DSG(2010)C137

FEEDBACK FROM CORWM MEETING – NOVEMBER 2010

NDA Strategy II - Feedback to NDA

Provided as **DRAFT** CORWM document 2859
- see appendix 1

Other Discussion Topics:

Scottish Government Higher Activity Waste Policy
- Closed session had been held with Elizabeth Gray of the Scottish Government
- The CORWM had responded to the addendum on Geological Disposal (sent out separately)
- CORWM believed that the wording of the Policy was nearing completion and may be issued in new year.

CORWM R&D Report
- Government have responded to comments on the CORWM R&D report - 19th Nov 2010 - can be found on DECC website

Hunterston Graphite
- Raised by Peter Roche - Nuclear Waste Advisory Associates
- CORWM will get a presentation from Hunterston A in Feb 2011.

Public & Stakeholder Engagement - General
- CORWM would not subscribe to the view that NGOs should be paid to attend meetings but still support payment of reasonable expenses;
- CORWM are preparing a new website for launch
- They will meet with the NGOs early next year to ensure issues are being addressed.
- A paper on PSE has been prepared but will be released next year

NDA RWMD R&D Update
- CORWM have reviewed the RWMD R&D report and were to discuss it with Neil Smart on 25th Nov
- needed to consider how to ensure that the Supply Chain remain engaged over the timescales involved.
- NDA/RWMD need to consider how to engage and perhaps get a Lead Contractor in place for implementation.

Nuclear Waste Research Forum
- CORWM now attended as observers
- Were impressed by the first meeting especially - Technology Maps that were on the walls - Each Site had produced one
- CORWM still required confirmation as to how Scottish Sites were to address the Change in Higher Activity Waste Policy; what waste may go down which disposal route. It was stated that as the policy wording had yet to be completed, then no NDA instruction had been given as yet.
- Also need to recognise that these end points impact on Site End Points.

PSE - West Cumbria MRWS Group
- Presentation on CORWM Website and assoc document

- Highlighted the work completed recently by BGS on unsuitable areas.
- Major effort on informing the Public - from drop-in surgeries, stands in supermarkets, adverts in local papers.
- The group is funded direct from DECC not NDA.
- Allerdale Council voted to stay in the Option of being a potential Site
- The Chair of the West Cumbria MRWS group believed that the Hunterston Pathfinder project "had not been helpful" in terms of timing and no consideration given as to how it may Integrate into a UK Strategy. he believed there needed to be a robust dialogue on this issue.
- **There was also an Open Invite to any Caithness Councillors who may wish to see the Consultation work that has been ongoing.**
- http://www.westcumbriamrws.org.uk/default.asp is the website - Document 199 is a good summary

CORWM Work programme 2011-14

- Minor refocussing of tasks to address ongoing issues such as the changing Scottish Policy and investigation of the Near-Site near surface options for England (wales)
- Knowledge management - Viewed as key area and different from Information Management - Consideration will be given to reinforcing this work area; Consideration of utilising the Technology Strategy panel - Knowledge Transfer networks.
- Monitoring and Retrievability - this is an area that has already been raised with respect to the MRWS in Cumbria

2ND FULL DRAFT OF CORWM'S RESPONSE TO THE NDA CONSULTATION ON ITS DRAFT STRATEGY (PUBLISHED SEPTEMBER 2010) AND SEA REPORT

Marion Hill (editor)

This document does not present the views of the Committee on Radioactive Waste Management nor can it be taken to present the views of its authors. It is a paper to inform Committee deliberations and both the authors and the whole Committee may adopt different views and draw entirely different conclusions after further consideration and debate.

INTRODUCTION

1. This is the response from the Committee on Radioactive Waste Management (CoRWM) to the Nuclear Decommissioning Authority (NDA) consultation on its Draft Strategy (NDA, 2010a) and the accompanying Strategic Environmental Assessment (SEA) Environmental and Sustainability Report (NDA, 2010b). The response has been factually checked and discussed with NDA, Government and regulators but the views expressed in it are entirely the Committee's own.

2. CoRWM's remit is to provide independent scrutiny and advice on the long-term management of radioactive wastes. This response deals only with the parts of the Draft Strategy and SEA report that are related to this remit.

3. The response covers only issues considered by CoRWM to be important. Comments on detailed wording in the Draft Strategy and SEA report are only included in the response if they illustrate a point being made about an important issue. CoRWM has not responded directly to the consultation questions in the Draft Strategy.

4. Some members of CoRWM had the opportunity to discuss an earlier draft of the Strategy with NDA and to submit informal comments. They wish to thank NDA for its attempts to accommodate their comments in the current draft.

5. CoRWM's principal comments on the Draft Strategy are below. More detailed comments on the Draft Strategy document are in Annex A. Comments on the SEA Environmental and Sustainability Report are in Annex B. References are in Annex C.

CORWM'S PRINCIPAL COMMENTS ON THE DRAFT STRATEGY

General Comment

6. CoRWM recognises that this is only the second NDA Strategy and the first to be produced under the NDA's Strategy Management System (SMS). It also recognises that the Strategy document will be read by people from a wide range of backgrounds and that it is probably not possible to satisfy all potential readers.

