

HOUSE OF LORDS

Science and Technology Committee

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2nd Report of Session 2004-05

# Radioactive Waste Management: Government Response

## Report

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Ordered to be printed 21 March and published 5 April 2005

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Published by the Authority of the House of Lords

*London* : The Stationery Office Limited  
£price

HL Paper 89

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# Radioactive Waste Management: Government Response

## THE COMMITTEE'S COMMENTARY ON THE GOVERNMENT RESPONSE

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1. In December 2004 we issued a short report on recent developments concerning the long-term strategy for the management of the United Kingdom's radioactive waste.<sup>1</sup> In particular, we looked at the work of the Committee on Radioactive Waste Management (CoRWM), set up by the Department for Environment, Food and Rural Affairs (Defra) in 2003. We expressed astonishment that CoRWM, in seeking the best technical solution to the problems of radioactive waste management, had been required to start from a "blank sheet of paper". The report also raised concerns over the internal technical expertise available to CoRWM, and the lack of involvement of Defra's Chief Scientific Advisor in its establishment.
2. In light of the urgency of the issues raised in our report, we secured an early debate, on 12 January.<sup>2</sup> The Government then responded to our report on 23 February, and the response is reprinted in the Appendix. While it is clear from both the debate and the response that there remain differences between the Government's position and our own, we commend the Government for having addressed our conclusions in such a thorough and thoughtful fashion.
3. We welcome the increased involvement of Defra's Chief Scientific Advisor in assuring the quality of scientific advice provided to CoRWM (paragraph 22). Formation of an expert panel would go some way to meeting our recommendation that specialists in management options be a core part of CoRWM's structure, and we trust that it will also accelerate the process of agreeing the preferred waste management option.
4. However, we note with concern the suspension of one member of CoRWM, Dr Keith Baverstock, and the request of another, Dr David Ball, that he too be suspended from the committee.<sup>3</sup> We have already stated our concern as to the level of expertise on CoRWM; it would be extremely unfortunate if this expertise were further diluted through the loss of two members with relevant technical experience.
5. We are aware of, and welcome, the interest of Defra's Science Advisory Council (SAC) in the process by which CoRWM was established.<sup>4</sup> This raised some important science governance issues. The Government assert that CoRWM's role is that of "overseeing an assessment of the options for the long-term management of the UK's higher activity radioactive waste, as opposed to that of being a scientific advisory committee *per se*" (paragraph 11). CoRWM's remit requires it to make recommendations to ministers on

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<sup>1</sup> Radioactive Waste Management, 5th Report, 2003-04 (HL Paper 200).

<sup>2</sup> HL Deb., cols. 323-352.

<sup>3</sup> Confirmed in the House by the Minister, Lord Whitty, on 28 February: see HL Deb., cols. 9-11.

<sup>4</sup> The Science Advisory Council provides Defra with expert and independent advice on science policy and strategy. See <http://www.defra.gov.uk/science/how/advisory.htm>.

how to manage radioactive waste, and we therefore consider that it is *de facto* providing advice on scientific issues. As such we propose that it follow the Office of Science and Technology's code of practice for scientific advisory committees.<sup>5</sup> This sets out guidance which, if it had been followed from the outset, might have alleviated some of the problems we have identified in CoRWM.

6. We are pleased that the Government, rather than waiting for CoRWM to report in 2006, will start planning for the next stage of the process this summer (paragraph 36). We shall follow developments with interest.
7. Improvements to the arrangements for meetings of CoRWM, and to the presentation of related papers, are also to be welcomed (paragraph 31). CoRWM continues to keep us informed of its ongoing work, and we look forward to a further meeting with them before the autumn.
8. Our objective remains, as it has always been, to provide independent parliamentary scrutiny of the process of finding an agreed method of radioactive waste management. We shall therefore continue to keep the work of CoRWM under active review, bringing matters of legitimate concern to the attention of the House.

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<sup>5</sup> Available at <http://www.ost.gov.uk/policy/advice/copsac/index.htm>. Paragraph 6 states: "The function of a scientific advisory committee is to help Government collect scientific information and make judgements about it. Such committees give advice on a very wide range of issues, spanning everything from the food we eat and grow to the quality of our environment, the safety of our roads and transport, and the buildings we live and work in. They review, and sometimes commission, scientific research, and they offer independent expert judgement, including where facts are missing or uncertainties exist. Scientific advisory committees may be required to provide either scientific advice, advice on scientific issues, or indeed both. Increasingly they have to frame their advice to take account of social and ethical issues and public and stakeholder concerns."

