

IN THE MATTER OF UK NIREX LTD

OPINION

EXECUTIVE SUMMARY

In summary our Opinion is as follows:

- as matters stand Nirex is independent of the nuclear industry and thus from industrial and commercial pressures from waste producers;
- there are questions as to whether, if Nirex is to be subsumed within the NDA (or become a subsidiary of or otherwise controlled by the NDA) this would be possible without amendments to the Energy Act 2004 in respect of the NDA's functions;
- successive International Law instruments have from 1978 onwards emphasised the importance of independence and separation in all aspects of nuclear regulation;
- the IAEA Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management requires the designation of a regulatory body to implement the legislative safety framework, which must have adequate competence and resources to ensure its effective independence and must be separate from the commercial activities of spent fuel management;
- the requirements for regulatory independence and separation extend to those bodies that provide advice to regulators;
- these requirements are also referred to and expanded upon in IAEA Guidance and Safety Series Documents which require to be adhered to by government;
- the obligations in the Joint Convention and the relevant IAEA safety standards also form part of binding EURATOM legislation and hence are requirements of Community Law as well as International Law;

- whilst, as matters stand, Nirex has the necessary degree of independence due to the CLG control of its work to ensure compliance with the Joint Convention and the other relevant International Law instruments, subsuming Nirex into the NDA (or making it a subsidiary or contractor of the NDA) would be inconsistent with the UK's International Law and Community Law obligations in this regard;
- for these reasons we are of the view that any move to subsume Nirex into the NDA would give rise to serious issues as regards the UK's compliance with International Law and Community Law. Incompatibility with Community law in particular would be an issue for the European Court of Justice.

INTRODUCTION

1. We are asked for our opinion on certain issues that would arise were United Kingdom Nirex Limited ("Nirex") to be subsumed in some way into the Nuclear Decommissioning Authority ("the NDA") which was established by Part I of the Energy Act 2004 ("the 2004 Act").
2. This Opinion is divided into the following parts:
 - the role and constitution of Nirex;
 - the role and constitution of the NDA;
 - the International Law context;
 - the Community Law context;
 - the issues arising.

(i) THE ROLE AND CONSTITUTION OF NIREX

3. The Nuclear Industry Radioactive Waste Executive ("the Executive") was set up by the UK Government in 1982 to examine the environmental and economic aspects of deep geological disposal of intermediate-level ("ILW") and low-level ("LLW") radioactive waste in underground storage facilities on behalf of the nuclear power industry.
4. In 1985 the Executive was replaced by a limited company, United Kingdom Nirex Limited known as "Nirex". Shares in Nirex were from 1985 until April 2005 owned by the major producers of radioactive waste¹ subject to a golden share owned by the Secretary of State for Trade and Industry². Nirex was funded principally by its shareholders³.
5. In July 2003 the Secretary of State for Environment, Food and Rural Affairs announced that the Government would be consulting the existing Nirex shareholders on the best way of making Nirex "independent of industry". It was said by the then Secretary of State that it was very important that Nirex was in a position "where it is, and can be seen to be, independent of industry": see Defra news release July 2003⁴.
6. On 21 July 2004 the Secretary of State for Environment, Food and Rural Affairs announced a new Government-owned Company Limited by Guarantee was to be set up jointly by the Department for Environment, Food and Rural Affairs ("Defra") and the Department of Trade and Industry ("the DTI") to hold the shares in Nirex and oversee its business operations. The announcement stated that the arrangements would achieve, inter alia, the objective of making Nirex "independent of industry"⁵.

¹ Namely British Nuclear Fuels plc ("BNFL"); Magnox Electric plc (a subsidiary of BNFL); the UK Atomic Energy Authority ("UKAEA"); British Energy Generation Ltd; and British Energy Generation (UK) Ltd.

² The Secretary of State for Trade was represented on the Nirex board.

³ Some funding was also, we understand, provided by the Ministry of Defence.

⁴ <http://www.defra.gov.uk/news/2003/030716d.htm>

⁵ Defra press release - <http://www.defra.gov.uk/news/2004/040721b.htm>

7. Accordingly, Nirex CLG Limited ("CLG") is a Government-owned Company Limited by Guarantee which was set up on 11 March 2005, to hold the shares in Nirex and oversee its business operations. The ownership of Nirex was transferred to the CLG on 1 April 2005. The CLG is a non-trading and non-profit making public corporation.

8. Nirex is now funded principally by the NDA via a funding agreement. However, the Ministry of Defence continues to contribute funding in respect of defence-related wastes. There are other waste producers and potential new ones such as those related to new build. The Government has said these organisations would be responsible for their own liabilities

9. The current Nirex Mission as agreed by the Nirex Board on 16 September 2004 and endorsed by Government is:

"In support of Government policy, to develop and advise on safe, environmentally sound and publicly acceptable options for the long-term management of radioactive materials in the United Kingdom".

10. Nirex's key objectives are as follows⁶:

- "Carry out scientific, engineering and social science research to help develop safe and environmentally sound options for dealing with radioactive waste in the long term";
- "Set specifications and standards based on a phased deep geological disposal concept and advise the industry on how to treat and package radioactive waste through the application of the Nirex Letter of Compliance Process";
- Maintain an inventory of radioactive waste in the UK in conjunction with the Department for Environment, Food and Rural Affairs ...";
- "Communicate with all stakeholders, including the public, to build understanding and develop ways of addressing the wide range of concerns and

⁶ These objectives have been set out in a number of places, see e.g. the Nirex website <http://www.nirex.co.uk/index/about.htm> and also Nirex's "Submission to the House of Commons Trade and Industry Select Committee Inquiry into the Nuclear Decommissioning Authority" dated February 2005.

views surrounding the management of radioactive waste, so that these influence our work⁷."

11. For the purposes of this Opinion we focus on the first two objectives:

12. **Developing options for long term management:** In terms of options for dealing with radioactive waste on a long-term basis (see the first bullet point above), the position of Nirex is that a deep geological repository is a suitable long-term option for the UK, but that it must be implemented in a phased manner to provide the flexibility to retrieve the wastes for periods of up to several hundreds of years, if required: see e.g. Nirex Report N/122, "The Viability of a Phased Geological Repository Concept for the Long-Term Management of the UK's Radioactive Waste".

13. At present there are two separate organisations who are involved in radioactive waste management, the NDA (considered further below) focusing on the short term and Nirex focusing on the long term. Nirex's view⁸ is that it is in the interests of transparency and safety that there remains a clear and concrete separation between the short-term decommissioning and clean-up body (the NDA) and the long-term radioactive waste management organisation (Nirex). This is crucial for a number of reasons, not least due to separation providing clarity of focus in the tasks that the different organisations undertake. Experience in other jurisdictions shows that the long-term project requires a focused organisation specifically dedicated to achieving it in a sustainable and publicly acceptable manner e.g. the Nuclear Waste Management Organisation in Canada (NWMO) and the Nuclear Waste Management Organisation (NUMO) in Japan. It is of note that the Committee on Radioactive Waste's ("CoRWM") recommendations to the Government published

⁷ The submission referred to in the above footnote also says "This work will be carried out adhering to Government policy at all times, ensuring no conflict or overlap with the work of Committee on Radioactive Waste Management or the Nuclear Decommissioning Authority". The Nirex website contains wording to similar effect.

⁸ See again the Nirex submission referred to in the above footnotes.

in July 2006 include a recommendation that there be an independent body to oversee the implementation of its other recommendations (see recommendation 15). These matters are considered below in the context of the requirements of International Law.

14. The setting of specifications and standards and the “Letter of Compliance” process: A key aspect of the work of Nirex is what is now known as the Letter of Compliance process referred to in the second bullet point above.

15. The Health and Safety Executive (“HSE”) Nuclear Installations Inspectorate (“NII”) regulates the conditioning, and in particular the packaging⁹, of radioactive wastes on nuclear licensed sites in the UK under the terms of the conditions attached to nuclear site licences issued under the Nuclear Installations Act 1965. The HSE in undertaking this regulatory role will consult the relevant environment agency (the Environment Agency (“EA”) in England & Wales and in Scotland, the Scottish Environment Protection Agency (“SEPA”)) in accordance with agreed Memorandums of Understanding (“MoU”).

16. The NII, EA and SEPA as part of this process assess the suitability of a nuclear site licensee’s safety case to treat radioactive waste.