7. The Committee considers that NDA has succeeded in producing a Strategy document that is suitable for general readers. The document is well-structured and presented, and, for the most part, can be understood by those without detailed technical knowledge.

8. CoRWM considers that the Draft Strategy is less successful as an overarching document that brings together more detailed theme and topic strategies. One reason for this could be that many of the theme and topic strategies are still under development. The Committee believes that it would be better to make this situation clear at the beginning of the document, so that readers know what to expect.

9. The Committee also thinks that it would be preferable not to describe theme and topic strategies as "mature" when they are either still under development or are in the process of being revised (*e.g.* because the current strategy has been found to be sub-optimal or has been overtaken by recent developments). In addition, it would be helpful to indicate, for each theme and topic, the nature of the strategy that NDA intends to produce in due course. It is important to show for which themes and topics there will be strategies in the usual sense of the word (*i.e.* plans for achieving desired objectives, with milestones) and for which there will be simply a set of principles to guide the activities of NDA and its Site Licence Companies (SLCs).

Emphasis and Priority to be given to Radioactive Waste Management

10. CoRWM considers that the Draft Strategy does not set out sufficiently clearly the place and importance of radioactive waste management in NDA's remit. The Committee notes that the Energy Act 2004 states (Chapter 1, Section 37) that "decommissioning" and "cleaning-up" include "treatment, storage, transportation and disposal of hazardous material" and that "hazardous material" means "nuclear matter" (as defined in the Nuclear Installations Act 1965), radioactive waste (as defined in the Radioactive Substances Act 1993) and contaminated articles and substances. Furthermore, the Energy Act 2004 gives the NDA specific responsibilities for securing the operation of "designated facilities" for treating, storing, transporting or disposing of hazardous material and for, in "designated circumstances", securing the treatment, storage, transportation and disposal of hazardous material.

11. The importance of radioactive waste management is acknowledged in NDA's statement of its mission, which uses the words (p5, para 2 of the Draft Strategy[1]): *"Our mission is to deliver safe, sustainable and publicly acceptable solutions to the challenge of nuclear clean-up and waste management".* However, in its approach to its Strategy (Section 1.2) and subsequent sections radioactive waste management is presented as subsidiary to site restoration, rather than as an intrinsic part of it.

12. In CoRWM's view it is desirable for NDA to make it much clearer throughout its Strategy document that radioactive waste management is a fundamental part of its work. As part of this clarification, it would be best to state explicitly, early in the document, that radioactive waste management activities are not confined to those covered by the Integrated Waste Management theme. This theme covers the management of wastes after they have been retrieved from legacy facilities or after they have arisen from decommissioning or clean up.

13. NDA is well aware that radioactive waste management has to be considered when planning decommissioning of facilities and site restoration, as well as when carrying out decommissioning and site restoration activities. This could be emphasised in the section on the Site Restoration theme and in the section on the Decommissioning and Clean Up topic strategy. In particular, the need to apply the Waste Hierarchy could be mentioned in the Decommissioning and Clean Up topic strategy (as it is in the Land Quality Management topic strategy). It would also be preferable to state clearly that retrieval of higher activity wastes (HAW) from ageing facilities is part of decommissioning, because it is a major step in reducing the hazards of those facilities, while subsequent management of those wastes is covered by the HAW topic strategy.

[1] Page numbers quoted are those in the printed version of the Draft Strategy.

Emphasis and Priority to be given to Implementing Geological Disposal

14. The Draft Strategy contains a clear commitment to fulfilling the role of implementer of geological disposal. However, CoRWM would wish to see a more explicit statement that implementing geological disposal is a strategic objective for NDA, as was the case in NDA's 2010-13 Business Plan (NDA, 2010c). The Committee considers that there is also a need for an indication in the Strategy of how NDA plans to achieve this objective.

15. In CoRWM's view it is not enough to state that the NDA's Radioactive Waste Management Directorate (RWMD) has the responsibility for implementing geological disposal. It would be better to explain briefly how RWMD's strategy is determined, what relationship RWMD's strategy has to the Government's Managing Radioactive Waste Safely (MRWS) programme, and how NDA ensures consistency between RWMD's strategy and the NDA Strategy and relevant topic strategies. Reference to RWMD's progress in planning for implementation of geological disposal (NDA, 2010d) would also be helpful. CoRWM considers that these changes to the Strategy document would demonstrate that NDA has a strategy for fulfilling its role as the Government's delivery organisation for geological disposal (Defra *et al.,* 2008).

Higher Activity Waste Strategy

16. CoRWM notes that what is presented for HAW is a set of activities, issues and aspirations, not a strategy as such. Furthermore, there is an implication in the Draft Strategy (and in other NDA documents and on its website) that NDA already has an HAW strategy and all that is needed is work to refine it. CoRWM does not believe that this is the case. At Government level there are policies and objectives; at site level there are default plans that are intended to be revised in the light of further work. What is missing is an NDA strategy that, when implemented by SLCs, will ensure that HAW will be managed in a way that complies with Government policies and meets the relevant objectives.

