



Review of Progress in Developing a Prospective Site Licence Company to Implement Geological Disposal

Report of a joint regulatory inspection by the Environment Agency, Health and Safety Executive, and the Department for Transport

November 2011

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Introduction

1 The Environment Agency, Health and Safety Executive and Department for Transport (collectively termed 'the regulators') are the principal regulators for the implementation of geological disposal. The Nuclear Decommissioning Authority (NDA) is the organisation tasked by Government with responsibility for planning and implementing geological disposal. The NDA has established a Radioactive Waste Management Directorate (RWMD), which it will develop into an effective delivery organisation to implement geological disposal.

2 Following a joint regulatory review carried out in November 2009¹ of NDA's RWMD development as a 'Prospective SLC', we (the regulators) carried out a two day inspection visit on 1-2 March 2011 to assess RWMD's progress.

3 Depending on the timing of any advances made with selecting a site for a geological disposal facility under the UK Government's Managing Radioactive Waste Safely programme, we would expect RWMD to separate from NDA to become a wholly-owned subsidiary organisation, capable of holding the environmental permits needed to carry out intrusive site investigations at a candidate site (or sites). At a later date, before the start of underground operations, the organisation would need to be capable of holding a nuclear site licence. Throughout this time RWMD will need to ensure it continues to operate the Letter of Compliance (LoC) process as a means of providing advice on the compatibility of proposals for packaging wastes with the requirements of geological disposal.

4 Prior to our review in November 2009, we agreed with NDA and RWMD that the 'Prospective SLC':

- will provide separation between the strategic responsibilities of corporate NDA and RWMD's development work (including, for example, planning for implementation, investigating and assessing specific candidate sites and specifying packaging standards and the associated LoC process);
- will embody the culture, and demonstrate the competences, of a company that is to hold an environmental permit and a nuclear site licence including having an independent assurance function; and,
- will be a stable organisation that meets the immediate needs of the business, its regulators and others.

These expectations remain valid.

¹ Report available at: <http://www.environment-agency.gov.uk/business/sectors/114335.aspx>

Inspection visit

5 The purpose of our inspection visit was to check progress against our recommendations from the in-depth review of RWMD's organisational management arrangements that we undertook in November 2009. We used the recommendations as a basis for the inspection visit and for assessing RWMD's progress as a 'Prospective SLC'.

6 The inspection was carried out while RWMD were undertaking an organisational review. The regulators were briefed on the initial results of RWMD's organisational review and draft proposed new structure, but the regulatory inspection was undertaken against the existing arrangements. During the inspection we recognised that changes would be made to RWMD's organisation in the future, and we plan to follow up this inspection with further more detailed reviews during 2012 and subsequent development of the organisation.

7 To inform the inspection visit, RWMD provided updated versions of its Safety and Environment Management Prospectus (Rev 3.0, September 2010) and Organisational Baseline Document (Rev 3 December 2010). It also provided a copy of the Organisational Baseline Compliance Assessment (Rev 2.0, January 2011).

8 The inspection team comprised staff from each of the participating regulatory organisations (EA, HSE NII and DfT) with experience in the development and regulation of organisations and their management arrangements at nuclear licensed sites. We provided RWMD with a Briefing Note setting out the aims of the inspection and specific areas of interest (See Annex 1).

9 Our approach for the inspection was to sample and assess the governance, staffing and management arrangements as set down in NDA RWMD's Safety and Environment Management Prospectus (SEMP). We treated NDA RWMD as a prospective Site Licence Company (SLC) and undertook interviews with a cross-section of staff from across the organisation including the Managing Director, members of the Executive Management Team, managers and staff.

Discussions with RWMD staff

10 In our discussions with staff and management, we aimed to assess RWMD's progress against the four regulatory issues:

- Leadership and governance
- Organisational design and capability including core organisational competence
- Control and assurance
- Organisational learning

These issues are related directly to recommendations presented in the joint regulatory review report in November 2009; this relationship is shown in Table 1.