17. A key component of the safety case is the ILW Conditioning Proposal. This documentation underpins the development and implementation of the licensee’s plans to condition ILW, and details the associated justification in safety and environmental terms. Nirex plays a “key part”¹⁰ in this system of regulation. What

is now known as the Nirex “Letter of Compliance” system is the “preferred route”¹¹ of the NII, EA and SEPA for licensees to demonstrate that ILW conditioning proposals meet the relevant international packaging standards and the anticipated requirements for final disposal.

18. A cross-government policy group, the Radioactive Waste Policy Group (“RWPG”), has considered the arrangements that should be in place to address disposability requirements pending the outcome of the work of the CoRWM which, of course, reported in July 2006. The RWPG sponsored a workshop on the issue, which noted that work to check the compatibility of ILW packaged under the Nirex Letter of Comfort arrangements had shown a good level of compatibility with the range of options likely to be considered by CoRWM. The RWPG concluded that, on the balance of probabilities, waste destined for eventual disposal in an ILW facility should continue to be packaged under the existing Letter of Compliance arrangements. Further, the EA’s Nuclear Waste Assessment Team (“NWAT”) has an agreement with Nirex¹² to scrutinise their Letter of Compliance process and PGRC as a basis for decisions on the future packaging and treatment of ILW¹³. This in our view has strengthened, or certainly formalised the role of Nirex in the regulatory process.

19. Indeed Nirex has long had a key role in setting specifications and standards providing advice to industry as to how wastes should be packaged compatibly with what is known as the Nirex Phased Geological Repository Concept (“PGRC”). This was formerly done through the issue of what were originally called “Letters of Comfort”¹⁴ which were first instigated in the 1980’s.

⁹ The current guidance issued in March 2005 (see further below) defines “Conditioning” as “the processing of radioactive waste to achieve passive safety for interim storage and to prepare it for eventual disposal. Such processing can be considered to involve treatment, conditioning and packaging stages. For brevity “conditioning” is used in this document to include all stages of the process, except where it is necessary to refer to one of the stages specifically”.

¹⁰ This is the phrase used by Defra in para. E-79 of the UK’s second national report on compliance with the obligations of the Joint Convention on the safety of spent fuel management and on the safety of radioactive waste management (see further below).

¹¹ See Guidance to Industry on Conditioning of Intermediate Level Radioactive Waste on Nuclear Licensed Sites (HSE, SEPA, Environment Agency) page 2, para. 1.3.

¹² <http://www.environment-agency.gov.uk/business/444304/945835/1085253/1085276/?version=1&lang=en>

¹³ SEPA have a similar agreement: see NUSAC(2005)P5 “Regulation Of The Conditioning Of Intermediate Level Radioactive Waste On Nuclear Licensed Sites: An Update” produced by the NII, EA and SEPA: <http://www.hse.gov.uk/aboutus/hse/iaacs/nusac/140705/p5.pdf>.

¹⁴ The change of terminology was effected in January 2005.

20. The PGRC is a long-term management concept. The PGRC is underpinned by a "suite of documents" including the Generic Waste Package Specification ("GWPS") which define and describe the packaging standards and specifications that have been derived from the PGRC and is used by regulators (see further below) as the basis for the packaging of ILW and certain LLW. The GWPS is the primary document defining Nirex packaging standards and specifications and is supported by the Waste Package Specification and Guidance Documentation ("WPSGD"). The WPSGD comprises a suite of documentation primarily aimed at waste packagers, its intention being to present the generic packaging standards and specifications together with explanatory material and guidance: see further "Introduction to the Nirex Waste Package Specification and Guidance Documentation": WPS/100.

21. Nirex has also developed guidance on practical approaches to meeting its specifications and topical guidance on a range of issues relevant to production of conditioned waste packages: see the Nirex Technical Note No. 484085 for the CoRWM.

22. The current guidance on the operation of improved arrangements for the regulation of conditioning of ILW on nuclear licensed sites was issued jointly by NII, EA and SEPA in March 2005.

23. Prior to that in January 2004, the NII, EA and SEPA implemented revised arrangements for the regulation of nuclear licensed sites. Under these revised arrangements the pre-existing Nirex Letter of Comfort assessment process (as it then was) took on a strengthened role, providing advice to the environment agencies' NWATs, on the acceptability and in particular, disposability, of ILW packages that are proposed to be produced as a result of site remediation and clean-up.

24. The March 2005 Guidance is entitled "Conditioning of Intermediate Level Radioactive Waste on Nuclear Licensed Sites: Provision of Advice by the Health and Safety Executive, the Environment Agency and the Scottish Environment Protection Agency Guidance to Industry"¹⁵, hereinafter "**The Guidance to Industry**".

25. The regulatory arrangements for ILW conditioning are summarised by the Guidance to Industry as involving (see para. 1.3):

"regulatory oversight of the following three interlinked aspects of ILW conditioning:

1. proposals from licensees to condition all types of ILW, including those wastes that are challenging to characterise, retrieve or condition;
2. the Nirex "Letter of Comfort" system, which is the regulators' preferred route for licensees to demonstrate that ILW Conditioning Proposals meet the relevant international packaging standards and the anticipated requirements for final disposal;
3. the development by Nirex of their "Phased Disposal Concept" (PGRC) which provides the current UK reference design for a deep geological disposal facility for ILW.

This guidance focuses on the first of the aspects described above, with the aim of ensuring that proposals to condition ILW give proper emphasis to safety, radioactive waste management and long-term environmental considerations whilst having due regard to costs and benefits. As a separate part of the improved arrangements, the environment agencies (Environment Agency and SEPA) have set in place programmes of work to scrutinise the LoC assessment process and the associated development by Nirex of the PDC, to seek assurance on their fitness for purpose. It is the regulators' intention that this guidance should assist licensees by:

· increasing the transparency of regulatory decision-making, and streamlining the path to permissions, by providing a clear and transparent regulatory process involving early dialogue between the nuclear industry, the regulators, Nirex, the NDA, and other stakeholders ..."

26. The Guidance to Industry summarises the role of the Letter of Compliance process in this way at para. 5.3:

"As part of their assessment criteria, the regulators expect that conditioned wastes will meet the relevant international packaging standards and the anticipated requirements for final disposal. Unless ultimate disposal to an existing disposal facility is planned, the regulators would normally expect licensees to seek an

¹⁵ http://www.environment-agency.gov.uk/commondata/acrobat/intlevelradiowaste_1010898.pdf

assessment via the Nirex Letter of Comfort (LoC) process. The LoC process will therefore be an important input to the proposal.

From a "disposability" viewpoint the LoC process allows for three successful outcomes (i.e. those that enable the issue of a LoC):

- all Nirex safety criteria can be met for the packaging proposal;
- assessment of the packaging proposal shows that, for the specific waste stream being assessed, it is not necessary to meet all of the Nirex general safety criteria;
- it is not possible to demonstrate compliance with all the Nirex general safety criteria now (thus a defined "compliance gap" exists) but in Nirex's view the licensee has demonstrated credible plans to remove the compliance gap in the future to produce a packaged wasteform that will be acceptable to Nirex.

In some cases, the licensee's options assessment for ILW conditioning might show that it is not reasonably practicable to produce a package to the standards required to obtain a LoC. Also, for certain wastes, the regulators recognise that it may not be practicable to demonstrate compliance, in a timely manner, with all of the LoC specifications, because:

- this would delay the treatment of the waste to the extent that immediate safety concerns would become overriding; or
- the necessary information (e.g. on waste characterisation) cannot be obtained without first retrieving the waste.

In certain cases, such as those just described, the regulators could agree to proposals involving packaging without a LoC. In these instances, early and continued involvement of Nirex is desirable, to understand the difficulties in complying with Nirex safety criteria. In particular, it is likely that much of the assessment associated with the LoC will still be necessary in order to understand the potential problems with future disposal, to justify the decision, and to put in place contingencies (such as plans for further conditioning in the future) to address such problems.

In such cases, the HSE and relevant environment agency would only give their permission where:

- all options to condition the ILW have been assessed;
- any "compliance gap" is fully understood and credible plans are in place, and have been agreed with the regulators, to address it.

While it is recognised that interim treatment might sometimes be necessary to reduce the hazard, this will need to be balanced against the regulators' strong preference to avoid the need for further reworking or repackaging. In all such cases the regulators will be looking for the waste to be packaged in a manner that facilitates later conditioning in accordance with Nirex safety criteria."