17. CoRWM would expect an NDA HAW strategy to include:
    - underlying principles
    - preferred options for how and where each broad type of HAW will be treated
    - preferred options for which broad types of HAW will be stored, whether that storage will be interim prior to geological disposal (wastes in England and Wales) or longer term (wastes in Scotland), and where storage will occur
    - conclusions on which types of HAW should be placed in near-surface disposal facilities and the strategy for implementing near-surface disposal (or strategies if these are different for England, Wales and Scotland)
    - conclusions on which types of HAW should be placed in a geological disposal facility (GDF)
    - contingency plans for use if it is not possible to implement the preferred options.

18. The Committee recognises that the work NDA currently has in hand will be useful for development of such an HAW strategy. What is needed in the Strategy document is not a description of this work but statements about how it will be used in the preparation of an HAW strategy of the type outlined above.

Research and Development

19. CoRWM is of the view that, overall, the Draft Strategy document gives the impression that NDA undervalues the need for and benefits of research and development (R&D). It is not just a matter of carrying out R&D to encourage innovation, reduce costs and timescales, and "underpin" decisions that have already been taken. In many areas R&D is essential to enable NDA to decide how to carry out its mission. While the essential

nature of R&D is recognised in some sections of the Draft Strategy (*e.g.* those on spent fuels and nuclear materials), in other sections R&D seems to be a supplementary activity (*e.g.* the HAW section) or is not mentioned at all (*e.g.* the decommissioning and clean up section).

20. The Committee considers that the Strategy should demonstrate more comprehensively that NDA recognises that it has a general need for R&D and that it addresses this need strategically. This is in addition to addressing the specific requirements of the Energy Act 2004 to fund and promote research on decommissioning and clean up issues, including waste management.

Public and Stakeholder Engagement

21. CoRWM welcomes the inclusion in the NDA's mission statement of an intention to actively engage stakeholders (p5, para 2). It believes that such engagement is crucial to NDA's success. It also recognises that NDA has undertaken a substantial amount of public and stakeholder engagement (PSE) since it was established in 2005.

22. However, the Committee considers that, in parts, the Draft Strategy does not give sufficient emphasis to PSE or to its importance to the achievement of NDA's objectives. In particular, in some topic strategies there is no mention of the need to engage stakeholders or the public, although such engagement will be essential (*e.g.* the Transport and Logistics topic strategy).

23. The Committee has been told that stakeholder engagement plans exist or are being developed for various topic areas. However, it has not had sight of these plans and they are not referred to in the Draft Strategy document. CoRWM suggests that it would be helpful to indicate in all the key sections of the Strategy that there are or will be stakeholder engagement plans. It is not sufficient to make initial or general statements about PSE because, once the Strategy is finalised, few stakeholders will read the whole document.

Conclusions

24. CoRWM wishes to emphasise that in making these comments, and those in Annex A, it is not asking NDA make its Strategy document more detailed. The Committee believes that the level of detail in the Draft Strategy is about right. CoRWM envisages that NDA will be able to address most of its comments by replacing existing text or adding references to other NDA documents that contain more detailed material.

25. CoRWM would be happy to provide further clarification of its comments and to discuss them with NDA during the finalisation of the Strategy.

ANNEX A

MORE DETAILED COMMENTS ON THE DRAFT STRATEGY

GENERAL MATTERS

Strategy Development

A1. In CoRWM's view the Draft Strategy does not explain clearly enough that the Energy Act 2004 both requires NDA to have a Strategy and specifies what it must contain. Nor is there an explicit statement that the Strategy is for the whole of the time period required to complete the NDA's mission, not the five years to the next review. Without this context, readers may not understand the reasons behind the content of the Strategy and may be under the impression that the Strategy primarily covers the next five years. (The Committee has already heard the Strategy referred to by various stakeholders as a "five year strategy".)

Strategy Delivery

A2. CoRWM considers that it would be helpful to include more in the main text of the Strategy document about how the Strategy will be delivered and how NDA will report on its delivery. Site Strategic Specifications and their relationship to Lifetime Plans are only mentioned in Appendix A, yet these will be key to successful delivery of the Strategy. The Draft Strategy document does not make it sufficiently clear that the Energy Act 2004 requires NDA to produce an Annual Plan for each financial year and an Annual Report on what it has done. Nor is there mention that NDA is held to account in other ways (*e.g.* it has been the subject of enquiries by Parliamentary Select Committees and the National Audit Office).

Driving, Supporting and Enabling Themes

A3. CoRWM considers that it would be better if Site Restoration was not described as the "driving strategic theme", with all other themes supporting or enabling its delivery (*e.g.* p11, para 2). In CoRWM's view, the activities covered by the Site Restoration, Integrated Waste Management, Spent Fuels and Nuclear Materials themes are all equally important to the NDA's mission.

A4. The Committee understands the need to emphasise that site restoration is the end point and that this end point is always considered in planning decommissioning and clean up, radioactive waste management and the management of spent fuels and nuclear materials. However, it considers that this emphasis could be achieved by means other than presenting Site Restoration as the principal theme, to which all others are subsidiary. It might be better to reserve the term "site restoration" for the overall objective of the Strategy and rename the theme.

A5. CORWM also questions whether "decommissioning and clean up" is the most appropriate name for this topic strategy. In most of its work and much of the Strategy document, NDA uses "decommissioning and clean up" (DCU) in the sense in which it is defined in the Energy Act 2004 (para 10 of the main text of this response). The Committee suggests that the DCU topic strategy could be renamed "Decommissioning of Facilities".

