GUIDE TO REGULATORY PROCESSES FOR GENERIC DESIGN ASSESSMENT OF NEW NUCLEAR POWER STATIONS

Summary

1. This guide sets out the arrangements that regulators have put in place for assessments of generic designs of new nuclear powers stations. These assessments could be undertaken in advance of site-specific applications being made to build nuclear power stations. The guidance is issued jointly by the principal nuclear regulators in the UK - the Health and Safety Executive, the Environment Agency, the Scottish Environment Protection Agency and the Office for Civil Nuclear Security. In addition to this guidance, the regulators are providing more detailed guidance on their specific areas of responsibility and links are provided to where this can be found.

Introduction

2. There are a number of permissions that must be obtained by an operator prior to construction or operation of any nuclear installation, including nuclear power stations. These permissions are granted by a number of separate regulators including:

- the Health and Safety Executive (HSE) - for licences to allow certain nuclear operations (including the operation of a nuclear reactor) on a specified site.
- the Environment Agency in England and Wales and the Scottish Environment Protection Agency (SEPA) - for authorisations to allow disposals of radioactive waste from nuclear sites and other environmental permissions.
- the Office for Civil Nuclear Security (OCNS) - for approval of site security plans.
- the Department for Transport Dangerous Goods Division (DfT-DGD) - for approval of transport packages for radioactive materials and wastes.

Other permissions, such as planning, are also required.

3. At the request of the Government, the Health & Safety Executive and the Environment Agency submitted expert reports, in June 2006, to inform the Government's Energy Review. These set out the potential role for pre-licensing and pre-authorisation assessments of candidate reactor designs. "Pre-licensing" and "pre-authorisation" will be referred to collectively as "generic design assessment" throughout the rest of this document. In the Energy Review report published by the Department for Trade and Industry (DTI) in July 2006, Government asked HSE and the Environment Agency to take forward these proposals. HSE's Nuclear Installations Inspectorate (NII), the Environment Agency and OCNS have prepared guidance on generic design assessment of nuclear power stations, co-ordinating their activities with other relevant regulators.

4. This document outlines the overall regulatory process for generic design assessment. It describes how the regulators' processes are integrated, and refers to the more detailed guidance produced by each of them.

The principal regulators and their roles

5. HSE grants site licences to the operators of nuclear power stations. The operators have to satisfy HSE about the safety aspects of the design, manufacture, construction, commissioning, operation, maintenance and decommissioning of the installation, and the management of radioactive waste on the site.

6. The Environment Agency (England and Wales) and SEPA (Scotland) regulate:
    - Radioactive waste disposals, including discharges;
    - Abstraction from, and discharges to, controlled waters, including rivers, estuaries, the sea and groundwaters;
    - Operation of specific “conventional” plant;
    - Assessment and where necessary, clean-up of contaminated land;
    - Disposal of conventional waste; and
    - Certain flood risk management matters (Environment Agency only, not SEPA).

They also have wider responsibilities with regard to Euratom Article 37 requirements concerning the impact of nuclear sites on other EU Member States.
Operators will have to satisfy the environment agencies that discharges and disposals made into the environment are minimised and their effects are acceptable, such that people and the environment will be properly protected throughout the whole life-cycle of the plant from construction to decommissioning.

7. OCNS is the regulator for security at all civil nuclear sites. It is concerned with physical security of nuclear material, IT security, security of nuclear material in transit, and the vetting of people who access nuclear sites. OCNS require the holder of the nuclear site licence, to submit a site security plan to be approved before nuclear material arrives on site.

8. The Department for Transport - Dangerous Goods Division is the UK Competent Authority for the Safe Transport of all Radioactive Material by all modes, and issues Design and Shipment Approvals for certain package designs. It directly regulates road transport and some aspects of rail transport; and advises/supports the Civil Aviation Authority and the Maritime & Coastguard Agency in Air and Maritime transport matters.

Generic design assessment

9. While the regulators will work together to provide an integrated approach to generic design assessment, each has a different legislative regime which will lead to some necessary differences in approach. Figure 1 outlines how the regulatory processes fit together.

10. The arrangements being introduced for generic design assessment by each nuclear regulator are set out below. These assessments will be undertaken in a staged manner to help reduce regulatory uncertainty as each step of the process is completed.