27. Thus in short the key points are:

- where a site operator wishes to develop a plant for conditioning and packaging of ILW, the guidance makes it clear that the packaging should be undertaken in accordance with Nirex packaging standards and specifications, and that the

operator is normally expected to consult with Nirex in order for Nirex to undertake an assessment of disposability of the proposed waste package;

- the Nirex specifications and assessment are based upon PGRC, and in cases where the package is found to be compliant with the concept Nirex will issue a Letter of Compliance (thus, for example, in para. 5.4 it is said that meeting all the Nirex safety criteria is one of the bases for "regulatory acceptance");
- in addition to the Letter of Compliance, Nirex will issue an Assessment Report describing the assessments undertaken and the case why the package is deemed to be disposable. The Assessment Report will be used by the site operator as part of the overall safety case for the facility, and will be used to give confidence to regulators and stakeholders in general, that the waste packages to be produced have been assessed by the UK's waste management organisation and found to be compliant with PGRC;
- the Guidance to Industry highlights that there may be some situations where the regulators consider that wastes should be retrieved and conditioned even if the site operator has not yet satisfied all of the disposability criteria determined by Nirex. In such a case the Assessment Report takes on increased importance as this document will provide the vehicle to understand in what ways the waste package falls short of the normal expected packaging standards. With this information the regulator will be in a position to make an informed decision whether to give the go-ahead for a waste package that does not meet all the long-term disposability requirements and which will potentially require some further reworking in the future.

28. The Guidance to Industry describes Nirex's role at para. 4.4 under the heading "UK Organisational Responsibilities" in these terms:

"In relation to the conditioning of ILW, Nirex operate the Letter of Comfort process designed to give assurance that conditioned wastes will meet the safety criteria that it has developed for the storage, transport, handling and disposal of ILW. By this process, Nirex gives advice to licensees that can be used in the formulation of proposals to condition ILW and the licensee's safety case."

29. In Annex A to the Guidance to Industry the following questions and answers are provided in relation to the Letter of Compliance process and Nirex:

2) LOC - Letter of Comfort

Question LOC-1: Is it necessary to obtain a Letter of Comfort?

The safety case produced by the licensee should adequately address the long-term future of the waste, including its disposability. At present, for wastes that may be expected to go into an ILW repository, the regulators consider that the only credible way of doing this is to judge proposals against the Phased Disposal Concept developed by Nirex – i.e. to use the assessment process that backs up the Letter of Comfort (LoC). It is therefore the assessment behind the LoC that is important to the regulators, not the LoC document itself. A licensee may wish to obtain the LoC document for other purposes, e.g. for future dealings with a repository operator.

Question LOC-2: Is a Letter of Comfort sufficient to satisfy regulatory requirements?

No. The regulators expect the licensee to be able to demonstrate that he/she understands the disposability aspects of the safety case, in presenting the assessment behind the LoC.

...

3) NRX – Nirex

Question NRX-1: What happens if Nirex's advice or criteria change in the future?

There is no guarantee that this will not happen. It is therefore important that the licensee

understands Nirex's advice, its provenance and the implications for his business

...

Question NRX-3: What is the status of advice received from Nirex?

Advice from Nirex to licensees has no special status in law. Its value is set by the expertise backing the advice and the recognition of that expertise by the regulators, government, the industry and other stakeholders. The regulators scrutinise the Nirex Letter of Comfort process (and the Phased Disposal Concept that underpins it) to ensure it is fit for purpose.

Question NRX-4: Is Nirex a regulator?

No. Nirex provides advice to the nuclear industry. Nirex own and develop the Phased Disposal Concept and operate the Letter of Comfort process" (emphasis added).

30. The Guidance to Industry makes plain that Nirex, while not a regulator as such, is nonetheless part of the regulatory system, or in other words is a body involved in regulation through the setting of specifications and standards and the provision of

advice¹⁶ on conditioning matters via the Letter of Compliance system which is an important part of the regulatory system of control¹⁷. This is shown inter alia by Figure 1, p. 18 of the Guidance to Industry.

31. Furthermore in NUSAC(2005)P5 "Regulation Of The Conditioning Of Intermediate Level Radioactive Waste On Nuclear Licensed Sites: An Update" produced by the NII, EA and SEPA (see above) it is said that the role of Nirex is "a key issue":

"The regulators consider that licensees should normally seek an assessment via the Nirex Letter of Compliance (LoC) process. The LoC process will therefore be an important input to the proposal" (emphasis added).

32. It is noted that in answer to Question NRX-3 from Annex of the Guidance to Industry document, quoted at para. 29 above, it is said that "Advice from Nirex to licensees has no special status in law". At one level this is correct in that the advice provided by Nirex is not the subject of specific statutory provisions and is not legally binding on the regulator. However, taken on its face the statement may present a misleading picture as to the status of Nirex's advice in the context of its role as custodian of the repository concept, if it gives the impression that compliance with the Nirex standards are voluntary or that the regulator may freely depart from them. Essentially Nirex's standards on packaging of waste are relevant at two stages. Prior to any repository being opened to accept waste, i.e. while the concept is being developed, site selection undertaken and the repository built, waste will have to be packaged ready for disposal. Plainly, in normal circumstances, that packaging must meet the relevant standards, set by Nirex, in order to be compatible with the repository concept and design. There might be exceptional circumstances in which the regulators feel that they must sanction a departure from those standards (e.g. where waste has to be packaged urgently because of safety concerns). To that extent there would be departure from the Nirex standard. However, the compliance

¹⁶ Nirex has an important role in setting standards and specifications: see above.

¹⁷ We understand that very significant proportions of ILW have still to go through the Letter of Compliance procedure. In the Nirex response to the NDA's consultation on its strategy in November 2005 it was stated that at that time 22% of ILW had been issued with a final Letter of Compliance, 18% was currently within the Letter of Comfort assessment process and 60% had still to be assessed.

gap identified by the Nirex assessment would have to be justified by the waste producers to the regulators. The Nirex standard remains relevant in that the waste producer must ensure that the "gap" is rectified before the material enters the repository. At the second stage, when the repository is open to receive waste, the safety of the overall concept including packaging would have been tested at the planning permission stage and the construction process of the repository would have been regulated to ensure it met the necessary safety and environmental protection requirements. The receipt of waste would be subject to the operator's conditions for acceptance, which would in turn necessarily be based on the Nirex standards according to which the waste should have been packaged. The Nirex standards are therefore not simply non-statutory "advice" in terms of their importance and effect and their value does not rest solely on the expertise underlying them, but also in the independence of that expertise.

(ii) THE ROLE AND CONSTITUTION OF THE NDA

33. The NDA is a non-departmental public body, set up in July 2004 and assumed its functions under the 2004 Act in April 2005, to take strategic responsibility for the UK's nuclear legacy. Its core objective is to ensure that the 20 civil public sector nuclear sites under its ownership are decommissioned and cleaned up. The role of the NDA in decommissioning these sites involves the production of large quantities of radioactive waste. The NDA's mission statement is:¹⁸

"To deliver a world class programme of safe, cost-effective, accelerated and environmentally responsible decommissioning of the UK's civil nuclear legacy in an open and transparent manner and with due regard to the socio-economic impacts on our communities."

It is relevant in our view to note the references to "cost-effective" and "accelerated", which bring into focus one of the NDA's main reasons for existence, which is to cut the cost of decommissioning and clean-up through the rigorous

¹⁸ [www.nda.gov.uk/About the_NDA_\(9\)](http://www.nda.gov.uk/About_the_NDA_(9))

application of a procurement model based on an approach adopted in the US. The mission involves an inbuilt tension with strict standards which would potentially increase the cost and timescale of projects.

34. Turning to the detailed provisions relating to the role and constitution of the NDA:

35. S. 1 of the 2004 Act provides that there shall be a body corporate to be known as the NDA which is not to be treated as performing any duty or exercising any power on behalf of the Crown or as enjoying any status, immunity or privilege of the Crown. It is also provided that the NDA's property is not to be regarded as property of the Crown, or as held on behalf of the Crown.

36. By s. 2 of the 2004 Act the Secretary of State appoints the Chair and other non-executive members of the NDA who in turn appoint the chief executive and executive members of the NDA.