A6. CoRWM understands why it is convenient for NDA to group so many topics under the Critical Enablers theme. However, this approach could give the impression that these topics are in some sense less important than those under other themes, which is not the

case. The Committee suggests that NDA could give further consideration to avoiding this impression.

Decision Making Processes

A7. CoRWM considers that it would be helpful if the Strategy contained a brief summary of the processes that NDA uses to take strategic decisions, the factors that it takes into account, and how it involves stakeholders in such decisions. Section 1.2 (p 11) of the Draft Strategy document lists the factors considered by NDA when selecting preferred strategy options. This is said to be part of a business case approach, based on Treasury guidance. There are then references throughout the rest of the document to making business cases, without saying what these entail or whether factors such as safety are considered (*e.g.* Section 3.2.3, p30, on exotic fuels; Section 3.3.1, p34, on plutonium). Nor are any details given of how Treasury guidance is being used in NDA decision making processes. It would be helpful if, as a minimum, "business case" was defined in the Glossary.

Risk Management and Contingency Planning

A8. CoRWM is aware (CoRWM docs. 2412, 2550) that NDA has a comprehensive risk management framework, involving risk registers at corporate, directorate and site level. This is not mentioned in the Draft Strategy document. As a result, some readers may gain the impression that NDA has few procedures in place to ensure that contingency plans are formulated and kept up to date. Only in a few areas (*e.g.* management of Magnox and oxide fuels) is contingency planning specifically mentioned.

A9. NDA could deal with this issue in one of two ways. Either risk management and contingency planning could be mentioned in all the parts of the document where they are relevant, or a short section on these topics could be added, with references to other documents for more details.

INTEGRATED WASTE MANAGEMENT

Theme Level Comments

Scope of the Theme

A10. In both the Overview (p15) and in Section 3.4 of the Draft Strategy document (p39) it could be made clearer which parts of radioactive waste management are dealt with under the Integrated Waste Management theme and which under Site Restoration. As mentioned in the principal comments (para 12), CoRWM considers that it would be better if both sections stated that the Integrated Waste Management theme is about managing wastes after they have been retrieved from legacy facilities or after they have arisen from decommissioning, clean up or site restoration.

A11. CoRWM notes that including liquid and gaseous discharges in the same lower activity waste (LAW) category as solid low level waste (LLW) has led to errors. In particular, discharges are not disposed of in near-surface facilities, as stated on pages 15 and 39.

Differences in the Nature of Topic Strategies

A12. As implied in CoRWM's principal comments (para 9 of the main text of this response), it would be preferable to explain why very different types of strategies are given for the topics under the integrated waste management theme. For HAW it could be explained that the strategy is still under development (para 16 of the main text) and the reason for this given.

A13. For solid LLW it is appropriate to refer the reader to the UK Nuclear Industry Solid LLW Management Strategy (NDA, 2010e), but it is necessary to indicate its relationship to an NDA LLW strategy. For liquid and gaseous discharges the UK Radioactive Discharges Strategy (DECC *et al.*, 2009) can be referred to but it is appropriate to add an explanation of why there is no need for an NDA strategy for discharges. For non-radioactive and hazardous waste it would be preferable to explain why there are only statements about compliance with a prescriptive regulatory regime. More generally, it could be explained why there is no NDA Integrated Waste Strategy (IWS), to guide or bring together its sites' IWSs.

Higher Activity Waste

Scope of the NDA HAW Strategy

A14. CoRWM notes that the objective of the HAW strategy refers to treatment and packaging of "retrieved" wastes (p40), implying that the focus is wastes in legacy facilities. Also, in the subsequent text no mention is made of wastes that are already in modern stores or wastes that have yet to arise. Furthermore, removal of liquid wastes from storage tanks is not usually called "retrieval".

A15. CoRWM considers that the statement about expediting retrievals from ageing facilities and supporting the retrievals programme (p40) is out of place and difficult to understand unless the reader is familiar with the Sellafield Legacy Ponds and Silos (LP&S) situation.

Consolidation of Treatment and Storage Facilities

A16. The statement (p39) that NDA intends to take a multi-site and UK-wide view is welcome but CoRWM notes that progress has been slow. The first NDA Strategy (NDA, 2006) raised the issue of whether it made sense to rationalise storage of ILW at a small number of sites. The current Draft Strategy raises the same issue, but with no clear plan for tackling it. In addition, movement of wastes from one site to another for treatment and the alternative of using mobile treatment plant are barely mentioned.

A17. In CoRWM's view it is not enough to state that NDA will "investigate opportunities for sharing waste management infrastructure". What is needed is an indication of how and when options for sharing will be evaluated and a multi-site strategy (with or without consolidation) developed. CoRWM also believes that the Strategy should contain firmer commitments to stakeholder and public engagement on these issues, including on the transport implications of the various options. Asking for views *via* this consultation (Question 11) should not be a substitute for specific engagement.

Reactor Decommissioning Wastes

A18. CoRWM considers that the section on reactor decommissioning wastes (p41)

how, or by whom, near-surface disposal facilities for HAW would be established. CoRWM considers that this is an important omission. Allowing near-surface disposal of some HAW is very likely to become part of Scottish Government policy. There is also increasing interest in use of this disposal method in England and Wales for existing, committed and new build HAW that is either short-lived or longer-lived but of low toxicity.