## **APPENDIX 1: THE GOVERNMENT RESPONSE**

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### **Introduction**

1. This document sets out the Government's response to the House of Lords Science and Technology Committee's 5<sup>th</sup> Report of Session 2003-4 on Radioactive Waste Management published in December 2004.
2. The Committee reached a number of conclusions in light of their inquiry, and each is responded to in turn in what follows.

### **Timing**

**Recommendation 1.** Since 1997 progress towards finding a long-term solution to the problem of radioactive waste management has been bedevilled by delay. Both Mr MacKerron (Q 3) and Mr Morley (Q 36) assured us that CoRWM will be able to deliver its recommendations to Ministers by July 2006. This timetable must not be allowed to slip, nor must CoRWM's report be followed by further procrastination. (Paragraph 3.4)

3. We agree that CoRWM recommendations should not be delivered any later than July 2006. We have repeatedly stressed this need to the Committee.

4. We agree that we must look to move quickly forward to decide policy in light of CoRWM's recommendations and to put in place arrangements for its implementation. We will begin planning for this once the short list of options that CoRWM will be assessing fully is known, following public and stakeholder consultations, in July of this year (see also later "After CoRWM reports" section).

5. That said, we must equally point out that much has been achieved in the nuclear field since the Science and Technology Committee published their report on "Management of Nuclear Waste" in March 1999. Under the Energy Act 2004, we have set up the Nuclear Decommissioning Authority (NDA) to take responsibility for the decommissioning of the UK's older, publicly-owned, civil nuclear sites. Security reviews have been undertaken in respect of the events of 11 September 2001. And we have published our Energy White Paper of February 2003 which set out our views on the future of nuclear power in the UK.

6. We also issued our "Managing Radioactive Waste Safely" consultation document in September 2001 to give the public and stakeholder groups the opportunity to say how they thought policy in the obviously difficult area of the long-term management of higher activity radioactive wastes should be decided. Our way forward statement announced the decision to set up CoRWM during 2002. CoRWM was set in place during the course of 2003. The Committee has now been working for over a year, and is now less than 18 months from delivering its recommendations.

7. We must also keep in proper perspective the scale of the project we are embarking upon. Solving this long-term radioactive waste management problem will cost billions of pounds and take many years, probably decades, to tackle. Taking a little time and effort to set a sound basis for the project is effort well spent. We cannot risk another costly failure of the kind we had in 1997, when the previous underground repository development programme collapsed at the planning inquiry stage.

### **A “Blank Sheet of Paper”**

**Recommendation 2.** We are astonished that CoRWM was asked to start from a “blank sheet of paper” when several of the options being considered had already in effect been ruled out by the Government and numerous authoritative bodies. CoRWM must waste no more time considering infeasible strategies. (Paragraph 3.15)

8. Government believes it is a necessary step to be able to demonstrate in an authoritative and comprehensive manner that all available options have been considered and evaluated. Where options are screened out there must be defensible and fully recorded reasons for this.

9. The key reason for this is that when we arrive at the next planning inquiry, whenever and for whatever facility this might be, we need a full, and an openly and transparently constructed, audit trail for the decisions that have been taken. Discarding options in piecemeal fashion, and without clearly documented reason, will not provide such an audit trail.

10. That said, we agree that infeasible options must be weeded out as soon as possible. The CoRWM short list will be published for public and stakeholder consultation in mid-March 2005, for finalisation by July 2005. The Committee’s detailed assessment will only be of the short-listed options.

### **Scientific Expertise and Commissioning Scientific Work**

**Recommendation 3.** We cannot understand why Defra’s Chief Scientific Advisor was not directly involved in the formation of a Committee that will be providing advice to Ministers on crucial scientific and technical matters. The inadequacies in CoRWM that we have found might well have been recognised at an early state in its concept if Ministers had involved the Chief Scientific Advisor from the outset. (Paragraph 3.11)

**Recommendation 4.** There is a danger that, without technical expertise relating to waste management options, CoRWM will be unable to evaluate evidence critically. Total reliance on contractors is unwise. (Paragraph 4.9)

**Recommendation 5.** We welcome the involvement of the learned societies, including the Royal Society and the Royal Academy of Engineering, in the technical assessment of CoRWM’s work, and in identifying data gaps. (Paragraph 4.4)

**Recommendation 6.** We urge the Government to consider, without delay, either the appointment of additional members to CoRWM with expertise in earth science materials or civil engineering, or the establishment of a technical sub-committee to CoRWM comprising several members of the main Committee along with a number of experts with experience of relevant technologies. It is not too late for such expertise to play an important role in the decision-making process. (Paragraph 4.8)

11. CoRWM’s role is that of overseeing an assessment of the options for the long-term management of the UK’s higher activity radioactive waste, as opposed to that of being a scientific advisory committee per se. As such, it needs the combination of skills and knowledge necessary for this oversight role, with the ability to draw on both scientific and other expert input and to undertake wide soundings of public and stakeholder views as required.