11. The organisation seeking a generic design assessment is referred to as "the requesting party".

<u>HSE</u>

12. HSE is introducing a new process, in which the design will be assessed independently of any site-specific factors, separately from any consideration given to the potential operating organisation.
www.hse.gov.uk/nuclear/reactors/index.htm HSE Guidance to requesting parties on HSE’s nuclear power reactor design acceptance process

Environment Agency/SEPA

13. The Environment Agency is also introducing a new process of generic design assessment that considers radioactive waste discharges and disposal matters, issues such as water abstraction and discharge, and the operation of conventional plant. This work will be carried out under section 37 of the Environment Act 1995 through which the Environment Agency will provide advice to requesting parties about the acceptability of their generic design. The Environment Agency will consult the Food Standards Agency (FSA) during the course of this work. The FSA has responsibilities relating to the food chain and will be a statutory consultee on any site-specific application.

www.environment-agency.gov.uk/business/444304/945835/1584173/?version=1&lang=_e Process and Information Document for Generic assessment of candidate nuclear power plant designs

14. SEPA will work closely with the Environment Agency throughout the generic design assessment process in order to meet SEPA's obligations under the Radioactive Substances (Basic Safety Standards) (Scotland) Direction 2000 and ensure that the Scottish public and environment are adequately protected.

OCNS

15. OCNS will carry out a review of the security issues associated with the design, to allow a conceptual security plan to be agreed for the specific technology proposed. It has issued new guidance relevant to the management of sensitive nuclear information during the generic design assessment process.

www.dti.gov.uk/energy/sources/nuclear/safety-security/security/regulator/page36440.html
OCNS: Guidance document for generic design assessment activities,
OCNS: The Management of sensitive nuclear information during the generic design assessment of nuclear technologies

Department for Transport

16. DfT would be engaged in the generic design assessment process through its contact with other regulators. The regulation of the transport of nuclear material is largely based on international standards and recommendations from the International Atomic Energy Agency and international transport agencies. There is no need for extra guidance or extra resources required for assessment of transport issues during the generic design assessment process, although there may be some new issues that arise during the consideration of designs by the regulators.

Existing Guidance documents, mainly for rail transport.
www.dft.gov.uk/stellent/groups/dft_control/documents/contentservertemplate/dft_index.hcst?n=11638&l=4

Site Specific Assessment

17. Where applications are made for site-specific permissions (nuclear site licence, environmental authorisations and permits, and security plan approval) the regulators will follow their existing procedures. Where these site-specific applications are based on a generic design that has undergone assessment, the regulators will take full account of the work that they have already carried out and the advice that they have provided. Figure 2 outlines how these processes fit together.

18. HSE's licensing assessment would mainly centre on site-specific issues and those relating to the organisation of the potential operator.

19. The Environment Agency's consideration of site-specific applications would take full account of the detailed design of the proposed station including any changes since the generic assessment, and generally focus on local impacts associated with the permissions sought and the suitability of the potential operator.

20. Similarly, if site-specific applications are made, the principles of the conceptual security plan would be taken forward and developed into a site security plan that will be considered for approval by OCNS prior to nuclear material being brought to the site.

Regulators' working arrangements

21. Although each regulator will make its decisions on matters for which it is responsible, well-developed arrangements exist to ensure that they properly coordinate their activities. These arrangements include Memoranda of Understanding agreed by the relevant regulators. A joint regulatory forum has been established to closely coordinate their activities during the generic design assessment and site-specific licensing and authorisation processes. The forum has overseen the development of the generic design assessment processes and will continue to oversee the regulators' response to requests for generic design assessments.

Administrative procedures

22. Requesting parties wishing a generic design to be assessed should prepare a single integrated submission for all the regulators. This should address, in one or a series of documents, the requirements of all regulators. "Route-maps" indicating those parts of the submission considered relevant to each regulator should be provided, to assist their consideration of the submission.

23. The regulators plan to provide a single point of contact to process submissions.

24. The regulators prefer designs to be "frozen" at the time that the submission is made, but recognise that design changes might ensue. Any such changes proposed during the course of the assessment must be notified to the regulators, and they might impact on the expected timescales for the generic design assessment.

Public comments

25. The regulators intend that the generic design assessment process operates in a transparent and open way. They

- expect that the submission provided for generic assessment will be made available to the public by the organisation seeking the assessment, with the exclusion of sensitive nuclear information and commercially confidential information.
- will invite comment from the public during the generic design assessment process.
- will consider the comments made, together with any response from the organisation requesting the assessment, during their assessment of the design.
- would then give public feedback at key stages during the generic design assessment process.
- are developing further their processes for more general public and stakeholder engagement.

Overall timescale

26. An indicative overall timetable is set out in figures 1 and 2. However it is not possible to give definitive statements of how long the various steps will take in advance, because there are many factors which might affect this, such as the timely provision of submissions or the introduction of design changes.