A20. It would be clearer if the document stated that *in situ* disposal[2] is a form of near-surface disposal. In addition, it would be helpful to describe the links between near-surface disposal of some HAW and decay storage of ILW to enable it to be disposed of as LLW. CoRWM notes that such decay storage would be unnecessary if there were to be one or more near-surface disposal facilities for short-lived and low toxicity HAW. In these circumstances it would be a waste of resources to introduce decay storage of short-lived ILW because decay to LLW could occur after emplacement in a near-surface disposal facility.

Lower Activity Waste

A21. CoRWM considers that it is important to link the LAW and HAW strategies. In particular, mention could be made of the possibility that the Low Level Waste Repository (LLWR) may have to be closed much sooner than 2080 and one or more new near-surface disposal facilities established. In this situation it would be important to consider whether such facilities should take short-lived and low toxicity ILW, as well as LLW.

SPENT FUELS

Spent Magnox Fuel

A22. CoRWM suggests that NDA includes a brief statement of why reprocessing is the best option for the management of Magnox fuel, rather than simply stating that it is Government policy (p26). The main reason is that reprocessing is the only proven means of treating Magnox fuel so as to produce a waste form suitable for disposal.

A23. CoRWM notes that there does not seem to be any mention in the Draft Strategy document of stakeholder engagement on the management of Magnox fuel. This is not consistent with the approaches to other topics.

A24. The Committee understands that the Magnox fuel strategy only deals with the bulk fuel covered by the Magnox Operating Plan (MOP). The Strategy could also mention the smaller amounts of Magnox fuel that are outside the MOP (*e.g.* the fuel in the LP&S) and the plans for its management.

Spent Oxide Fuel

A25. CoRWM considers that it is confusing to describe the present strategy as “mature” when it is also made clear that the future strategy is under development. .

A26. CoRWM would wish to see an explanation of why NDA currently intends to complete its contracts for reprocessing LWR and AGR fuel as soon as is practicable and cease reprocessing at THORP. It also believes that NDA needs to explain why it is apparently not considering the option of renegotiating its contract with British Energy for reprocessing AGR fuel, thus enabling THORP to be closed at an earlier date. Also, it seems inconsistent to give a firm date for cessation of reprocessing in THORP (2020,

[2] *In situ* disposal is the term used for leaving radioactive materials and structures in place underground, with the addition of suitable engineered containment where necessary.

p77), given the discussion in Section 3.2.2 on the need to assess the optimal time to cease reprocessing oxide fuel (p28).

A27. It is unclear to CoRWM what is meant by "we will develop a business case for continued reprocessing in the event that long-term storage options are not viable and consider the findings of the SEA and other factors" (p28). Does this mean that NDA will examine the advantages and disadvantages of replacing THORP, in case wet or dry storage of oxide fuel is not viable?

A28. CoRWM considers that it is important to reiterate here the commitment given in the Strategy Overview (p13) to engage with stakeholders on the management of oxide fuel. As previously mentioned, once the Strategy is finalised stakeholders are more likely to read sections of it when the need arises than to read through the whole document.

Spent Exotic Fuels

A29. CoRWM suggests that it would be better to avoid the word "reprocessing" in the context of exotic fuels (p30). Although some fuels may be treated in existing reprocessing plant, in many cases this will be because this is the best treatment option, not because it is important to recover the plutonium or uranium.

A30. CoRWM considers that it is important to mention contingencies for those exotic fuels for which use of existing plant is an option. Contingencies are needed in case some or all of the Magnox reprocessing plant, THORP and the supporting infrastructure are not available.

NUCLEAR MATERIALS

Theme Level Comments

A31. It is stated that consolidation of storage of nuclear materials on fewer sites will be considered from the points of view of security and economy. CoRWM considers that it is important to mention other factors and to indicate that there will be stakeholder engagement in such decisions.

A32. CoRWM notes the difference in approach for plutonium and uranics. For plutonium, NDA will await Government policy on re-use or disposal. For uranics, NDA appears to have decided that the only two options it will pursue are sale or storage as a "strategic reserve". The uranics decision seems to have been taken without any stakeholder consultation, whereas both NDA and DECC have held consultations on plutonium and a further DECC consultation is planned.

Plutonium

A33. CoRWM recognises that NDA cannot develop a full strategy for plutonium management until the Government takes a policy decision on the long-term management of this material.

A34. The intention to evaluate consolidated storage of plutonium is welcomed but more needs to be said about how the evaluation will be conducted. In particular, it would be helpful to indicate the range of factors that will be considered and which stakeholders will be consulted.

A35. CoRWM notes that there is an implicit assumption that plutonium can be stored for as long as is necessary without repackaging, whichever long-term management option is chosen. It is important to demonstrate that there is R&D to underpin this assumption.

A36. It is stated that the performance of the Sellafield MOX Plant (SMP) will continue to be evaluated (p34) but there is no mention of developing contingencies against failure of SMP to perform adequately. It would be preferable to rectify this omission.