Table 1: Relationship between inspection issues and review recommendations

Inspection issue	Joint Regulatory Review Recommendation	Number ^(a)
Leadership and Governance	We recommend that RWMD develops among its staff a clear understanding of, and ownership for, the potential nuclear safety and environment impact of its work. We believe that this is essential if it is to meet the agreed principles and the necessary culture to be a credible 'Prospective Licensee'.	3
	RWMD Board and Executive develop leading indicators to allow it to review and understand nuclear safety and environment performance of the organisation, and arrangements that enable the organisation to respond in good time to any issues that may arise.	4
See note (b) below	We recommend that the RWMD Board becomes more challenging in its behaviours and consider how best to develop a deeper familiarity with the delivery of the organisation's overall mission and objectives including, specifically, nuclear safety and environment.	1
	We recommend RWMD reviews the remit and role of the various groups and committees with roles in governance and reflect these, where appropriate, within revised, clarified arrangements.	5
Organisational design and capability (including core organisational competence)	We recommend RWMD Board reviews and resolves the issue of staff retention and recruitment with the NDA as a matter of some urgency.	2
	We recommend RWMD undertakes a review of the basis for organisational design that links clearly to the activities needed to develop and implement a programme of geological disposal.	6
	We recommend RWMD puts in place arrangements to recruit as soon as possible to the key safety and environment positions currently filled by 'interim' contractors.	8
	We recommend RWMD reviews its understanding of its core organisational competence requirements against the basis for organisational design, and consider what arrangements are needed to deliver and monitor this.	7
	<p>Whilst acknowledging RWMD's aim to remain 'lean', we recommend RWMD establishes a robust strategic human resource plan that includes effective arrangements to:</p> <ul style="list-style-type: none"> ▪ identify current and future competence and workforce needs ▪ identify vulnerabilities such as demographic issues and 'singleton' staff with unique knowledge or skills ▪ develop appropriate succession, recruitment and contingency plans 	9
See note (c) below	We support the development of a competence management system in RWMD and recommend that its development continues to meet internationally recognised standards of a 'systematic approach to training' as set out in IAEA guidance and the HSE NII T/AST/027.	10

Table 1: Relationship between inspection issues and review recommendations

Inspection issue	Joint Regulatory Review Recommendation	Number ^(a)
Control and Assurance	We recommend RWMD reviews its arrangements for assurance to ensure that they are robust to consider nuclear as well as conventional issues of safety and environment performance.	11
	We recommend RWMD reviews and develops its safety and environment management system to ensure the proper control and assurance of nuclear safety and environment issues.	12
Organisational learning	We recommend that RWMD establishes formal arrangements for capturing and sharing lessons learnt and for developing a clear knowledge developed from individual projects and networking activities.	13
	We recommend RWMD establishes arrangements for considering 'operational experience feedback'.	14
<p>Notes:</p> <p>(a) The number refers to the number of the recommendation in the report of the joint regulatory review in November 2009.</p> <p>(b) We followed up recommendations 1 and 5 as part of the inspection visit but recognised that RWMD was reviewing its organisational management arrangements at the time of our inspection visit.</p> <p>(c) We recognised that RWMD was continuing to develop its approach to competence management and this issue was not a major part of our inspection visit.</p>		

11 In common with the November 2009 review, the discussions with staff allowed us to consider whether RWMD does 'embody the culture, and demonstrate the competences, of a company that is to hold an environmental permit and a nuclear site licence including having an independent assurance function'.

12 We identified individuals for interview according to the roles they held within RWMD and their involvement in key activities that have a bearing on the nuclear safety and environment performance of the organisation, as well as to provide a good cross section across all staff. We spoke to 18 individuals during the course of our structured discussions, equating to almost a quarter of the total staff. Annex 2 lists the posts involved in structured discussions.

13 We chose not to include in our review the Letter of Compliance (LoC) process or research function but we recognise these as key activities. In our interviews, we wanted to get an overall impression of how these activities are integrated with the organisational management arrangements that support RWMD's wider activities and particularly, how they influence the approach to nuclear safety and environment in these wider activities. We did however look at how the independence of the LoC assessment process is maintained from any Corporate NDA influence or wider project management pressures within RWMD.

14 Our discussions with staff were structured to ensure that we comprehensively considered the current organisational arrangements, and were broadly consistent for all the discussions. We were

also flexible in allowing specific issues relevant to an individual member of staff to be explored. To help us assess RWMD's overall progress as a 'Prospective SLC', questions to some staff were extended beyond the scope of the issues noted in Table 1.

Key Findings

15 RWMD's staff were open and honest in our discussions and had an enthusiastic approach to their work. We observed a good level of knowledge across the organisation and an understanding of the need to embed a nuclear safety and environment culture in RWMD's work. RWMD showed a greater sense of purpose than we observed in the November 2009 review and we observed clear progress in RWMD's development as a prospective SLC.

Leadership and Governance

Leadership

16 From our discussions with staff, we gained evidence that RWMD is developing a clear sense of identity and a greater sense of purpose in its mission to deliver geological disposal. As noted previously, we did not find evidence to suggest that corporate NDA was exerting undue influence over RWMD activities or decision-making: in particular, we were reassured that the outcome of LoC assessments are not being influenced by corporate NDA. Recruitment remains an area where corporate NDA does exert influence - but there was evidence that the constraints noted in our November 2009 review are being relaxed and RWMD has been able to appoint staff to some key vacancies.

17 Importantly, we observed a better awareness of the need to embed nuclear safety and environment into RWMD's activities than we saw in our November 2009 review. This represents progress, but there remains a concern that we found little evidence of safety and environment performance measurement and feedback. RWMD should develop a range of means to monitor performance and to hold members of the organisation properly to account, so that it can build and maintain the high standards of safety and environmental performance that are required.

