NDA Annual Research Board Report – Issue 1 Stan Gordelier, Independent Chair, February 2014

1. Introduction and Background.

This is the third annual report of the Research Board since its restructuring and expanded remit in 2011. Two meetings of the Board have been held during the period, see sections 3 and 4 below.

The terms of reference, the modus operandi and the membership have remained the same during the year. The independent chair and the NDA continue to consider these are appropriate, in agreement with Board members, but that they should be subject to review when the implications of the establishment of the Nuclear Innovation and Research Advisory Board (NIRAB) have become clear (see section 2 below). The organisations represented on the Board are listed in Appendix 1.

In its second and in this third annual report the Board has made a number of high level recommendations. While its role is purely advisory, the Board intends that the responses to its recommendations will be the subject of future monitoring.

2. Government's Response to the House of Lords Science and Technology Committee Report.

As discussed in the last Research Board Annual report, in late 2011 the House of Lords Science and Technology Committee (HoLSTC) published a report into the UK's nuclear research and development capabilities¹, expressing its concern and making a number of recommendations. Amongst other matters the HoLSTC did not believe that the UK has sufficient R&D capabilities for its current needs, let alone an extended programme. As a result, the government set up a series of coordinated groups to examine what changes needed to be made to maintain and, as necessary, expand the UK's civil nuclear capability.

The Research Board has taken updates on the Government's response to the HoLSTC from its government member representatives at each of its meetings in FY 2013-2014.

The Nuclear Industrial Strategy² was the Government's response to the HoLSTC inquiry into the UK's nuclear R&D capabilities and the recommendations from the Ad-Hoc Nuclear Research and Development (R&D) Advisory Board. The Advisory Board was established to oversee work on an industrial vision statement, an R&D roadmap, a review of the R&D landscape, and a long-term nuclear energy strategy. Its membership included many members of the NDA Research Board. The resulting strategy covers four key areas: 1) the home market; ii) innovation and R&D; iii) forging a stronger international presence; and iv) investing in the right skills.

¹ Note that the House of Lords report addressed the full range of civil nuclear technologies, not just those related to waste management and decommissioning.

² See <u>www.gov.uk/government/publications/nuclear-industrial-strategy-the-uks-nuclear-future</u>

Key actions associated with strategy are the establishment of the Nuclear Industry Council (NIC) which is responsible for delivery and development of this strategy, the establishment of NIRAB to coordinate nuclear R&D and the establishment of a Nuclear Innovation and Research Office (NIRO) to respond to NIRAB recommendations and provide advice to Government, its organisations and industry on R&D / innovation opportunities and programmes. The NIRO is hosted within the National Nuclear Laboratory (NNL). The NIRO will periodically review the UK position with respect to the R&D roadmap and highlight possible consequences and disadvantages of inaction.

A further key Government document is the Nuclear Supply Chain Action Plan³ which has been developed by Government in partnership with industry. One of the objectives of the action plan is to maximise UK economic activity and growth from the nuclear sector. All sectors of the nuclear industry were involved in the development of the plan.

As a result of these developments and its discussions, the Board has agreed that:

- No significant changes should be made to the way that it operates until the impact of the establishment of NIRAB has become clear.
- At an appropriate time the Research Board's independent chair should meet with the chair of NIRAB to discuss how the Board's activities should fit with those of NIRAB.
- The Board should then review its terms of reference, modus operandi and membership to ensure that its activities fit appropriately with the newly established pattern of relationships for UK civil nuclear R&D.
- On the basis of this review the Board should make appropriate recommendations to its sponsoring government department, DECC, and to the NDA Board.
- The Board should also ask the NDA to report back to it on any changes to NDA's own activities resulting from the Nuclear Industry Strategy.

3. Fifth Meeting of the Board, 17th April 2013.

The main purposes of the fifth meeting were to:

- Receive an update on and review implications of recent Government announcements.
- Be informed of the Office of Nuclear Regulation's (ONR's) analysis of research needs.
- Receive a report on activities of the Radioactive Waste Management Directorate's (RWMD's) Technical Advisory Panel (TAP).
- Receive reports from and review of effectiveness of Nuclear Waste Research Forum (NWRF) and associated Working Groups.

The full Agenda for the fifth meeting is included in Appendix 1. As discussed in the last annual report, the Board has agreed that a key element of its future programme would be to examine the objectives, activities and progress of the NWRF topic based working groups. This formed the major part of the agenda in this fifth meeting, during which the Board received progress reports from the co-chair of the NWRF and the NDA Research Manager and held detailed discussions with the chairs of the Land Quality Working Group and the Decommissioning Working Group.