Uranics

A37. CoRWM considers that a clearer explanation is needed of why all uranics that cannot be sold at present are designated to be a "strategic reserve". The Committee understands that this is because it is not yet possible to decide which materials have the potential to be re-used and which should be declared to be waste. However, the term "strategic reserve" implies that no material will be regarded as waste. If this was the case then establishing disposal requirements and conditioning technologies (p36) would not seem to be worthwhile, nor would investing in technical studies to ensure changes to the geological disposal programme can be accommodated (p37).

A38. The Committee notes that the text about hex at Capenhurst needs revision in the light of the decision to transfer the NDA's Capenhurst site to Urenco. In revising the text it is desirable to remove apparent inconsistencies. For example, on p36 and p76 is said that deconversion (conversion of hex to a more stable form) will begin in 2020. However, it is also stated (p37) that over-packing/repacking for long-term storage as a strategic reserve is a possibility. If the 2020 date is not a firm commitment but simply the current reference option this needs to be made clear.

SITE RESTORATION

Theme Level Comments

A39. As noted above (para 12), CoRWM considers that it should be made clear in this section of the Draft Strategy that radioactive waste management is intrinsic to decommissioning of facilities and site restoration. If examples are required some that that could be given are:

- the best method of demolishing a building cannot be determined without considering what wastes will be produced and how they will be managed
- dealing with an ageing facility that contains wastes involves retrieving, characterising, treating, packaging, storing and disposing of those wastes, then decontaminating and demolishing the facility and managing the wastes created
- spent fuels, plutonium and uranics that are not to be re-used have to be managed as wastes
- it is not possible to achieve end states for all the NDA sites until wastes have been emplaced in disposal facilities[3].

A40. CoRWM also considers that, when discussing the priority to be given to reducing intolerable risks and hazards, it is important to make it clear that many of the projects and programmes to achieve these reductions involve the management of HAW. This is particularly true at Sellafield where all five high hazard programmes are for HAW facilities (one for each of the LP&S, one for highly active liquor).

A41. CoRWM notes that it is stated that NDA will take urgent action to reduce intolerable risks (p17) and give intolerable risks priority (p13). The programme shown in the Draft Strategy for the LP&S at Sellafield (p77) does not seem to be consistent with urgent action and high priority. The start of fuel and waste retrievals from the LP&S is given as later than previously planned and the completion date (2046) is some 19 years later than

[3] Or left in place in the case of *in situ* disposal.

that previously given for the silos (NDA, 2009a). CoRWM also notes that the first NDA Strategy (NDA, 2006) contained a commitment to demonstrate real progress in reducing high hazards in the LP&S. In contrast, the Draft Strategy focuses on risk reduction, which in this case is only a precursor to hazard reduction, and over a longer timescale.

Decommissioning and Clean-Up

A42. There are statements that the products from decommissioning and clean up have to be managed and that the timing and method of decommissioning will influence waste management requirements (p19). CoRWM considers that it should be recognised in the Strategy that the reverse is often the case. There are many situations in which waste management requirements influence decommissioning methods and timing.

A43. It is noted that the option of *in situ* disposal is mentioned in this section (p19) but nowhere else. CoRWM is of the view that it is essential that the option is fully considered at various sites and its implications explored in a strategic way. A link could be added between the HAW and LAW strategies and the decommissioning and clean-up strategy to cover this.

CRITICAL ENABLERS

Health, Safety, Security, Safeguards, Environment and Quality (HSSSEQ)

A44. CoRWM notes that no strategy for HSSSEQ has yet been developed; there is only a set of underpinning principles (NDA, 2010e). It also notes that the strategic objective given in the principles document is about consistently applying good practice. Different wording is used in the objective given in the Draft Strategy document (p54).

A45. CoRWM considers that the explanation of why NDA has chosen to require good practice, rather than best practice (p54), is not easy for the general reader to understand. It could also be mentioned that the Energy Act 2004 only requires NDA to ensure the adoption of good practice.

R&D

A46. The R&D strategy section is extremely general, with no indication of how NDA ensures that there is sufficient R&D to support its highest priorities (*e.g.* the high hazard projects at Sellafield). CoRWM takes the view that it is not enough for the strategy to address who will do the R&D; the strategy should also address how decisions are taken on what R&D is to be done across NDA and its SLCs.

A47. It would be preferable to state explicitly that the NDA's "primary function" of decommissioning and clean-up includes radioactive waste management, and thus that much of its R&D is about waste management. CoRWM also considers that it is important that NDA shows that it is aware of the links between R&D on decommissioning and R&D on waste treatment, packaging, storage and disposal.

A48. CoRWM suggests that specific mention should be made of geological disposal, because this cannot be implemented without R&D. Also, geological disposal is in a different category from some of the other topics because NDA, through RWMD, is the implementer and RWMD is not yet an SLC. Reference could usefully be made to the NDA R&D strategy for geological disposal (NDA, 2009b).

A49. The R&D strategy section does not deal with the NDA's approach to ensuring that there are sufficient facilities for research related to its remit, either in the short term or the long term. In CoRWM's view, it would be useful to indicate how NDA expects the

requirements for research facilities to be met, whether by maintaining or enhancing UK facilities or making use of facilities in other countries.