37. The principal functions of the NDA are defined by s. 3 of the 2004 Act as being responsibility for securing:

- the operation, pending the commencement of their decommissioning, of designated nuclear installations (s. 3(1)(a));
- the decommissioning of those and other designated nuclear installations (s. 3(1)(b));
- the cleaning-up of designated nuclear sites (s. 3(1)(c));
- the operation of designated facilities for treating, storing, transporting or disposing of hazardous material (s. 3(1)(d));
- the treatment, storage, transportation and disposal, in designated circumstances, of hazardous material (s. 3(1)(e)); and
- the decommissioning of designated installations comprised in NDA facilities (s. 3(1)(f)).

38. A designation for the purposes of s. 3 is made by the Secretary of State having been laid before Parliament.

39. The responsibilities of the NDA under s. 3 are responsibilities to be discharged by the performance of its duties under s. 15 (duty to decommission and clean up installations and sites) and s. 16 (duties to operate installations and to provide treatment etc): see s. 3(2) of the 2004 Act.

40. Under s. 15 the Secretary of State can give general or specific directions which the NDA must comply with in discharging its responsibilities. Under s. 16 the NDA's responsibilities must be discharged in accordance with its approved strategy (see ss. 11 – 12) and annual plan (see s. 13).

41. S. 9(1) of the 2004 Act provides that "[i]t shall be the duty of the NDA, in carrying out its functions, to have particular regard to each of the following— (a) relevant Government policy; (b) the need to safeguard the environment; (c) the need to protect persons from risks to their health and safety from activities involving the use, treatment, storage, transportation or disposal of hazardous material; and (d) the need to preserve nuclear security."

42. Under s. 10(1) of the 2004 Act the NDA are given a general power, for the purpose of carrying out its functions, "to do all such things as appear to it to be likely to facilitate the carrying out of its functions, or to be incidental to carrying them out".

43. S. 10(2) provides a number of specific powers including: the power to operate electricity generating stations; to apply for and hold nuclear site licences; to make grants or loans; to carry out research; to enter into contracts and to acquire or establish subsidiaries and to carry out its functions through subsidiaries. It should be emphasised however, that as with the "incidental" power under s. 10(1), these powers are related to the carrying out of the NDA's principle functions and do not provide a means of extending these functions into other areas.

44. S. 10(3) provides "The NDA may impose charges in respect of the things that it does or secures in the discharge of its responsibilities— (a) on persons with control of installations, sites and facilities in the case of which it does not have a financial responsibility under section 21; and (b) on other persons for whom it does or secures the doing of anything for which it does not have a financial responsibility under that section".

45. Under s. 18 the NDA has power to give directions relating to the cleaning up or decommissioning to persons controlling designated sites, installations and facilities.

46. S. 21 of the 2004 Act provides that "[t]he NDA's responsibility for securing— (a) the decommissioning or operation of an installation or facility to which this section applies, or (b) the cleaning-up of a site to which this section applies, or of a related site, includes the financial responsibility for the decommissioning or operation of the installation or facility, or for the cleaning-up."

47. We are of the view that were Nirex to be subsumed within the NDA there would be the need for an amendment of the 2004 Act and in particular those parts dealing with the functions of the NDA if serious legal doubts as to the competence of the NDA are to be avoided¹⁹. These legal difficulties would in our view apply whether

¹⁹ It is not immediately obvious that the NDA is designated under the 2004 Act as having responsibility for long-term disposal matters, were Nirex to be transferred within it. As indicated above, its principal functions are set out in s. 3 in terms of responsibility for securing various matters relating to decommissioning of designated installations and the clean up of designated sites. It is correct that s. 3(1)(d) refers to "the operation of designated facilities for treating, storing, transporting or disposing of hazardous material" which might be thought capable of extending to a long term geological repository. However, the Parliamentary intention was that this would deal with the operation of existing facilities such as BNFL's THORP plant, the Sellafield MOX plant and the low level waste disposal site at Driffild: see Current Law Statutes, Energy Act 2004, General Note to section 3, para 20/4. Accordingly, we would not read those words as allowing NDA to be given responsibility for the conception, identification and design of a new and as yet unidentified long term disposal site. It is also correct that s. 3(1)(e) refers to responsibility for securing "the treatment, storage, transportation and disposal, in designated circumstances, of hazardous material". However, we would read that as providing that NDA is responsible for securing the disposal of the material it produces to suitable facilities, not for conceiving, implementing and operating such facilities. We do however note that under s. 4(4) it may be possible by direction to give the NDA responsibility for securing the design, construction and operation of a facility for the purpose of disposing of waste or matter for which it has responsibility. This seems however to refer to a specific facility i.e. the facility located

the model chosen involved Nirex becoming a subsidiary company of the NDA or if Nirex, or parts of Nirex were managed by the NDA.²⁰

(III) THE INTERNATIONAL LAW CONTEXT

48. A useful starting point in terms of the relevant International Law context is the *Handbook on Nuclear Law* by Stroiber, Baer, Pelzer & Tonhauser (2003) produced by the International Atomic Energy Agency ("the IAEA"). Before considering the content of the *Handbook on Nuclear Law* we need to say something about the IAEA under whose auspices the Handbook is published.

49. The IAEA²¹ is "the World's centre of cooperation in the nuclear field"²². It was set up as the "Atoms for Peace" organization in 1957 within the United Nations ("UN") family of organisations²³. The IAEA's statute was approved on 23 October 1956 by the Conference on the Statute of the IAEA at the UN headquarters in New York. The IAEA²⁴ "works with its Member States and multiple partners worldwide to promote safe, secure and peaceful nuclear technologies"²⁵. Reports on IAEA

near Drigg rather than the disposal concept as operated by Nirex.. It seems to us that a move of Nirex within NDA would, in order to avoid doubt as to the legal duties and powers of the NDA to fulfil the functions currently carried out and proposed to be carried out in future by Nirex, require some amendment of the primary legislation. This raises the issue of whether it would not be preferable to have a specific piece of legislation dealing with long-term disposal of radioactive waste with responsibilities and roles defined in a clear and transparent manner.

²⁰ The NDA's powers in s. 10(2)(k) include power to acquire and establish subsidiaries and "to carry out its functions through subsidiaries". Similarly, under s. 10(2)(i) and (j) the NDA has power to enter into contracts to secure the carrying out of its functions by others. The NDA clearly cannot expand its statutory powers and functions by acting through a subsidiary, or through contracting with or managing some separate organisation.

²¹ The IAEA Secretariat is a team of 2200 multi-disciplinary professional and support staff from more than 90 countries. IAEA programmes and budgets are set through decisions of its policymaking bodies - the 35-member Board of Governors and the General Conference of all Member States.

²² See the IAEA website at <http://www.iaea.org/About/index.html>

²³ As an independent international organization related to the UN system, the IAEA's relationship with the UN is regulated by special agreement. In terms of its Statute, the IAEA reports annually to the UN General Assembly and, when appropriate, to the Security Council regarding non-compliance by States with their safeguards obligations as well as on matters relating to international peace and security.

²⁴ The IAEA Secretariat is headquartered at the Vienna International Centre in Vienna, Austria. Operational liaison and regional offices are located in Geneva, Switzerland; New York, USA; Toronto, Canada; and Tokyo, Japan. The IAEA runs or supports research centres and scientific laboratories in Vienna and Seibersdorf, Austria; Monaco; and Trieste, Italy. See Offices and Contacts": *ibid.*

²⁵ *Ibid.*

activities are submitted periodically or as cases warrant to the UN Security Council and UN General Assembly.

50. The IAEA's mission is guided by the interests and needs of Member States, strategic plans and the vision embodied in the IAEA Statute. Three main pillars - or areas of work - underpin the IAEA's mission: Safety and Security; Science and Technology; and Safeguards and Verification²⁶.

51. The IAEA's *Handbook on Nuclear Law* deals in Chapter 2 with "The Regulatory Body" and at section 2.2 with the key issue of "Independence and separation of regulatory functions". It states that "[o]ne of the most important attributes of a regulatory body is its freedom from unwarranted interference in its regulatory functions". It is explained that this concept has been developed in a number of IAEA documents and in relevant international conventions.