³ See <u>www.gov.uk/government/publications/nuclear-supply-chain-action-plan</u>

These two working groups had been selected as examples of one that was demonstrating considerable success and another that was struggling to make progress⁴.

In these discussions the Board noted in particular:

- One of the successes of the Land Quality Working Group had been that it has enabled its members to collaborate on multi-site issues by sponsoring projects through the NDA's Direct Research Portfolio, thereby avoiding duplication and promoting faster progress.
- That prior to the formation of the Decommissioning Working Group there had been no established forum for sharing decommissioning R&D issues within the UK nuclear industry.
- That the NWRF was trialling an electronic networking site, the NDA Knowledge Hub, to support the sharing of information.

The Board was appreciative of the frankness of the chair of the Decommissioning Working Group in explaining the difficulties that he faced. The key underlying issue was that the scope of the working group was very large, with the result that its members felt little by way of common interests, coming from disparate specialisations. The Board recommended that the group be continued (particularly in recognition that there was no other established forum for this field) and that it should focus on prioritised areas covering much reduced scope. If necessary this could be done via sub-groups or themed meetings. Progress was already being made in identifying priority areas, which the Board encouraged. Enthusiasm

Moving to other matters on the fifth agenda, the Board's terms of reference give it a UK wide role and the ONR had proposed the agenda item covering its Chemical Plant Research Index (CPRI)⁵ to help it in this respect.

The Nuclear Research Index (NRI) reflects the regulator's considered opinion on the need for safety-related research in the nuclear industry. The NRI was originally set up to consider operating nuclear reactors but ONR was working on this CPNRI to cover nuclear decommissioning, fuel reprocessing and waste plants in the UK. This would be followed later by a unified Nuclear Research Index. The Board members from the EA and SEPA confirmed their agencies had been engaged in the process and were working on how to include their needs in the ONR approach.

The intention was to publish the CPNRI and ask Site Licence Companies (SLCs) to demonstrate that their R&D programmes are meeting the published needs. Whilst ONR could commission safety-related research itself, its preference is to avoid this through early dialogue with the SLCs. The ONR would like the Board to note the publication of the CPNRI and comment on ONR's

⁴ In addition to these two working groups, there are four others covering the topics of: Waste Packaging and Storage; Characterisation; The Technical Baseline and Underpinning R&D (TBuRD) Process; and University Interactions.

⁵ When published it was called Decommissioning, Fuel & Waste Nuclear Research Index 2012/13

subsequent review of the SLC's response. ONR would ultimately look to include safety-related research needs associated with geological disposal in a future unified NRI.

In its discussion of these issues the Board noted that:

- The Co-chair of the NWRF and the Board secretary had both been involved in discussions on early drafts of the CPNRI.
- It was important to clearly define safety-related research. The NRI, as a regulators' tool, should not become an all embracing index but should be focussed on safety related research.
- There was a shared objective to minimise additional burdens on the SLCs and the Technical Baseline and underpinning Research and Development (TBuRD) documents represent a very useful set of data on which to base a response.
- There was considerable safety related work being conducted by academia and internationally and this should be taken into account in assessing the adequacy or the overall UK R&D programme's response to the unified NRI.

4. Sixth Meeting of the Board, 2nd October 2013.

The main purposes of the sixth meeting were to:

- Consider the results of the external contract work on prioritisation, with a view to completing the Board's current work on the prioritisation process.
- Receive a brief update on the Government's response to the House of Lord's inquiry and consider any implications for the Board's work and practices.
- Understand the basis of the Committee on Radioactive Waste Management's (CoRWM) comments in their Annual Report and consider how the Board should respond and what changes the Board might make.
- Explore the R&D elements of the RWMD technical programme (in particular with respect to processes for governance, scrutiny and challenge) and, as appropriate, make recommendations or endorse the approach.

The Agenda for the sixth meeting is included in Appendix 2. Following a short update on the activities of the TAP at its fifth session, the Board had agreed to devote the major part of the sixth meeting to an examination of RWMD's research and development programme. A number of RWMD documents on its technical programme had been provided to members in advance of the meeting, together with links to further information available on the web. The agenda provided the opportunity for the Board to hear from and discuss issues with:

- RWMD senior representatives.
- The independent chair of the RWMD Technical Assessment Panel (TAP).
- The regulatory bodies (ONR and EA)⁶.