12. It was never planned, and indeed it would have been impossible, for CoRWM to have had access to all the necessary expertise to carry out its assessment of options in house. Neither, given Government's open-minded approach to CoRWM's review of options, would it have been appropriate for the Committee to have been constructed in a manner which was itself suggestive of any predisposition towards a particular option.

13. What CoRWM has is a broadly based membership comprising both members with a good existing understanding of the nuclear industry and radioactive waste and others who have the necessary knowledge and experience to supply a fresh, but suitably informed, view of the issues.

14. It was always intended that CoRWM should be provided with both administrative and technical support for its work. The reason the NNC technical support contract took some time to put in place, was that CoRWM first needed to specify its requirements and then the support contract had to be let under competitive tender. It was not, as the Committee have portrayed in their report "The complex methodology employed by CoRWM, and the lack of sufficient in-house expertise" that led to this appointment. Further, CoRWM's Procurement Principles, which cover the manner in which technical work is commissioned, and the role of NNC in this, are published on the CoRWM website—[www.corwm.org.uk](http://www.corwm.org.uk).

15. A key reason for providing technical support to CoRWM was not to restrict the range of expert advice to which the Committee has access but rather to provide the support necessary to help broaden that access.

16. Neither do we accept that CoRWM is unable to act as an intelligent customer for its work. CoRWM contains members with long and distinguished careers in areas such as nuclear health and safety, the technology of nuclear waste management, environmental regulation, environmental law, nuclear economics and risk assessment.

17. As its work proceeded during the course of 2004, CoRWM progressively stepped up the level of expert input to its programme. This included the commissioning, during the course of 2004, of a large number of specialist reports, including a substantial number on scientific aspects of waste management and specialist advice on effective methods of option assessment. The degree to which CoRWM draws on such expert advice will increase as its work proceeds, and focuses on the detailed assessment of short-listed options.

18. It is incorrect to portray CoRWM's procurement of expert advice as solely "commercially provided", or provided by "consultants". Much of CoRWM's advice is provided by independent experts or academics, some whom are choosing not to be paid. That said, it is not uncommon for such experts or academics themselves to work in a paid consultancy mode. Equally, CoRWM does also seek advice from commercial consultancy companies, many of whom themselves possess substantial and valuable expertise. This can be gauged from the extent to which the nuclear and radioactive waste industries more generally make use of such companies.

19. CoRWM has set up a Quality Assurance Working Group, to assure the overall quality of scientific and other expert inputs to its work (including, for example, ethics and economics as well as scientific disciplines). It has invited a small number of distinguished scientists and experts to join this Working Group to advise both on peer review and also overall strategy for acquiring the best possible science and technology input. Among those who have accepted CoRWM's

invitation to join this Group is Professor Geoffrey Boulton (Regius Professor of Geology at Edinburgh University and long-standing Fellow of the Royal Society).

20. CoRWM has also set up, and is actively using, a panel of over 150 peer reviewers to ensure the quality of its specialist work, especially in science and technology. The Committee has consulted both the Royal Society and the Royal Academy of Engineering in the construction of this panel, a fact that the Science and Technology Committee have specifically welcomed in its report.

21. As its work proceeds, CoRWM is also considering the setting-up of scientific and expert workshops and events to assist its evaluation of short-listed management options.

22. Also, as the Minister for the Environment, Mr Morley, informed the Science and Technology Committee, the Defra Chief Scientist is taking a particular interest in CoRWM's arrangements for science and technical quality assurance and peer review to ensure that they are robust. In particular, the Chief Scientist has been discussing the composition of CoRWM's Quality Assurance Working Group with the CoRWM Chair, and will continue to take an active involvement in its activities. To assist in this, the Chief Scientific Advisor is also considering the possibility of establishing his own panel of experts to provide him with views on the activities of the CoRWM Quality Assurance Group to help assure, independently of CoRWM, that the advice that they are giving is both robust and fit for purpose. Consideration of the precise nature of these arrangements is ongoing.