Governance

18 We observed progress in the way the Repository Development Management Board is starting to challenge the safety and environmental performance of the organisation. There remain questions about whether the Board has the correct balance of independent non-executive directors against those from corporate NDA, and whether the Board displays accountability to the interests of RWMD. Addressing these questions will be important if RWMD is to develop the appropriate governance structure for an independent subsidiary company. However, we did note that staff consider that RWMD is acting independently of NDA in its decision making.

19 We found evidence that non-executive directors were outward looking and provide RWMD with insights and contacts for work being done elsewhere which could inform RWMD's work

programme. We also found evidence that non-executive directors were considered to be remote and not in touch with RWMD's overall mission and objectives.

20 There also seemed to be a lack of independent, undiluted input to the Board to inform decision-making; most information appeared to be filtered through the management chain before reaching the Board. There was no equivalent to the function of a Board audit or assurance committee with the role of examining independent evidence of business performance including safety and environmental performance.

21 The governance of RWMD is relatively complex, with input from a number of Committees and Boards. Staff generally seem to be unclear about the purpose and decision making processes involved in these arrangements.

Organisational Design and Capability

22 RWMD has made progress with organisational design and capability. For example, RWMD is now looking five years ahead in planning its work programme and identifying future resource requirements, whilst also keeping an eye on the longer term. It is undertaking some succession planning to maintain continuity in key posts, and increased sharing and flexibility of roles to reduce the number of singleton specialists. RWMD also recognises more fully the need for knowledge management and is putting in place systems that should help it maintain and build its knowledge base in the longer term, if the programme to develop geological disposal proceeds.

23 We found that there are still unfilled vacancies and a continuing heavy reliance on interim staff. We are aware that RWMD is acting to address this issue but progress has been slow, in part because of constraints on recruitment applied by corporate NDA. We would expect some urgency in addressing this issue, because there will need to be significant progress if RWMD is going to be capable of holding an environmental permit or nuclear site licence.

24 There is not yet a systematic approach to competence management within RWMD; some progress has been made but on-going work needs to be completed before an effective competence management process is functional within the organisation.

25 We did not find evidence that reference to and control of the safety case is fully integrated into business management processes.

26 RWMD has knowledgeable and enthusiastic staff. There has been much work in the past twelve months to build a human resources strategy. Given the leanness of the organisation, we believe that this should include a structured and systematic process to identify the core capabilities required to deliver the next and any future stages in the process for developing geological disposal.

Identifying and maintaining the required core capabilities should also ensure that the organisation remains expert in its own work and an intelligent customer for the work it contracts out.

27 We noted progress in RWMD's use of the supply chain for provision of the services it requires to support its work programme. There is a need for RWMD to implement a supply chain management system, and a scalable contract management capability - particularly as it moves towards letting larger contracts. There is also a question over whether RWMD would be able to be an intelligent customer for the proposed bigger contract packages; many of the staff who oversee the quality of work undertaken on behalf of RWMD will need to be equipped with both the skills and the systems to manage these larger portfolios of work.

Control and Assurance

28 We recognise that RWMD's management arrangements are still under development but it is not yet a process-led organisation and it does not yet demonstrate the fully coherent management system that we would expect to see in an organisation holding a nuclear licence. The current management system is built around that of the wider NDA (for example, use of NDA's internal audit arrangements) and we expect that a management system more suited to the specific needs of RWMD will be developed.

29 RWMD has developed and published its generic Disposal System Safety Case (gDSSC); this is an important document that should provide the baseline for any future safety case development. To support such future development, robust and clear change control arrangements are required that apply more widely across the organisation than the concept change control arrangements currently in place. In particular, RWMD should make clear how any changes feed through from LoC assessments to the gDSSC.

30 We found evidence that RWMD staff recognise the need for data assurance, and we welcome this. Data management arrangements still need further development to provide a sound basis for building and maintaining the safety case necessary for any future development of geological disposal.

31 We found little evidence of internal regulation and audit extending beyond the LoC process. An important example where further work is required is that of clarifying the basis for closing out actions within the compliance assessment plan that RWMD uses to track completion of actions needed to implement its developing organisational management arrangements. An appropriate internal regulation and audit function would provide such challenge. It is also unclear what the change control and baseline will be for planned and future changes to RWMD's structure and management arrangements.

Organisational Learning

32 The review of nuclear safety and environment culture undertaken by RWMD and the subsequent focus groups were generally appreciated by staff. Capturing and sharing the lessons

learnt through the culture review should be part of the internal organisational learning that should inform RWMD's development as a 'Prospective SLC'. We welcome RWMD's review of the lessons learnt in producing the gDSSC and also its project reviews to identify any lessons learnt.