52. It is necessary to consider the various International Law sources of this concept further in a moment. However, before doing so it is of note that at section 2.4 of *Handbook on Nuclear Law* under the heading "ADVISORY BODIES AND EXTERNAL SUPPORT" it is said:

"A final matter to be discussed briefly is how to ensure that the regulatory body can obtain the necessary technical support and policy advice. If the regulatory body lacks the technical personnel necessary in order to discharge its responsibilities, the nuclear law should enable it to secure the services of technical experts or to arrange for the necessary technical work to be carried out under contract. It is, of course, important that the providers of the external expertise (e.g. contractors, universities, technical support organizations and scientific institutes) have the maximum degree of independence from the bodies engaged in the development or promotion of nuclear energy".

53. This is a logical and common sense approach. If regulators are to remain impartial and independent they must receive impartial and independent advice²⁷.

²⁶ *Ibid.*

²⁷ It is of note that the English Courts have accepted that a lack of impartiality on the part of those advising decision-makers can lead to decisions being quashed on the basis of bias: see e.g. *R v Gough* [1993] AC 646 at 664C and 670G in relation to Magistrates' clerks); *R v Governors of the Sheffield Hallam*

54. We turn now to consider the various International law sources from which is derived the requirement of regulatory separation and independence. This is a requirement which we take the view (in accordance with the IAEA's *Handbook on Nuclear Law* (see above) extends to those bodies providing advice to regulators.

55. The most important current sources of the independence and separation concept in International Law as it relates to the matters we are considering in this Opinion are as follows:

- First, the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management INFCIR/546 (1997) ("**the Joint Convention**");
- Secondly, the IAEA's "Safety Culture, Safety Series" No. 75-INSAG-4, IAEA (1991);
- Thirdly, in the IAEA's Nuclear Safety Standards ("NUSS") series "Legal and Governmental Infrastructure for Nuclear, Radiation, Radioactive Waste and Transport Safety Standards Series" No. GS-R-1, IAEA (2000) ("NUSS No. GS-R-1, IAEA (2000)"); and
- Fourthly, in the IAEA Waste Safety Standards ("WS") series, "Geological Disposal of Radioactive Waste" No. WS-R-4 (2006).

56. However, the requirement for independence and separation is not a new one. There have been since 1978 various international instruments that have emphasised the importance of independence in all aspects of nuclear regulation. One of the first references to independence or separation is in the original 1978 version of the IAEA NUSS "Governmental Organization for the Regulation of Nuclear Power Plants - A Code of Practice" (IAEA Safety Series no. 50-C-G, Vienna 1978, p.3)²⁸ which provided:

University, ex p R [1995] ELR 267 at 284-85; *Lafarge Aggregates Ltd v Scottish Ministers* [2000] 4 PLR 51 and *R (SmithKline Beecham) v ASA* (unreported 17 January 2001)

²⁸ This is the predecessor of NUSS No. GS-R-1, IAEA (2000).

"3.1.2. In performing its functions, the regulatory body shall act independently of applicants, vendors, and operating organisations, but should not be functionally responsible for promotion of nuclear power. However, full use of available expertise is essential and should be made under the control of the regulatory body."

57. The concept has been further developed in the following IAEA documents:

- NUSS Programme revised (1988): IAEA Safety Series no. 50-C-G (Rev.1), Vienna 1988 p. 11;
- "Safety Culture" IAEA Safety Series no. 75-INSAG-4, Vienna 1991 pp.4, 15; Appendix p. 22.
- "The Safety of Nuclear Installations" IAEA Safety Series no. 110, Vienna 1993 p. 4 (no. 304);
- The Convention on Nuclear Safety, INFCIRC/449, IAEA (1994) which provides in Article 8(2) that "Each Contracting Party shall take the appropriate steps to ensure *an effective separation* between the functions of the regulatory body and those of any other body or organization²⁹ concerned with the promotion or utilization of nuclear energy" (emphasis added)³⁰.

58. With that history in mind we now consider the four most important current sources, identified above, of the independence and separation concept in International Law:

(1) The Joint Convention

59. The Joint Convention was adopted on 5 September 1997 by a Diplomatic Conference convened by the IAEA.

60. The Joint Convention pursuant to Article 40(1) came into force on 18 June 2001 on the ninetieth day after the day of deposit of the twenty fifth instrument of ratification, acceptance or approval, including the instruments of 15 states each

²⁹ The *Handbook on International Law* states (at para. 2.2 p. 26) that "[i]t is understood that "any other body or organization" includes private and commercial entities."

³⁰ As regards the possible overlap of the Joint Convention and the Convention on Nuclear Safety: see "The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management" by Tonjauser and Jankowitsch-Prevnor *Nuclear Law Bulletin* 60.

having an operational nuclear power plant. As at May 2006 there were 41 parties, 42 signatories.

61. The UK deposited its instrument of ratification on 12 March 2001.

62. Article 1 sets out the objectives of the Joint Convention which are:

- to achieve and maintain a high level of safety worldwide in spent fuel and radioactive waste management, through the enhancement of national measures and international co-operation, including where appropriate, safety-related technical co-operation;
- to ensure that during all stages of spent fuel and radioactive waste management there are effective defences against potential hazards so that individuals, society and the environment are protected from harmful effects of ionizing radiation, now and in the future, in such a way that the needs and aspirations of the present generation are met without compromising the ability of future generations to meet their needs and aspirations; and
- to prevent accidents with radiological consequences and to mitigate their consequences should they occur during any stage of spent fuel or radioactive waste management.

63. Article 32 of the Joint Convention contains a reporting requirement "each Contracting Party shall submit a national report to each review meeting of the Contracting Parties". National reports are required to address "the measures taken to implement each of the obligations of the Convention". Review meetings are provided for by Article 30. The UK's national reports to date are considered further below.

64. The Articles most relevant in the present context are Articles 19 and 20 which provide:

"ARTICLE 19. LEGISLATIVE AND REGULATORY FRAMEWORK"

1. Each Contracting Party shall establish and maintain a legislative and regulatory framework to govern the safety of spent fuel and radioactive waste management³¹.
2. This legislative and regulatory framework shall provide for:
 - (i) the establishment of applicable national safety requirements and regulations for radiation safety;
 - (ii) a system of licensing of spent fuel and radioactive waste management activities;
 - (iii) a system of prohibition of the operation of a spent fuel or radioactive waste management facility without a licence³²;
 - (iv) a system of appropriate institutional control, regulatory inspection and documentation and reporting;
 - (v) the enforcement of applicable regulations and of the terms of the licences;
 - (vi) a clear allocation of responsibilities of the bodies involved in the different steps of spent fuel and of radioactive waste management.
3. When considering whether to regulate radioactive materials as radioactive waste, Contracting Parties shall take due account of the objectives of this Convention.

ARTICLE 20. REGULATORY BODY

1. Each Contracting Party shall establish or designate a regulatory body³³ entrusted with the implementation of the legislative and regulatory framework referred to in Article 19, and provided with adequate authority, competence and financial and human resources to fulfill its assigned responsibilities.
2. Each Contracting Party, in accordance with its legislative and regulatory framework, shall take the appropriate steps to ensure *the effective independence of*

³¹ Article 2(h) (j) provide as follows:

- "radioactive waste" means radioactive material in gaseous, liquid or solid form for which no further use is foreseen by the Contracting Party or by a natural or legal person whose decision is accepted by the Contracting Party, and which is controlled as radioactive waste by a regulatory body under the legislative and regulatory framework of the Contracting Party;
- "radioactive waste management" means all activities, including decommissioning activities, that relate to the handling, pretreatment, treatment, conditioning, storage, or disposal of radioactive waste, excluding off-site transportation. It may also involve discharges;
- "radioactive waste management facility" means any facility or installation the primary purpose of which is radioactive waste management, including a nuclear facility in the process of being decommissioned only if it is designated by the Contracting Party as a radioactive waste management facility

In addition:

- "discharges" means planned and controlled releases into the environment, as a legitimate practice, within limits authorized by the regulatory body, of liquid or gaseous radioactive materials that originate from regulated nuclear facilities during normal operation (Article 2(c));
- "disposal" means the emplacement of spent fuel or radioactive waste in an appropriate facility without the intention of retrieval (Article 2(d));
- "spent fuel" means nuclear fuel that has been irradiated in and permanently removed from a reactor core (Article 2(n));
- "spent fuel management" means all activities that relate to the handling or storage of spent fuel, excluding off-site transportation. It may also involve discharges (Article 2(o));

³² "licence" means "any authorization, permission or certification granted by a regulatory body to carry out any activity related to management of spent fuel or of radioactive waste: see Article 2(e).