⁶ Note that in Scotland waste disposal is a devolved issue and the policy is for long term management of higher activity radioactive waste in near-surface facilities located as near to the site where the waste is produced as possible. SEPA therefore has no regulatory role in monitoring the GDF programme, but is clearly interested in following progress.

• The EU Secretary General of the Implementing Geological Disposal Technology Platform (IDG-TP), to bring an international perspective.

During the meeting itself, the members discussed with the RWMD Director of Science and Technology and the RWMD Head of Research how the programme is developed, delivered and scrutinised by the TAP, the regulators and CoRWM. Members probed the adequacy of funding, the difficulties that could arise from not having a confirmed repository site and the potential skill shortages that might arise as the Geological Disposal Facility (GDF) project moved into implementation. The Board noted:

- RWMD's reassurance that current funding was sufficient and that the government recognised that this would need to increase as implementation progressed.
- That progress in certain areas was necessarily on hold to avoid nugatory work, due to the lack of confirmed site, but that RWMD maintained its capabilities by collaboration with international partners.
- That competition with the oil and gas sector could potentially result in skill shortages as the project moves towards the exploration and implementation phases (e.g. drilling engineers).
- That the currently available documents on the technical programme are a detailed and lengthy read which, in the Board's view, did not match the needs of less specialist stakeholders.

Given the complexity and vast extent of the technical programme and its documentation, the Board is to a large extent reliant on the more detailed work of its supporting TAP. The Board's discussion with the RWMD senior representatives was followed by a further discussion with the independent chair of the TAP. Again members sought reassurance on sufficiency of resources and the availability of expertise. The TAP's current six members had been selected by the TAP independent chair in agreement with the RWMD Executive on the basis of their complementary technical skills; external resources could be used to support detailed technical reviews. The Board was assured that the need to expand capability and capacity was recognised as the GDF project moved towards implementation. Communication of the TAP's work and recommendations was via published minutes and its annual reports.

With respect to regulation, RWMD had agreed with the ONR and the EA that it is subject to voluntary regulation, given that there was currently no site selected for a GDF. The Board's ONR member explained that its approach was to assess the research and development needs completely independently of RWMD using external support. ONR and EA collaborated to achieve a common view.

The Board was also grateful to the Secretary General of the IGD-TP for accepting its invitation to discuss the programme at this session. The IGD-TP provided a vehicle for collaboration across EU member states with the following benefits:

- Cost savings and programme acceleration.
- Transfer of knowledge and development of skills.

• The opportunity to engage with a wide range of stakeholders and hence develop a consensus on research needs.

Board members again sought reassurance on the adequacy of funding. They also welcomed RWMD's membership of the IDG-TP Executive Group and expressed their support for RWMD's continued involvement.

Finally for this topic, the Board explored the current UK academic research programme on geological disposal. The RWMD Chief Scientific Advisor highlighted in particular work conducted via Engineering and Physical Sciences Research Council (EPSRC) and Natural Environment Research Council (NERC), much of which was part funded by RWMD.

This session had been long and detailed and the Board agreed that over the period to its next meeting (April 2014) it would consider its response to four questions:

- Q1. On the basis of the evidence available to the Research Board (presentations at Research Board, documents provided by RWMD, TAP programme, CoRWM reviews, further reading members may have done etc.) does the Board consider the process for developing the R&D programme is soundly based?
- Q2. Does the Research Board consider the mechanisms for review of the R&D programme (TAP for the Research Board, Regulators, CoRWM) are at least adequate? They could be more than adequate.
- Q3. Recognising the extensive work of others (as above, the TAP, Regulators and CoRWM), are there still areas where the Research Board believes there could be gaps in the R&D programme or where it would like to test for gaps? The Research Board could, for example, ask the TAP to explore particular areas on which it is not yet satisfied.
- Q4. Does the Research Board consider that the R&D programme is adequately communicated to RWMD's stakeholders?

Views expressed by members so far were that:

- Members were encouraged by the work of its supporting TAP and the expertise of the TAP members. It was reassured that the TAP had sufficient resources for its work.
- RWMD's programme is already heavily monitored. Suggestions in a recent government consultation⁷ that an additional monitoring body could be created seemed excessive.
- Consideration should be given to producing a more accessible document to communicate RWMD's technical programme, more appropriate to a non-specialist audience.

⁷ Managing Radioactive Waste Safely: Call for Evidence on the Siting Process for a Geological Disposal Facility, see https://www.gov.uk/government/consultations/managing-radioactive-waste-safely-call-for-evidence-on-the-siting-process-for-a-geological-disposal-facility.