33 We found evidence of some external learning, particularly in capturing feedback from stakeholder engagement such as work with the West Cumbria MRWS Partnership, and through work with overseas organisations such as the repository developer in Sweden. We would encourage this learning, although a more systematic approach needs to be developed to ensure that RWMD makes best use of external information and knowledge.

34 Some processes such as Key Performance Indicators (KPIs) and Operational Experience Feedback (OEF) are not yet bedded in to RWMD's management arrangements but we found evidence of KPIs starting to be used to inform planning and decision-making.

Summary and Recommendations

35 RWMD has made good progress since our review in November 2009 and is working well in its development as a prospective SLC.

36 The recommendations from our November 2009 review remain valid – these are listed in Tables 1 above. There are two new recommendations from the current review:

- **We recommend that RWMD develops a mature autonomous management system with effective assurance and review processes (See paragraphs 28 – 31).**
- **We recommend that RWMD develops capabilities to be an intelligent customer and effective contract management organisation for the larger types of contract that could be required in the future (See paragraphs 26 – 27).**

37 We recognise that RWMD is developing proposals for changing its organisational structure and associated management arrangements. RWMD's management of change arrangements will allow the Regulators to provide continued feedback on its proposals.

Next steps

38 We will continue to provide regulatory advice and comment to RWMD as it implements its revised organisational management arrangements; this will involve working level interaction on specific topics. This approach would be similar to the way we work with organisations that are under our regulatory control.

39 We intend to follow up this inspection up with further more detailed reviews during 2012 and subsequent development of RWMD's organisational management arrangements. The purpose of these reviews will be to support RWMD's development and assess its state of readiness to become a wholly-owned subsidiary of the NDA with the capabilities expected of a possible future holder of an environmental permit and a nuclear site licence.

ANNEX 1: Regulators' Briefing Note for RWMD staff

Regulatory review of NDA Radioactive Waste Management Directorate, 1- 2 March 2011

Purpose

To support NDA Radioactive Waste Management Directorate's development into an organisation capable of developing and being licensed and authorised to operate a Geological Disposal Facility

Objectives

- To undertake an interim assessment of the progress of NDA RWMD in addressing the recommendations of the joint regulatory (HSE, EA and DfT) inspection of November 2009.
- To provide recommendations as appropriate.

Date

The inspection is planned for 1-2 March 2011

Approach

The regulators will undertake the review through sampling and assessing the governance, staffing and management arrangements set out in NDA RWMD's Safety and Environment Management Prospectus (SEMP).

The regulators will treat NDA RWMD as a prospective licensee and will undertake interviews with a cross-section of staff from across NDA RWMD including the Managing Director and members of the Executive Management Team. The interviews will address the regulatory issues identified in the table below [Note: Not included here - see Table 1 in the main text] – these issues are related directly to recommendations presented in the joint regulatory review report in November 2009. Interview questions could extend beyond the scope of these issues to help regulators assess NDA RWMD's progress as a 'Prospective SLC'.

Regulatory team

The regulatory team will be confirmed nearer the time of the inspection but is likely to be:

Environment Agency: David Prescott, Andrew Fairhurst, (Roger Yearsley in support)
HSE: Peter Mullins, William Turner, Michael Richardson
DfT: Ian Barlow

Products

Initial verbal feedback and discussion at the close of the inspection will be followed by a joint regulators' report.

It is envisaged that this will be published on the Environment Agency / HSE DfT joint regulatory web-pages for geological disposal of radioactive waste.

ANNEX 2: Posts involved in structured discussions

	Post
1	Managing Director
2	Project Director
3	Health, Safety and Environment Director
4	Site Characterisation Manager
5	Head of Stakeholder and Community Engagement
6	HR Manager
7	RWMD Development Project Manager
8	Disposal System Technical Specification Manager
9	Transport and Nuclear Safety Manager
10	Waste Package Specification & Guidance Manager
11	Manager, Packaging Assessment Team
12	Quality Systems Manager
13	Safety & Environmental Systems Manager
14	Geological Assessment Specialist
15	Packaging & Transport Development Engineer
16	Operational Safety Engineer
17	Design System Engineer
18	Planning Engineer

Contacts

Environment Agency
Nuclear Waste Assessment Team
Environment Agency
Ghyll Mount
Gillan Way
Penrith 40 Business Park
Penrith
Cumbria
CA11 9BP
www.environment-agency.gov.uk

Office for Nuclear Regulation^{*}
Redgrave Court
Merton Road
Bootle
Merseyside
L20 7HS
<http://www.hse.gov.uk/nuclear/>

^{*} Formerly Health and Safety Executive, Nuclear Directorate

Radioactive Materials Transport Team
Department for Transport
Rose Court
2 Southwark Bridge
London
SE1 9HS
www.dft.gov.uk

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