³³ "regulatory body" means "any body or bodies given the legal authority by the Contracting Party to regulate any aspect of the safety of spent fuel or radioactive waste management including the granting of licences": see Article 2 (k).

the regulatory functions from other functions where organizations are involved in both spent fuel or radioactive waste management and in their regulation” (emphasis added).

65. There are a number of points that can be made about the Joint Convention in the context of the issues arising for consideration in our Opinion:

- first, it is of some note that the first review meeting of Joint Convention took place in November 2003. One of the specific technical issues discussed was “regulatory independence”. Concern was expressed at the review meeting “over the situation in a few of the Contracting Parties where organisations exist with multiple functions and where regulatory functions in relation to radioactive waste management may not be sufficiently independent of other functions of the organisations”³⁴;
- second, for the purposes of Article 19(2)(vi) of the Joint Convention it is our view that both the NDA and Nirex are bodies “involved in the different steps of spent fuel and of radioactive waste management” with the result that there is an obligation to ensure “a clear allocation of responsibilities” between these bodies in terms of the legislative and regulatory framework. While it is our view that the present arrangements provide this it is not at all clear to us how the same would be achieved if Nirex were to become part of the NDA;
- third, the obligation in Article 20(2) is for “effective independence of regulatory functions”. While Nirex is not a “regulatory body” for the purposes of Article 20 it is nonetheless for the reasons explained above involved in regulation by setting technical standards and providing advice via the Letter of Compliance system. It will be recalled that the *Handbook on Nuclear Law* (rightly in our view) takes the position that the requirement for independence and separation as set out in the Joint Convention (and other International Law instruments) extends to bodies providing advice to regulators (see above);
- fourth, as mentioned above there is a reporting obligation under the Joint Convention:

³⁴ See “Observations on the first Review Meeting of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management” by G. Linsey in the *Nuclear Law Bulletin* 74, p. 81 at p. 85.

i. in the UK’s second national report on compliance with the obligations of the Joint Convention (Defra February 2006) the following of note is said³⁵:

1. A-26: “Nirex was originally set up in 1982 by the nuclear industry to provide it with waste disposal services. Nirex’s programme for developing a deep repository for intermediate level radioactive waste (ILW) was abandoned following a Planning Inquiry in 1997. The company continues to provide advice on standards for the conditioning and packaging of radioactive waste, compiles the UK Radioactive Waste Inventory in conjunction with Defra, and serves as the main UK source of knowledge on underground disposal of waste”;
2. A-27 “To ensure Nirex advice is independent of the nuclear industry, the company was taken into joint Defra/DTI ownership from 1 April 2005: a jointly owned shareholding company has been established for this purpose. The long-term future of Nirex will be decided in light of CoRWM’s recommendations and policy decisions taken by Government in light of them ...” (emphasis added);
3. B-44 “Historically, proposals by the licensees for the conditioning of wastes were put to United Kingdom Nirex Limited (Nirex), the body originally given responsibility for delivering a disposal site for ILW in the UK. Nirex assessed the industry’s proposals to condition radioactive waste to check suitability for disposal. Following such assessments, Nirex provided formal advice to guide waste producer’s plans and future development. When satisfied that the proposals were consistent with Nirex standards, specifications, packaging principles and the phased geological repository concept, Nirex

³⁵ Nirex contributed to the report (see p. ii)

- provided endorsement in the form of a 'Letter of Comfort' (now termed 'Letter of Compliance')";
4. B-45 "Arrangements have been made to strengthen the "Letter of Compliance" system by introducing improved arrangements between the regulators (HSE and the environment agencies). Licensees provide safety cases to HSE to demonstrate the adequate protection and safeguards for activities involving ILW conditioning operations. The submission is supported by an assessment of the suitability for disposal of the conditioned waste, which a "Letter of Compliance" (LoC) assessment is one way of providing. To achieve this Nirex assesses the waste producer's conditioning proposal and provides advice and, where appropriate, endorsement through the issue of an LoC. For those safety cases that are chosen for assessment, HSE consults the appropriate environment agency and if both regulators are content, HSE grants permission for the treatment and packaging of the waste, as justified by the submission. If the regulators are not satisfied with the submission the licensee is told the reasons why and improves the submission until it is agreeable to the regulators. The improved regulatory arrangements are set out in joint guidance to industry."
 5. E-78 "Nirex is a Government-owned and controlled company whose mission is, in support of Government policy, to develop and advise on safe, environmentally sound and publicly acceptable options for the long-term management of radioactive materials in the UK".
 6. E-79 "Nirex plays a key part in the improved regulatory arrangements for the conditioning of intermediate level radioactive waste on nuclear licensed sites, through its 'Letter of Compliance' system described in paragraphs B-44 and B-45 above" (emphasis added);

7. E-93 " The joint HSE, EA and SEPA statement of December 2003 "The improved regulatory arrangements for the conditioning of intermediate level radioactive waste on nuclear licensed sites" sets out the role of Nirex in relation to the regulators' statutory functions. Nirex is not a regulator: its role under the improved regulatory arrangements is to assess the waste producers' packaging proposals and issues a 'Letter of Compliance' (LoC) or 'Letter of Advice' (LoA) as appropriate, which forms part of the licensee's safety case submitted to HSE. HSE consults the appropriate environment agency under the MoU and if both regulators are content HSE grants permission for the treatment and packaging of the waste. Nirex's work is scrutinised by both environment agencies";
- ii. The UK's first national report on compliance with the obligations of the Joint Convention (2003) also made reference to Nirex. However, Nirex is mentioned much less prominently and frequently in the report (particularly in the context of regulation) no doubt because at this time it lacked the requisite independence referred to and averred in the more recent report (see above). The only substantive mentions are¹⁶:
 1. B-31 "Historically, proposals by the licensees for the conditioning of wastes were put to United Kingdom Nirex Limited (Nirex), the body given responsibility for delivering a disposal site for ILW in the UK. Nirex assessed the industry's proposals to condition radioactive waste to check suitability for disposal. Following such assessments, Nirex provided formal advice to guide waste producer's plans and future development. When satisfied that the proposals were consistent with Nirex standards, specifications, packaging principles and

¹⁶ Other inconsequential references to Nirex are at F-73 as a source of information on radioactive waste management and disposal. See similarly F-28 in the 2006 report. See also in the 2006 report p. 98 where compliance with Nirex recommendations is referred to in the context of Twawsfynydd.

the phased disposal concept, Nirex provided endorsement in the form of a 'Letter of Comfort'.

2. B-32 "Arrangements are being made to strengthen the "Letter of Comfort" system by introducing new arrangements between the regulators (HSE and the environment agencies). Licensees will have to provide a submission for waste packaging proposals to HSE. The submission will be supported by an assessment of the suitability for disposal of the conditioned waste, which the "Letter of Comfort" provides. HSE will consult with the environment agencies and if all regulators are content, HSE will grant permission for the treatment and packaging of the waste, as justified by the submission. If the regulators are not satisfied with the submission the licensee will be told the reasons why and will have to improve the submission until it is agreeable to the regulators"

(2) The IAEA's "Safety Culture, Safety Series" No. 75-INSAG-4

66. The IAEA Safety Standards series "set the international baseline for good practice regarding nuclear safety"³⁷.

67. The IAEA's "Safety Culture, Safety Series" No. 75-INSAG-4 is a report by the International Nuclear Safety Advisory Group. It provides at p. 15:

" 4.1. GOVERNMENT AND ITS ORGANIZATIONS

"The practical approach that governments adopt towards safety in general and nuclear safety in particular has a major effect on all organizations influencing nuclear safety. The following aspects demonstrate government commitment:

— Legislation and government policies for the use of nuclear power set broad safety objectives, establish the necessary institutions and ensure adequate support for its safe development.

— Governments assign the responsibilities of such institutions clearly, arrange that conflict of interest in important safety matters is minimized, and ensure in particular that safety matters are addressed on their merits, without interference

³⁷ See the Guide to Industry at Annex D, para. 2.

or undue pressure from bodies whose responsibility for nuclear safety is less direct.

— Governments provide strong support for regulatory agencies, including adequate powers, sufficient funds for all activities and guarantees that the regulatory task can be pursued without undue interference ..."