23. The other important safeguard to the quality of CoRWM's work is the openness and transparency with which it is being carried out. This provides the opportunity for any member of the scientific or other expert communities to input their views.

24. Against this background, we see no present need to appoint additional members to CoRWM. We agree, however, that the Committee should look to ensure that it has access to, and draws upon as necessary, expertise in earth science, materials and civil engineering as its work proceeds.

### **Public and Stakeholder Engagement**

**Recommendation 7. The amount of time and money CoRWM gives to discussing its methodology of engagement and ways of working is disproportionate to the public engagement that is likely to be generated by its work. (Paragraph 4.14)**

25. A key aim of the CoRWM process is to seek to engage the public and stakeholders. As Margaret Beckett said in her Managing Radioactive Waste Safely next steps statement of July 2002:

“The new body must win public confidence and operate in an open, transparent and inclusive manner. The review must engage with interested stakeholders and the public. The first step of the review will be to set the framework for debate by establishing broad agreement on the wastes to be considered, the range of management options for each of them, and the criteria against which these options should be assessed. The second step will be to assess each option including commissioning any new research required. The final step will draw up recommendations for Ministers to consider”.

26. We do not believe that there is a “one-size-fits-all” solution to the issue of public and stakeholder engagement. Rather, the approach needs to be tailored to the actual requirement. In this case, it is for CoRWM to carry out the assessment of options for the long-term management of the UK’s higher activity radioactive waste in the manner set out in their terms of reference. Other advisory committees may face differing requirements.

27. Details of CoRWM’s proposed public and stakeholder engagement programme were given in CoRWM’s First Annual Report 2004<sup>6</sup> published in December 2004. These proposals followed from earlier planning work.

28. There are a number of key points to note concerning this programme:

- four rounds of public and stakeholder engagement (PSE) are planned within CoRWM’s option assessment programme, each addressing a specific objective or set of issues;
- the programme is progressive, in that round 1 of PSE was essentially “framing” work, which will move up in level and intensity in moving to phase 2 and later phases of CoRWM’s work. Lessons learned in one round will be drawn upon for subsequent rounds;
- a variety of engagement methodologies, of the kinds described in the Science and Technology Committee’s “Science and Society” report will be used;
- the kinds of methodologies employed are not simply “more of market research”, as suggested in the Science and Technology Committee report.

29. In CoRWM’s first “framing” round of public and stakeholder engagement, between November 2004 and January 2005, the Committee:

- sent copies of its work proposals out to over 4,000 citizens and organisations;
- issued a consultation document which collected around 150 responses from citizens and organisations;
- held a meeting with a score of national stakeholder organisations;
- held 8 meetings with local stakeholders at nuclear sites involving over 80 people and 8 open public meetings at the same locations involving over 100 people;
- put a large amount of good quality information on the CoRWM website;
- collected a wide range of very useful supplementary information which will be summarised and published.

30. CoRWM has learned valuable lessons from this initial work which will be carried forward to its later stages of more intensive engagement.

### **Meetings of CoRWM**

**Recommendation 8.** Documents submitted to CoRWM should be made available to the public, well in advance of meetings. At the meeting itself, some indexing of papers is essential to enable the public to follow

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<sup>6</sup> see [http://www.corwm.org.uk/pdf/735%20-%20First%20Annual%20Report%2020041130%20\\_latest.pdf](http://www.corwm.org.uk/pdf/735%20-%20First%20Annual%20Report%2020041130%20_latest.pdf)

proceedings. The meeting, its room and proceedings, should be accessible to all members of the public as far as is practicable. (Paragraph 4.17)

31. We agree that documents for CoRWM meetings should be made available on the CoRWM website well in advance of the actual meeting. A general objective of one week in advance of the meeting in question would seem to be of the right order. Equally, given the pace at which CoRWM is working, with plenary meetings being held on average about once a month, there may be instances of individual papers where this is not possible. But this should be very much the exception rather than the rule.

32. CoRWM itself accepts that conditions at the Ipswich plenary meeting were not ideal, and also accepts that documentation for that meeting was not always clear. CoRWM has subsequently worked hard to improve both aspects at later meetings. But it is also important to be clear that plenary meetings, such as that in Ipswich, are primarily for CoRWM to transact its own business. CoRWM invites members of the public to observe these meetings as a way of demonstrating openness and transparency, not as a method of direct public participation, for which there is a separate and substantial public and stakeholder engagement programme.