27. Bespoke timetables will be drawn up by the regulators and those requesting the work. These timetables will be kept under review as the assessment work progresses.

Nature of public statements by regulators

28. The regulators will make public statements on their progress and interim findings at key stages during the generic design assessment process.

29. On completion of the generic design assessments, the regulators will issue reports on their findings. If the design is judged to be satisfactory, the regulators will issue the following:

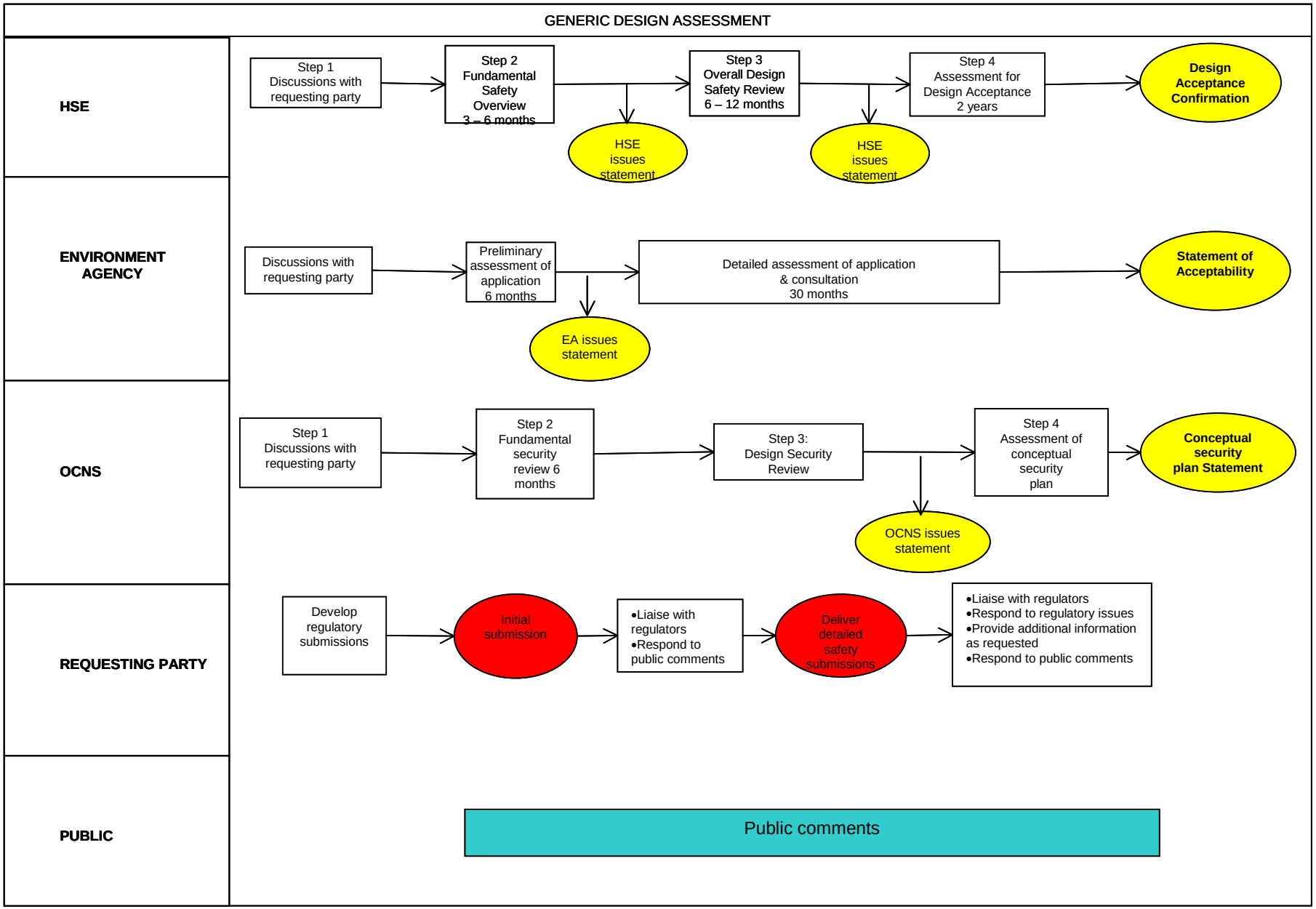
- HSE - Design Acceptance confirmation
- Environment Agency – Statement of generic design acceptability
- OCNS Generic Conceptual Security Plan approval