A50. It would be better to mention the importance to NDA of international research programmes and to add a link to the international relations topic strategy. It could be made clear that NDA seeks to influence and lead international research programmes, so that the needs of the UK are addressed, not merely to take part in such programmes.

A51. The consultation question (Question 16) asks about co-ordination of R&D across the nuclear sector. CoRWM has recommended (CoRWM doc. 2543) that there be strategic co-ordination of UK R&D on the management of HAW within NDA, between NDA and the rest of the nuclear industry, amongst the Research Councils and between the whole of the nuclear industry, its regulators and the Research Councils.

People (incorporating Skills and Capability)

A52. It is unclear to CoRWM how NDA will "provide a future proof training infrastructure" to ensure that it has "the right people in the right place at the right time". This is particularly the case for long-term projects, such as geological disposal. The current NDA people strategy seems very much geared to the next few years, not the next few decades.

A53. CoRWM is aware that the nuclear new build programme is not the only challenge facing NDA in obtaining and retaining skills. In particular, for geological disposal there are challenges from the oil and gas industry, from carbon capture and storage, and from other countries' HAW disposal programmes.

Asset Management

A54. CoRWM considers that, although strictly correct, it could be confusing to the lay reader to refer to facilities built in the 1940s and 1950s that present intolerable risks, and which will cost billions of pounds to empty and decommission, as assets (p57). They would more commonly be referred to as liabilities and the management of them would aim to ensure that they do not become even greater liabilities.

A55. The Committee recognises that the approach of considering any facility, plant or other item that is owned by the NDA as an asset is described in the topic strategy document (NDA, 2010g), where "asset" is defined. It is stated that including all items in the asset management strategy enables consistent management of plant and equipment across the NDA estate. The rationale for this approach appears to be poor practice in the past. It would be preferable to explain this briefly in the Strategy document.

A56. Assessing the assets against an internationally recognised standard is welcomed. Setting up an asset management working group involving all the SLCs and NDA to share good practice is also welcomed.

A57. It is not clear from the Draft Strategy document that by simply referring to a standard, namely Lloyds Publicly Available Specification (PAS 55), the strategy adequately covers the range of assets that are owned by the NDA. Further information is provided in the asset management strategy document (NDA, 2010g) and some of this could usefully be included in the Strategy. CoRWM suggests that it could be made clear that assets include the following.

- Assets that bring revenue – these will need to operate as long as the revenues stream is envisaged. There needs to be a reference back to Section 3.2.
- Assets that treat waste – these will need to operate until the relevant waste stream is treated.

- Assets that store waste prior to treatment – these will need to be able to store the waste until the entire waste stream has been treated.
- Assets that store waste prior to geological disposal – these will need to be able to store waste, albeit with refurbishment, for about a century to be robust against delays or failure of implementing geological disposal.
- Assets that are being decommissioned – these must retain the associated radioactivity until it is removed.
- R&D facilities – that must be maintained and, when necessary, enhanced.

Supply Chain Development

A58. The supply chain development strategy is stated to be mature. CoRWM recognises that this is the case for much of the NDA's work. However, in the implementation of geological disposal, supply chain development is at an early stage.

A59. As well as developing the supply chain, it is also necessary to maintain it. The Strategy could mention that NDA faces particular challenges in maintaining its supply chain for long periods of time.

Information and Knowledge Management

A60. In CoRWM's view, there is insufficient recognition in the Draft Strategy that information management and knowledge management are two different activities and that both are separate from keeping records in compliance with regulatory and statutory obligations. The section on delivery of the information and knowledge management strategy is about information management and record keeping. CoRWM considers that it is important to mention the challenges of knowledge management, particularly over long-term projects that will span many decades.

A61. The postponement of the National Nuclear Archive, and the recent reductions in the numbers of NDA staff involved in radioactive waste information management projects, give the impression that NDA does not intend to devote enough effort to information and knowledge management. CoRWM considers that the Strategy should address this issue and, preferably, correct this impression.

PSE and Communications

A62. CoRWM reiterates the comment it has made previously to NDA that it would be better to separate communications and PSE. While both are important, it is PSE that is the critical enabler for the NDA's mission. Communications is largely about providing information, which is only a starting point for engagement.

A63. It is unclear from the Draft Strategy whether NDA intends to develop a PSE strategy as such. At present there is a set of commitments (p63) but no strategic approach to PSE. CoRWM notes that, while reviewing existing national and local engagement methods is important, it does not constitute strategy development.

A64. CoRWM considers that it is important for NDA to show that it recognises that different engagement methods may be needed in the future (*e.g.* for strategic decisions such as on the management of oxide fuel, the consolidation of waste storage and geological disposal).

A65. It is stated that the strategy is being rolled out across the NDA. Progress appears to be slow. For example, there has been relatively little PSE on topics such as management of HAW, spent fuels and uranics.

A66. It would be preferable to mention coordination of PSE with Government, regulators and others to avoid overlap and inconsistencies, and to share experience.

Transport and Logistics

A67. CoRWM notes that the transport and logistics section does not set out a strategy as such, only a set of principles, and it relates to the current situation. The text does state that further development will be required but only mentions co-location of materials, treatment and storage facilities. There is no mention of geological disposal and the major transport requirements that this will entail. In CoRWM's view it is important for NDA to show that it recognises that there is a need for a comprehensive UK transport and logistics strategy for radioactive wastes, and that it is prepared to contribute to the development of such a strategy.