• Public acceptance was a key issue in establishing a UK GDF. Members were supportive of RWMD's part sponsorship of independent academic work, both for the value of its content and because such academic work would help facilitate public trust.

The intention is that, at the end of this process, the Board will agree a statement of its collective views.

Elsewhere on the agenda of this sixth meeting the Board reviewed the external consultant's work on R&D prioritisation conducted on its behalf and gave consideration to its relationship with CoRWM

5. Status Update on the Board's Shorter Term Objectives.

The last annual report listed the shorter term objectives that the Board had set for itself; the status these objectives is reviewed here:

- A map of who is doing what in UK R&D in the field of waste management and decommissioning.
 - Following the initial assessment presented in paper NDARD001 and the results of the subsequent study reported in paper NDARD004, this information was made available to the wider review of UK capability sponsored by DECC, as part of the response to the HoLSTC report.
 - The Board agreed that, as a result of this latter study, it required no further work itself in this area.
- A view of the highest priority R&D topics for the UK in this field and an assessment of whether these are being appropriately addressed.
 - This has been completed and the analysis presented in paper NDARD003 and passed to the NWRF for their review and feedback. The intention is that the outcome will also be compared to the NDA's Technical Baseline Report when this becomes available. However this report has been delayed by resource shortages.
 - The intention is that the Board will revisit its view on the highest priority R&D topics at appropriate intervals (e.g. quinquennially).
- An overview of how others select and prioritise their R&D programmes, measure the outcomes, disseminate the results etc., and a comparison with the NDA approach;
 - Following presentations from a number of organisations, the Board further explored this topic via a contract let on its behalf by the NDA.
 - The resulting study has been reported (NDARB010) and the outcome presented at the sixth meeting. The study concluded that while there was no single right way to prioritise R&D there was evident consistency in the good practices used.
 - The Board members agreed that:

- They should respond on the implications of the report for their organisations.
- That the NDA should provide a similar response.
- That the Board should then agree a concluding statement to this work.
- Reviews of NDA's own R&D programme, together with a consideration of other UK bodies research on these topics, leading to the Board's advice on overall adequacy and appropriateness.
 - Paper NDARD006 examined the NDA's TBuRD process. The Board was pleased to note that this independent review assessed this process as best in class.
 - The Board has agreed that its future programme will explore relevant UK R&D activities (both NDA's and that of others) via:
 - The NDA strategic themes⁸, taking more manageable sub-sets as necessary.
 - The objectives, activities and progress of the NWRF topic based working groups.
 - Comparing the outcomes to members' views of needs and priorities and making recommendations as necessary.
 - At its fifth meeting, in pursuit of this strategic approach, the major topic was a review of the NWRF progress and an examination of two of its working groups, and appropriate further actions were placed.
 - At its sixth meeting, in further pursuit of the agreed strategic approach, the Board examined the important work of RWMD and its technical programme in support of developing a UK GDF, which is a key component of the Integrated Waste Management theme. Appropriate further actions were placed.
 - The Board has agreed that its seventh meeting will examine the spent fuels strategic theme, for which preparations are already in hand.
 - The Board intends that, following examination of each strategic theme (or a key sub-component), it will agree a position statement recording its views and recommendations to enable transparency of the outcome.
- With respect to the Board's consideration of the communication of R&D needs and outcomes:
 - The fourth meeting of the Board has already explored this issue in some depth.
 - The independent chair reviewed the NDA's previous R&D communication strategy and agreed that, particularly in the light of a pending major revision, it was not useful for the Board to undertake its own review.

⁸ Site Restoration, Spent Fuels, Nuclear Materials, Integrated Waste Management, Business Optimisation, Critical Enablers.

- The independent chair has now also reviewed the latest strategy and provided the NDA with some observations. The revised strategy will now be provided to the full Board for its review and comment when agenda time allows.
- The Board was pleased to note and encouraged the continued development of the NWRF Knowledge Hub.
- Recommendation 6 from the Board's last annual report asked that the results of a DECC and FCO exercise to identify UK participating organisations in international programmes should be made more widely available and regularly updated, with the objective of enabling greater UK benefit. Further, that mechanisms should be put in place by which the benefits of UK participation can be more widely shared across the industry. From the Board's discussions this year it appears that no such list of participants exists.