### **After CoRWM Reports**

**Recommendation 9. The Government must be clear as to what they expect from CoRWM so that the next stage can follow on promptly. Planning and preparation by Government will be needed regardless of CoRWM recommendation. They must not wait until 2006. (Paragraph 5.2)**

33. We agree.

34. CoRWM's terms of reference set out what is expected of the Committee up until delivery of its management option recommendations in July 2006. These terms of reference also invite CoRWM to make any recommendations on option implementation issues that they feel are appropriate in light of their work. We understand that CoRWM is currently minded to offer its view on such issues.

35. Elliot Morley, Minister for the Environment and Agri-Environment, explained how Government intends to move forward once CoRWM's recommendation has been delivered in July 2006. He said the following:

“Once CoRWM's recommendations have been delivered in July 2006, Government has decided policy in light of it, and the facility or facilities required are clear, we foresee that the process and criteria to be adopted for a site selection will also be the subject of discussion in an open and transparent way.

An option to which consideration is being given, but has not yet been finally decided is to ask CoRWM, possibly in a somewhat reconstituted form, to undertake further work to oversee debate of process and criteria for site selection. This would take into account any implementation issues identified in their current programme of work.

This could be carried out in parallel with Government consideration and decision on the necessary institutional arrangements for delivery of the selected option, or options. Once in place, the implementation organisation could be given responsibility for carrying forward the agreed site selection process. We shall be aiming to have the delivery organisation in place, and ready to take on this work, as soon as possible after CoRWM has reported”

36. We agree further planning and preparation cannot wait until 2006. Our intent is to begin this once CoRWM's option short list has been confirmed, in light of public and stakeholder consultation, in July 2005. We shall be setting up a planning group involving UK Government departments and devolved administrations with an interest for this purpose.

### **The Future of Nuclear Power**

**Recommendation 10.** The Government must no longer allow delays in developing a long-term radioactive waste management strategy to be used as a pretext for deferring decisions on the future of nuclear power. To do so would seriously narrow the range of options open to the Government in meeting their longer-term energy and environmental goals. The small uncertainties associated with radioactive waste disposal that still exist must be balanced against the spectre of global warming: the consequences of not doing enough to limit greenhouse gas emissions may be catastrophic. (Paragraph 5.10)

37. The Managing Radioactive Waste Safely programme is primarily about the radioactive waste that is already in existence and which continues to be generated by ongoing nuclear and other relevant activities. The future of nuclear power is a separate issue on which Government policy is set out in the February 2003 Energy White Paper "Our Energy Future – Creating a Low Carbon Economy".

38. Nuclear power is currently an important source of carbon-free electricity. However, its current economics make it an unattractive option for new, carbon-free generating capacity and there are also important issues of nuclear waste to be resolved. These issues include our legacy waste and continued waste arising from other sources. The White Paper does not contain specific proposals for building new nuclear power stations. However, we do not rule out the possibility that at some point in the future new nuclear build might be necessary if we are to meet our carbon targets.

39. We recognise that climate change is an issue with us now and are taking measures to tackle it. Setting any long-term radioactive waste management solution in place is likely to take many years, probably decades. But the CoRWM process will be an important first step in identifying the means by which the UK's higher activity wastes will be managed in the long-term.



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- 2nd Report Therapeutic Uses of Cannabis (*follow-up to 9th Report 1997–98*)
- 3rd Report Resistance to Antibiotics (*follow-up to 7th Report 1997–98*)
- 4th Report Human Genetic Databases

### Session 2001–02

- 1st Report Managing Radioactive Waste: the Government's consultation (*follow-up to 3rd Report 1998-99*)
- 2nd Report Science in Schools: Government Responses
- 3rd Report What on Earth? The threat to the science underpinning conservation (*follow-up to 1st Report 1991-92*)

### Session 2002–03

- 1st Report Managing Radioactive Waste: Government Response
- 2nd Report Chips for Everything: Britain's opportunities in a key global market
- 3rd Report What on Earth? The threat to the science underpinning conservation: The Government's response and the Committee's commentary
- 4th Report Fighting Infection
- 5th Report Science and the RDAs: SETting the Regional Agenda

### Session 2003-04

- 1st Report Chips for Everything: follow-up
- 2nd Report Science and the RDAs: follow-up
- 3rd Report Science and Treaties
- 4th Report Renewable Energy: Practicalities
- 5th Report Radioactive Waste Management (*follow-up to 3rd Report 1998-99 and 1st Report 2001-02*)

### Session 2004-05

- 1st Report Science and Treaties: follow-up