A68. The objective (p64) mentions radioactive and bulk materials and the subsequent text refers to bulk materials, nuclear fuel and radioactive waste. CoRWM considers that this terminology is confusing. There is further confusion in the statement of principles (NDA, 2010h), which refers to bulk volumes of materials arising from decommissioning, which are apparently different from radioactive and non-radioactive wastes.

A69. As noted previously, PSE is not mentioned at all in this section (p64). Transport is a major concern for some groups of stakeholders and for the public. Many people will only be affected by decommissioning and waste management through transport. CoRWM considers that it is desirable for NDA to demonstrate in its Strategy that it recognises the importance of PSE on transport.

Funding

A70. The funding strategy given in the Draft Strategy consists of a few statements about the NDA approach. These focus on existing rules and budget allocations. CoRWM would have expected some discussion of the difficulties presented by annual budget allocations and of the challenges of securing funding for long-term projects, such as geological disposal. NDA could indicate whether it has a strategy of exploring and developing new and innovative funding approaches for such projects.

A71. It would also be preferable for this section to expand on what is said early in the document (p6) about funding constraints, the fall in NDA income as the last Magnox reactors close and, on the same timescale, expected increases in expenditure. It would be helpful if there was reference to contingency planning for funding shortfalls.

A72. CoRWM considers that, throughout this section, it is important to make clear that the NDA's "decommissioning programme" includes waste management, R&D, PSE and all the other activities that are essential if NDA is to fulfil its remit.

International Relations

A73. In CoRWM's view, the section on the international relations strategy does not make it clear international collaboration is an essential component of achieving the NDA's mission in a cost effective manner.

A74. CoRWM would expect the NDA to:

- identify the major challenges
- identify the countries that have similar challenges
- put arrangements in place for joint working.

A75. The European Commission is mentioned but there is no stated intent to maximise the benefit that the UK can gain from the R&D programmes of the EC by identifying common issues and addressing them with funds from the EC.

A76. CoRWM considers that simply maintaining the international reputation of NDA (and the UK) (p66) is not a sufficient objective. The aim should be to enhance reputations and take a greater role in influencing and leading international collaborative programmes.

ANNEX B

COMMENTS ON SEA ENVIRONMENTAL AND SUSTAINABILITY REPORT

B1. CoRWM appreciates that NDA has had difficulties in conducting a meaningful SEA for a Strategy in which many of the topic strategies are still under development. In such a situation all that can be done is to carry out an assessment to provide input to further strategy development.

B2. CoRWM considers that the assessment that NDA has conducted is of limited value in this respect. What is needed is an environmental and sustainability assessment for each topic strategy, in which the various credible options are described and evaluated. The results could then form inputs to NDA decision making. The study that NDA has done is too superficial to be useful when taking decisions. CoRWM is concerned that NDA may try to use it for this purpose and avoid doing the more thorough studies that are needed for the various topics.

B3. In some cases the options evaluated in the SEA Report do not match those that are being considered by NDA and that are given in the Draft Strategy and/or the topic strategy documents. One example is the options given for spent fuels in the SEA Report, which are not appropriate or even credible for most exotic fuels, nor in some cases for Magnox fuel. Another example is that the text on HAW options in the SEA Report states that near-surface disposal is part of the current strategy but it is not. Such inconsistencies mean that the some of the results of the environmental and sustainability assessment will not be useful in strategy development.

B4. In addition to these inconsistencies between the options, there are inconsistencies between the summary of the SEA in Appendix B of the Draft Strategy, the Non-Technical Summary of the SEA Report and the full SEA Report.

ANNEX C

REFERENCES

CoRWM Documents

2412 Meeting with NDA on Risk Management, 30 July 2008.

2543 National Research and Development for Interim Storage and Geological Disposal of Higher Activity Radioactive Wastes and Management of Nuclear Materials. CoRWM Report to Government. October 2009.

2550 Geological Disposal of Higher Activity Radioactive Wastes. CoRWM Report to Government. July 2009.

2847 Arrangements for Responding to NDA Consultation on its Second Strategy, September 2010.

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Department of Energy and Climate Change, Scottish Government, Welsh Assembly Government, Department of Environment Northern Ireland, 2009. *UK Strategy for Radioactive Discharges*, July 2009.

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NDA, 2006. *Strategy.*

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NDA, 2010a. *Draft Strategy,* Published September 2010 for Consultation.

NDA, 2010b. *NDA Strategy, Strategic Environmental Assessment, Environmental and Sustainability Report.* September 2010.

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NDA, 2010d. *Geological Disposal: Steps Towards Implementation.*

NDA, 2010e. *UK Strategy for Management of Solid Low Level Radioactive Waste from the Nuclear Industry*.

NDA, 2010f. *Health, Safety, Security, Safeguards, Environment and Quality (HSSSEQ), Strategic Underpinning Principles.* Version 1.0, April 2010.

NDA, 2010g. *Asset Management Strategy.* June 2010.

NDA, 2010h. *Transport and Logistics Strategy, Statement of Principles.* August 2010.