6. Key Conclusions:

- The Board's structure and modus operandi continue to be appropriate for the moment, pending the outcome from the establishment of NIRAB. Meetings remain well attended at senior level. An approach by the Scottish Chief Scientific Advisor to attend future meetings has been accepted.
- The Board had agreed to conduct its future programme via an exploration of UK R&D activities(both NDA's and that of others) via:
 - i. The NDA strategic themes.
 - ii. The objectives, activities and progress of the NWRF topic based working groups.
- 3. The Board has progressed its work in FY 2013-2014 in accordance with this strategic approach by:
 - i. Taking an overview of the NWRF's work and a more detailed consideration of the work of the Land Quality Working Group and the Decommissioning Working Group.
 - ii. An examination of RWMD's technical programme to develop a GDF, with Spent Fuels as the next strategic theme to be explored at meeting seven.
- 4. The Board is appreciative of it being informed of and being asked to comment on the regulators CPNRI. This is supportive of the Board's wider UK role.
- 5. The Board continues to be impressed with the work of the NWRF and encourages the organisations constituting its membership to continue to support its activities. It is also supportive of NWRF's endeavours to improve communication of the outcomes of its work (the Knowledge Hub). The benefits of the NWRF include:
 - i. Avoiding duplication of R&D across the NDA estate.

- ii. Collaboration with external groups, including influencing externally funded R&D programmes.
- iii. Sharing knowledge of individual SLC's university projects
- iv. Identifying and communicating common R&D needs, publishing common R&D issues and identifying future collaborative projects.
- v. Updated SLC guidance on the TBuRD process, resulting in smoother implementation, reducing costs and improving the quality of the information.
- 6. In the area of geological disposal:
 - i. The Board is greatly appreciative of the support and expertise of its TAP and reassured that it is appropriately resourced.
 - ii. The Board is supportive of RWMD's funding contribution to academia's work on geological disposal, which it sees as not only having value in its own right, but also because it should help facilitate public trust.
- 7. The Board made a number of high level recommendations in its last annual report. While the Board's role is advisory only, it is important that the response to these recommendations is tracked.

7. Recommendations

- No significant changes should be made to the Board's terms of reference, modus operandi and membership until the impact of the establishment of NIRAB has become clear.
- 2. On behalf of the Board, the independent chair should discuss with the chair of NIRAB how the Board's activities should best fit in the new UK arrangements,
- 3. The Board should then review its terms of reference, modus operandi and membership and agree appropriate recommendations to make to its sponsoring government department, DECC, and to the NDA Board.
- 4. The NDA should report back to the Board as to if and how its own R&D activities have changed as a result of the new Nuclear Industry Strategy.
- 5. An independent review of the NDA's TBuRD process has shown it to be best in class. The publication of the Technical Baseline report itself had been delayed by resource shortages in NDA. This is an important document and its production should be facilitated as soon as reasonably possible.
- 6. In the recent government consultation on the process for progressing a UK GDF there was a suggestion that a further monitoring body could be established. Given that RWMD's programmes are already subject to scrutiny by CoRWM, the Research Board and its supporting experts of the TAP, and by voluntary agreement with the ONR and EA, the Board does not think that such an additional body is either necessary or desirable.

- 7. Having learnt that a review of organisations participating in international programmes had not been in progress, as it had previously understood, the Board continues to recommend:
 - That such a record should be established, maintained in regularly updated form and made widely available.
 - That mechanisms should be put in place by which the benefits of UK participation can be more widely shared across the industry (e.g. the UK equivalent of the NWRF Knowledge Hub).

Outputs:

The Board has published the agendas and minutes of the meetings held. In addition, papers have been compiled as follows:

Published papers:

NDARB008 - Progress of the NWRF Working Groups NDARB009 - RWMD's Technical Programme NDARB010 - Investigation of good practice in prioritisation of R&D **Working documents:** None

Appendix 1: Organisations represented on the NDA Research Board. Appendix 2: Agenda for the fifth meeting of the Research Board. Appendix 3: Agenda for the sixth meeting of the Research Board.

Appendix 1

Organisations Represented on the NDA Research Board

Members

Atomic Weapons Establishment (AWE)

Commissariat à l'énergie atomique et aux énergies alternatives (CEA)

Department of Energy and Climate Change (DECC)

EDF Energy

Environment Agency (EA)

European Commission (EC)

Ministry of Defence (MOD)

Nuclear Champion, Research Council Energy Programme (RCEP)

Nuclear Decommissioning Authority (NDA)

Nuclear Decommissioning Authority - Radioactive Waste Management Directorate (NDA RWMD)

Nuclear Waste Research Forum (NWRF)

Office for Nuclear Regulation (ONR)

Radioactive Waste Management Directorate Technical Advisory Panel (RWMD TAP)

Rolls-Royce

Scottish Environment Protection Agency (SEPA)

Observers

Committee on Radioactive Waste Management (CoRWM) - Observer

Government Office for Science (GO-Science) - Observer

Appendix 2

Agenda for the fifth meeting of the Research Board

Meeting 5 – 17th April 2013

Main purposes of the meeting

- Receive update on and review implications of recent Government announcements.
- Be informed of ONR's analysis of research needs.
- Receive report on activities of RWMD Technical Advisory Panel.
- Receive reports from and review of effectiveness of Nuclear Waste Research Forum (NWRF) and associated Working Groups.

