuclear Power Plant

[N.B. The continuation of HSE's work on the assessment of nuclear power station designs is contingent on the outcome of the Government's deliberations on the future of nuclear power in the UK. A decision on this is expected by the end of the year.]

New Build - Waste Management

5. A significant area of regulatory interest (for NII, OCNS and EA) for any new nuclear power station design is the provision of on (or off) site facilities for the management of radioactive waste and spent fuel. This will be at least partly catered for in the basic station design, but some details will be dependent on customer (i.e. future operator) specifications and Government policy. The Government are developing their views on what should constitute the waste management 'base case' and, contingent on a decision in favour of new nuclear power stations, are expected to launch a public consultation on this. NuSAC's advice on this issue may be helpful to HSE, and to the Government in deciding on its waste and fuel management 'base case'.

New Build - Design Standards

6. A current area of interest for the design and manufacture of nuclear power stations is the harmonisation of design codes and QA standards. The design and manufacture of nuclear pressure systems is a global market and often

manufacturers are required to understand and apply different codes and standards for the same components. Additionally, the specification of design codes and QA standards is strongly influenced by regulatory requirements. Work is on-going through the Multi National Design Evaluation Process group of nuclear regulators. NuSAC advice on the outcomes of this work may be useful.

Siting Policy and Land Use Planning (LUP)

7. The policy for the siting of civil nuclear facilities in the UK is determined by Government (DBERR) informed by technical advice provided by HSE. This includes restrictions on the use of land around nuclear licensed sites.
8. HSE has produced papers in the past for NuSAC's predecessor, ACSNI, but nothing in recent years. HSE are reviewing the technical aspects of siting and LUP and a paper should be taken at the ND Management Board later this year proposing an approach for control of demographics. A second paper should be submitted to the ND Board in Spring 2008 to outline details. Although a developed approach on siting and LUP may already be on NuSAC's future agenda, it may be of benefit to seek advice from NuSAC at the principles stage before developing a detailed approach.

Regulation of Low Level Waste Facilities

9. A paper on this has already been taken at the last NuSAC meeting and ND has received some comments. There is further engagement with other stakeholders that has to be undertaken before a HSC paper is developed. It may be appropriate to go back to NuSAC regarding information on next steps and to show how we have taken account of its advice. A more appropriate option may be to do this more informally through Marion Hill who is acting in a coordinating role.

Regulation of an ILW Repository

10. The DEFRA Managing Radioactive Waste Safely consultation exercise should be completed at the end of November 2007. To date there is general agreement that an ILW repository would be a nuclear licensed site. A detailed examination of the basis (e.g. Safety Assessment Principles) of the regulation of an ILW repository may be needed.

Nuclear Regulator Capability (including Learning and Development)

11. The capability of the UK's independent Nuclear Regulator is of course of interest, and is something that NuSAC may advise on. ND from time to time assesses its capability requirements. Recently, it has embarked on a project to develop an improved framework for securing the competence of Nuclear Safety Inspectors against some of the issues anticipated in the increasingly difficult nuclear labour market. The current phase of the project started in March 2007 and is due to finish in October 2007 with the delivery of a competence framework that meets IAEA expectations and complements the

industry mapping being carried out by COGENT Sector Skills Council.

12. It is likely that this work will lead to the development of a National Occupational Standard for Nuclear Safety Inspectors. One of the key aims of the new approach is to transfer knowledge from the large number of very experienced Nuclear Inspectors that are due to reach retirement age in the next five years. This, and any increase in new Nuclear Inspector numbers, will place a very significant training burden on the organisation as a whole. If the project is successful, it will be extended to other job functions within the organisation.

UK Nuclear Industry Changes and Infrastructure

13. The UK Nuclear Industry is ageing and fragmenting. The previous nuclear safety related infrastructure has diminished. Now with potential increased activity in new nuclear build, it has to be rebuilt and it will apply more pressure on UK nuclear workforce as a whole. In addition to the above section focussing on the regulator, the competency of the entire UK nuclear workforce and its relationships to securing nuclear safety is a matter that NuSAC could advise on, as it could on other aspects of the infrastructure.

Nuclear Decommissioning Authority (NDA) Relationship to Securing Nuclear Safety

14. NDA was set up a couple of years ago. HSE has investigated whether NDA has been acting as the 'controlling mind' of nuclear sites and has submitted a paper to this NuSAC meeting. It may therefore be an appropriate time for NuSAC to review ND's findings with a view to offering advice.
15. There is also the question as to whether NDA involvement allows or enables individual licensees to fulfil their legal duties and what advice it may offer.

Safety Culture

16. NuSAC has said it is seeking to strengthen its interest in safety culture. This supplements the increased attention being paid by ND to this issue. At the request of NuSAC, HSE has provided a presentation to this NuSAC meeting. As HSE develops its approach to influence in the area of safety culture, NuSAC will undoubtedly wish to keep well informed and offer advice.

General

17. In all cases it would be appropriate for ND to produce a paper upon which NuSAC may wish to base discussion and give advice.

Further Information

18. For further information, contact Gary Booth, HM Principal Inspector of Nuclear Installations, via the HM Chief Inspector's office.