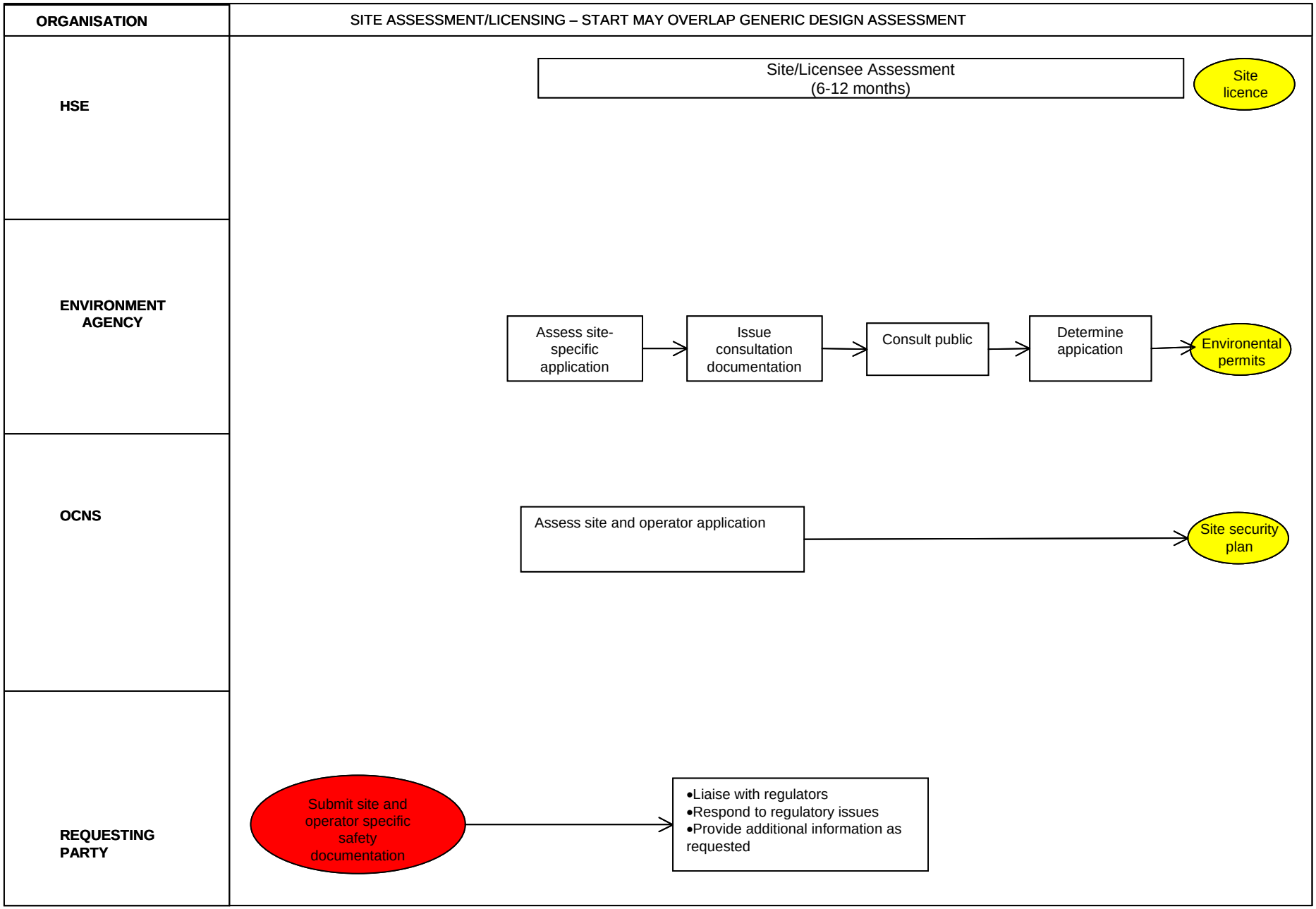
Further details are given in each regulator's guidance, which may be found on the regulators' websites.

Further information

30. Anyone seeking more information should contact newreactorbuild@hse.gsi.gov.uk in the first instance

OUTLINE TIMETABLE




ORGANISATION
SITE ASSESSMENT/LICENSING – START MAY OVERLAP GENERIC DESIGN ASSESSMENT
HSE
ENVIRONMENT AGENCY
OCNS
REQUESTING PARTY
Site/Licensee Assessment (6-12 months)
Site licence
Assess site-specific application
Issue consultation documentation
Consult public
Determine appication
Environental permits
Assess site and operator application
Site security plan
Submit site and operator specific safety documentation
•Liaise with regulators
•Respond to regulatory issues
•Provide additional information as requested