Agenda – Issue 1

No.	Agenda Item	Time	Lead
01	 Welcome & Apologies Welcome and introductions Any declarations of interest 	10:00	Chair
02	 Agreement of Agenda Notification of AOB if known at this point Date, location and time of next meeting 	10:10	Chair
03	 Review of 4th Meeting Review and approval of minutes Actions 	10:20	Chair
04	Update on Government Response to House of Lords Science and Technology Committee inquiry in to the UK's nuclear R&D capabilities – Nuclear Inustrial Strategy	10:30	DECC CSA
05	Discussion	10:45	ALL
06	Chemical Plant Nuclear Research Index	11:15	ONR
07	RWMD Technical Advisory Panel Update	11:35	Chair of RWMD TAP, Ind

NDA Research Board Annual Report FY2013-14

08	NDA Research Board – 2 nd Annual Report	12:00	Chair
	LUNCH	12:20	
09	 Nuclear Waste Research Forum Update Overview of Seminar Annual Report Future Programme 	13:00	Co-Chair of NWRF, Sellafield Ltd
10	Land Quality Working GroupCurrent & Future Programme	13:30	Chair of Land Quality Working Group, AWE
11	Decommissioning Working Group Current & Future Programme 	14:00	Chair of Decommissioning Working Group, Sellafield Ltd
12	Nuclear Waste Research Forum Working Groups	14:30	Research Manager, NDA
13	Discussion on NWRF and WGs	15:00	ALL
14	Review of Actions	15:30	
15	АОВ	15:45	
	CLOSE OF MEETING	16:00	

Appendix 3

Agenda for the sixth meeting of the Research Board

Meeting 7 – 17th April 2013

Main purposes of the meeting

- Consider the results of the external contract work on prioritisation, with a view to completing the Board's current work on the prioritisation process.
- Receive a brief update on the Government's response to the House of Lord's inquiry and consider any implications for the Board's work and practices.
- Understand the basis of CoRWM's comments in their Annual Report and consider how the Board should respond and what changes the Board might make.
- Explore the R&D elements of the RWMD technical programme (in particular with respect to processes for governance, scrutiny and challenge) and, as appropriate, make recommendations or endorse the approach.

Agenda – Issue 2

No.	Agenda Item	Time	Lead
01	 Welcome & Apologies Welcome and introductions Any declarations of interest 	10:00	Chair
02	 Agreement of Agenda Notification of AOB if known at this point Date, location and time of next meeting 	10:05	Chair
03	 Review of 5th Meeting Review and approval of minutes Actions 	10:15	Chair
04	Update on Government Response to House of Lords Science and Technology Committee inquiry in to the UK's nuclear R&D capabilities	10:25	Director Science & Innovation, DECC
05	 CoRWM Annual Report and concerns expressed on NDA Research Board Chair of CoRWM - explanation and details of concerns and recommendations. Chair of NDA Research Board - response & report on actions taken so far Discussion - members' views and responses 	10:35	Chair of CoRWM Chair All
06	R&D Prioritisation Summary of report 	11:35	Cogentus Consulting All

NDA Research Board Annual Report FY2013-14

	Discussion		
	LUNCH	12:00	
	Geological Disposal Research Programme		
07	RWMD's Research Programme	12:30	Head of R&D, NDA RWMD
08	RWMD's Technical Advisory Panel (TAP)	13:30	Chair of TAP, Ind
09	Regulator's view of disposal research needs	13:50	HM Principal Inspector, ONR
10	Implementing Geological Disposal – Technology Platform (IGD-TP)	14:10	Chair of IGD-TP Executive Group
11	Current UK academic research programme on geological disposal	14:40	Chief Scientific Advisor, NDA RWMD
12	Discussion of geological disposal research programme	15:00	All
13	Review of actions	15:40	
14	АОВ	15:45	
	CLOSE OF MEETING	16:00	