68. The obligation to ensure that "conflict of interest" in important safety matters is minimised is plainly of some importance. We think it would be difficult to say that this obligation was being adhered to if Nirex were to be subsumed within the NDA. Our reasons for taking that view are explored below.

(3) NUSS No. GS-R-1, IAEA (2000)

69. NUSS No. GS-R-1, IAEA (2000) at p. 5, in providing guidance on Legislative provisions requires that legislation "for the effective control of nuclear radiation, radioactive waste and transport safety ... (9) shall allow for the creation of independent advisory bodies to provide expert opinion to, and for consultation by, the government and regulatory body".

70. It is our view that Nirex as matters stand is an independent advisory body providing expert opinion to Government and regulators.

71. In the UK's second national report on compliance with the obligations of the Joint Convention Annex A considers IAEA requirements including NUSS No. GS-R-1, IAEA (2000). It is that same document that refers to the key role of Nirex under the current regulatory system and to its current independence. The reference in the NUSS No. GS-R-1, IAEA (2000) to the creation of independent advisory bodies is clearly of importance given the role Nirex plays under the present system of regulation (see further above).

72. WS-R-4 Geological Disposal of Radioactive Waste, published in July 2006, falls within the IAEA's Safety Requirements standards series and as such are intended to

establish requirements in mandatory terms, using regulatory language to allow them to be incorporated into national laws and regulations.³⁸

73. Para. 1.7 of WS-R-4 endorses the phased or step-by-step disposal concept, which includes the development of disposal concepts and iterative studies for design and safety assessment, along with the evaluation of possible sites.

74. Paras. 3.5 and following state clearly the requirements for regulatory independence and for independent scientific and technical expertise, which are especially important given the long time-scales necessary for the development of projects:

“Requirements for government responsibility

3.5 The Government is required to provide an appropriate national legal and organizational framework within which a geological disposal facility can be sited, designed, constructed, operated and closed. This shall include the definition of the steps in the facility’s development and licensing, the clear allocation of responsibilities, the securing of financial and other resources, and the provision of independent regulatory functions.

3.6 Such a provision is one of the principles of radioactive waste management and is stipulated under the terms of the Joint Convention ... Geological disposal is given special consideration within this infrastructure because of the relatively long time necessary for the development of such projects.

3.7 Matters that are considered include:

- Defining the national policy for the long term management of radioactive waste of different types;
- Setting clearly defined legal, technical and financial responsibilities for organizations to be involved in the development of waste management facilities, including geological disposal facilities;

³⁸ The interpretation section of the introduction states that “The safety standards use the term ‘shall’ in establishing international consensus requirements, responsibilities and obligations.”

- Ensuring the adequacy and security of financial provisions;
- Defining the overall process for the development, operation and closure of waste facilities, including the legal and regulatory requirements (e.g. licence conditions) at each step, and the processes for decision making and the involvement of interested parties;
- Ensuring that the necessary scientific expertise remains available both for the operator and for the support of independent regulatory review and other national review functions;
- Defining legal, technical and financial responsibilities for any post-closure institutional arrangements that are envisaged, including monitoring and ensuring the security of the deposited waste.

Requirements for regulatory body responsibility

3.8 The regulatory body shall establish the regulatory requirements for the development of geological disposal facilities and shall set out the procedures for meeting the requirements for the various stages of the licensing process. It shall also set conditions for the development, operation and closure of a geological disposal facility and shall carry out such activities as are necessary to ensure that the conditions are met.

3.9 General standards for the protection of human health and the environment are usually set out in a national policy or in legislation. The regulatory body develops regulatory requirements specific to geological disposal facilities ... The regulatory body provides guidance on the interpretation of the national legislation and regulatory requirements, as necessary, and guidance on what is expected of the operator. It also engages in dialogue with the operator and interested parties to ensure that the regulatory requirements are appropriate and practicable. The regulatory body will also undertake research, acquire independent assessment capabilities and participate in international co-operation as necessary to fulfil its regulatory functions.”

75. These requirements in our view spell out very clearly what is required in order to comply with international law and clearly in setting up current new or revised regulatory arrangements, the national government will need to ensure that these are consistent with the requirements.³⁹ In particular, there is a need for independence in the regulatory function of developing requirements specific to the relevant disposal facility, which includes the acquisition of independent assessment capabilities. It is the government's responsibility to ensure that the necessary scientific and technical expertise remains available both for the operator and the regulator and for the support of independent regulatory review. The technical expertise must be available on an independent basis to the regulator and cannot lawfully reside solely with the operator.

(IV) THE COMMUNITY LAW CONTEXT

76. The European Atomic Energy Community ("EURATOM") was established by the Treaty signed in Rome on 25 March 1957. Together with the European Community, it constitutes the first pillar of the European Union ("EU"). The EURATOM Treaty is the legal basis for the competences and activities of EURATOM.

77. The signatories stated in the preamble to the Treaty that they were, in particular:

- to create the conditions necessary for the development of a powerful nuclear industry;

³⁹ The application of such standards to pre-existing systems such as the SKB structure in Sweden which was set up in the 1970s is perhaps more doubtful in terms of whether IAEA standards would have retrospective effect. However, this is irrelevant to the UK situation where new arrangements are in contemplation. Certainly in terms of the facilities themselves the 2006 Safety Standard clearly indicates that retrospective changes are optional, to quote the Preface of the Safety Standard "For example, many of the safety standards, particularly those addressing planning or design aspects of safety, are intended to apply primarily to new facilities and activities. The requirements and recommendations specified in the IAEA safety standards might not be fully met at some facilities built to earlier standards. The way in which the safety standards are to be applied to such facilities is a decision for individual States."

- to create the conditions of safety necessary to eliminate hazards to the life and health of the public;
- to associate other countries with their work and to cooperate with international organisations concerned with the peaceful development of atomic energy.

78. Article 101 of the EURATOM Treaty allows EURATOM to enter into agreements with, inter alia, International organisations.

79. EURATOM acceded to the Joint Convention on 4 October 2005 and the Convention entered into force for EURATOM on 2 January 2006⁴⁰.

80. Article 39(4)(iii) of the Joint Convention which deals with the accession of "regional organizations" such as EURATOM requires such an organization must make a declaration as to which Articles of the Convention apply to it, and the extent of its competence in the field covered by those articles.

81. The Community has declared that Articles 1 to 16, 18, 19, 21 and 24 to 44 of the Joint Convention apply to it and that the Community possesses competences, shared with its Member States, in the fields covered by Articles 4, 6 to 11, 13 to 16, 19 and 24 to 28 of the Joint Convention as provided by the EURATOM Treaty in Article 2(b) and the relevant Articles of Title II, Chapter 3, entitled "Health and Safety": see C (2006)500 final (dated 20 February 2006) the Commission's report on EURATOM's implementation of the obligations under the Joint Convention. There can be no question but that the Community has competence in relation to the field of management of spent nuclear fuel and radioactive waste: see by analogy Case C-29/99 *Commission v Council* [2002] ECR I-11221 dealing with the accession of EURATOM to the Convention on Nuclear Safety.

⁴⁰ EURATOM meets the requirements laid down in Article 39(4) of the Joint Convention for becoming a party to it

82. It will be noted that Article 20 of the Joint Convention which contains the requirement of "effective independence" of regulatory functions does not apply to EURATOM itself and is not within the fields of competence. However, Article 19 which is also relevant in this context (see above) does apply to EURATOM and lies within its field of competence.

83. Furthermore, the Commission report (referred to above) makes the important point that "Following Euratom's accession to the Joint Convention, this Convention became part of the corpus of binding Euratom legislation" (p. 21). Thus the obligations in the Joint Convention as a whole (i.e. including Article 20) are now part of the corpus of Community Law. This means in turn that the Community's compliance and enforcement mechanisms (including the possibility of seeking a judgment from the European Court of Justice) apply to the obligations contained in the Joint Convention.

84. Furthermore, it is of note that in January 2003 the Commission published two Directives designed to pave the way for a Community approach to nuclear safety and the processing and disposal of nuclear waste. The second proposed Directive related to the management of spent nuclear fuel and radioactive waste: COM(2003) 32. The latest draft of the proposed Directive COM/2004/526 final - CNS 2003/0022 Amended proposal for a Council Directive (EURATOM) on the safe management of the spent nuclear fuel and radioactive waste contains at article 3(3) the following:

"3. Member States shall establish or designate a regulatory body entrusted with the implementation of the national legislative and regulatory framework governing the safety of spent fuel and radioactive waste management provided with adequate authority, competence and financial and human resources to fulfil its assigned responsibilities. In discharging its duties the functions of the regulatory body shall be effectively separated from those of any other body or organisation, whether private or public, involved in the management of spent fuel or radioactive waste" (emphasis added)

85. Both the accession of EURATOM to the Joint Convention and the proposed Directive provide further support for the view that independence and separation are fundamental requirements of International Law.

86. Furthermore:

"IAEA safeguards are applied in the UK according to the terms of the UK's safeguards agreement with Euratom and the IAEA ("Agreement of 6 September 1976 Between the United Kingdom of Great Britain and Northern Ireland, the European Atomic Energy Community and the Agency [IAEA] in connection with the Treaty on the Non-Proliferation of Nuclear Weapons" published by the IAEA as Information Circular (INFCIRC) number 263) and the Protocol additional to that agreement"⁴¹.

87. Thus the accession of EURATOM to the Joint Convention and its role in ensuring compliance with IAEA safety standards means that the International Law requirements considered above are also given effect to in Community Law.

88. Accordingly in our view the starting point is that the International Law standards requiring independence and separation, as considered above, are also part of the UK's obligations under the EURATOM Treaty, as a matter of Community law.

(V) ISSUES ARISING

89. Were Nirex to be subsumed into the NDA we are of the view that this would give rise to potentially serious difficulties in respect of compliance with International Law (and through EURATOM's accession to the Joint Convention) Community Law requirements.

90. The interests of the NDA as a major waste owner/producer in terms of decommissioning facilities may not necessarily coincide with those of Nirex in developing the PRGC or in assessing conditioning proposals. As a result we foresee difficulties in ensuring the effective independence of Nirex in offering advice to the regulatory agencies and otherwise being involved in the regulatory process (see

⁴¹ Ibid.

above) if Nirex were subsumed into what will be (we assume) the largest owner/producer of HLW and ILW.

91. As described in detail above at present Nirex, although not a regulator itself, plays what the UK Government has described as "a key part in the improved regulatory arrangements for the conditioning of intermediate level radioactive waste on nuclear licensed sites, through its 'Letter of Compliance' system"⁴². In our view that approach involves Nirex in setting standards and specifications for waste packaging. These specifications do not have direct force of law (i.e. it is not an offence to fail to comply with them) but they do derive such force through their use in the regulatory process by regulators, and also by their ultimate role as acceptance criteria which will govern whether or not waste will be accepted for disposal, as discussed in detail above. They are more than simply advice as to what is good practice technically.

92. Further, Nirex in fulfilling its essential role in the conditioning and packaging of wastes and ensuring compliance with the PGRC (see above) does so as a body wholly independently of the nuclear industry⁴³. It is our view that some body is clearly going to be required to offer guidance on these matters to the industry and to assess compliance with the relevant specifications. Such functions cannot be fully undertaken by the environment agencies or the NII. This is because any role as "keeper" or promoter of the PGRC would potentially place these bodies in a position where their independent regulatory functions could not be secured as Article 20 of the Joint Convention requires. Thus a source of independent advice to the regulators on these issues is required.

93. It seems to us that were Nirex subsumed into the NDA, the advice it currently provides would cease to be independent. The NDA will let contracts for decommissioning and clean up. Its contractors will have to seek the relevant site

⁴² See the UK's second national report on compliance with the obligations of the Joint Convention (Defra February 2006) at E-79.

⁴³ Ibid at A-29.

licences, which will involve them putting forward Conditioning Proposals. If Nirex were part of the NDA it would be controlling the specifications against which such proposals were assessed and would be assessing them for compliance. There is then an obvious risk that commercial considerations could figure in such an assessment, since requiring more exacting specifications for conditioning or packaging could increase the cost and the time involved in clean up or decommissioning. The costs of which are, of course, the responsibility of the NDA (see above). Thus the NDA is subject to industry and commercial pressures relating to its tasks of decommissioning and clean-up (see below). Nirex, at present, is able to take a broader view uninfluenced by industry or commercial pressures. These difficulties would appear to us to apply whether Nirex is simply subsumed within the NDA, or becomes a subsidiary of the NDA, or works under contract with the NDA.

94. Article 20(2) of the Joint Convention and the other International Law instruments referred to above require effective independence of regulatory functions (which includes, in our view, the Letter of Compliance process) from other functions involved in waste management carried out by the NDA. Subsuming Nirex within the NDA would not allow effective independence within the regulatory regime that exists in the UK.

95. Furthermore, given the explanation of the role of and specific reference to the independence of Nirex in the UK's second national report on compliance with the obligations of the Joint Convention (see above) it seems to us that the Government will find it difficult to report under Article 32 in a future national report the fact that it had taken an apparently retrograde step in terms of independence and separation by subsuming Nirex into the NDA. The difficulties in this regard are clear when one examines what is said about Nirex's independence and the "key part" it plays in the current regulation system via the Letter of Compliance process (see the quotations from the second national report set out above, especially paras. A-27 and E-79).

96. The present regulatory regime, as reported in the UK's second national report on compliance with the obligations of the Joint Convention (which includes the key role played by Nirex) reflects the fact that as a matter of International Law and common sense there has to be a means for setting and assessing compliance with standards for packaging which is independent from those involved in producing packaged waste. Furthermore because of the inherent necessary link between those standards and the PGRC the role currently fulfilled by Nirex could not be undertaken by a purely regulatory body (see above).

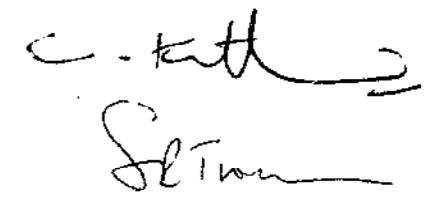
97. The same difficulties arise, in our view, in relation to the role of Nirex in offering advice to the Government and facilitating public engagement on long term disposal options. The NDA will be at the very least one of the major producers of waste to enter any long-term facility, and indeed any facility may be constructed on a site designated as the NDA's responsibility.

98. The advisory role of Nirex at this stage is less clearly a function of regulation than is currently the case in terms of the Letter of Compliance process. However, this advisory role does support the regulatory process in research as to the suitability of options. At present Nirex because it is not subject to industry and commercial pressures can take a wider view. An example of this can be seen in Nirex's response to the NDA Strategy and Environmental Report where Nirex point out that the pace of progress towards providing a long-term disposal facility cannot be wholly dictated by industry requirements, important though these are.

99. Thus in conclusion in our view it is difficult to see how subsuming Nirex into the NDA could be achieved consistently with the UK's International Law and Community Law obligations in this regard. This is in contrast to the existing position as only recently reported by the UK under the Joint Convention. As matters stand Nirex has the necessary degree of independence to ensure compliance with the Joint Convention and the other relevant International Law instruments set out above.

100. We note that as an alternative to Nirex becoming part of the NDA the model has been suggested of a "special unit", the precise legal status of which is unclear. Such a "special unit" could operate at arm's length from Government as a NDPB, or could be a group within a Government Department (e.g. similar to the Liabilities Management Unit that preceded the NDA within the DTI). The perceived advantage of such an arrangement to Government is that it would allow Government to manage crucial early stages of site selection and public engagement, without the process being compromised by the perception that the NDA is exerting influence on siting, related to its existing land ownership and assets management. Any involvement by the NDA within this option would create problems, and the unit itself would have to contain Nirex so that it could take part in site selection criteria and site assessment activities. A completely independent and advisory NDPB, provided it had the breadth of expertise to apply the PRGC approach, would not face this difficulty. However, there are in our view potential issues to be considered if the body undertaking such processes, which will be highly politically sensitive, was part of the Government department which would ultimately take the decision, through the planning process, on siting. It would in our view be strongly preferable for any such body to be, and be seen to be, at arm's length from Government.

101. If we can be of any further assistance please do not hesitate to contact us in Chambers.



CHRISTOPHER KATKOWSKI QC
STEPHEN TROMANS

Assisted by JAMES MAURICI

**Landmark Chambers,
180 Fleet Street,
London, EC4A 2HG**

**39 Essex Street,
London,
WC2R 3AT**

15 September 2006