

**MINISTRY OF DEFENCE POLICY FOR DECOMMISSIONING AND THE DISPOSAL OF
RADIOACTIVE WASTE AND RESIDUAL NUCLEAR MATERIAL ARISING FROM THE
NUCLEAR PROGRAMME**

INTRODUCTION

1. As a Department of State the Ministry of Defence (MoD) is committed to act in accordance with Government policy on nuclear material. This includes “The Decommissioning of the UK Nuclear Industry’s Facilities”¹, the “Policy for the Long Term Management of Solid Low Level Radioactive Waste in the United Kingdom”² and the interim arrangements and emerging outcomes associated with the “Managing Radioactive Waste Safely”³ programme for higher activity radioactive waste. The policy requirements are that we:
 - a. Scope all current and future liabilities.
 - b. Provide contingency for identified liabilities.
 - c. Where at all possible, work with Other Government Departments (OGDs) and Non-Governmental Organisations (NGOs) to develop coherent and complementary policies and strategies to discharge our responsibilities.
 - d. Where practicable, be nationally self sufficient in our ability to meet our responsibilities.
2. Within Defence, radioactive waste and residual nuclear material⁴ is generated from:
 - a. The Nuclear Programme. This consists of activities in support of the following:
 - (1) The nuclear weapons programme.
 - (2) The nuclear propulsion programme.
 - (3) Nuclear submarines.
 - (4) Supporting infrastructure.
 - b. Non Programme Areas. These liabilities originate from the use of radioactive materials by the armed forces, MoD and associated agencies not connected with the Nuclear Programme.
3. The MoD’s current and future nuclear liabilities account for less than 5%, both in terms of volume and activity, of the total UK inventory; 95% of the MoD total is produced by the Nuclear Programme⁵. The handling of the programme and non-programme waste lines of activity need to be drawn together.

AIM

4. This document provides the overarching MoD policy for the Nuclear Programme across all areas of defence nuclear activity in relation to the disposal of radioactive waste and residual nuclear material. It details **why** the MoD, as a generator of radioactive nuclear waste and residual nuclear material, will act in accordance with government policy on civil nuclear waste management.

¹ The Decommissioning of the UK Nuclear Industry’s Facilities – Amendment to Command 2919, DTI Paper, September 2004.

² Policy for the Long Term Management of Solid Low Level Radioactive Waste in the United Kingdom, 26 March 2007.

³ Response to the Report and Recommendations from the Committee on Radioactive Waste Management (CoRWM) by the UK Government and the devolved administrations, 2006.

⁴ Not all residual nuclear material (eg. used submarine reactor fuel) has been designated as MoD generated radioactive waste.

⁵ The remaining 5% is not the responsibility of Director General Submarines and typically comprises arisings from depleted uranium ammunition rounds, contaminated land and medical sources.

Further it outlines, in broad terms, **what** must be accomplished and **who** will be responsible for the necessary activities.

ASSUMPTIONS

5. The following assumptions have been made in this paper:
 - a. This policy will only be applicable to the Nuclear Programme.
 - b. That Director General Submarines (DGSM) will, in the future, act as the coordinator for advice and best practice within the MoD regarding strategies for nuclear liabilities, the disposal of radioactive waste and residual nuclear material.

STRATEGIC PRINCIPLES

6. As a responsible nuclear operator, the MoD is committed to complying, so far as is reasonably practicable, with national policies relating to the management of radioactive waste and residual nuclear material. In doing so cognisance is to be taken of the Secretary of State for Defence's policy statement on Health, Safety and Environmental Protection, "The Decommissioning of the UK Nuclear Industry's Facilities"⁶, the "Policy for the Long Term Management of Solid Low Level Radioactive Waste in the United Kingdom"⁷ and the interim arrangements and emerging outcomes associated with the "Managing Radioactive Waste Safely"⁸ programme for higher activity radioactive waste.
7. Decommissioning and disposal operations should be carried out as soon as is reasonably practicable, taking into account all relevant factors. The Government recognises that this process may involve a number of stages, spanning a number of decades⁹. DGSM is not directly responsible, under existing Terms of Reference and delegations, for all necessary areas of the disposal process. DGSM is responsible for the conduct of the disposal process relating to the MoD's Nuclear Programme. Through ensurance, and assurance gained from other stakeholders¹⁰. DGSM is required to:
 - a. Produce and maintain a decommissioning and disposal strategy for the MoD's nuclear programme.
 - b. Ensure, through the use of best practical means¹¹ (BPM), that due consideration is given to avoiding or minimising the generation of radioactive waste and residual nuclear material at every stage of any activity involving radioactive materials.
 - c. Ensure, through the use of BPM, that risks and doses to people now and in the future are kept as low as reasonably practical.
 - d. Ensure, through the use of BPM, that harm to the environment, now and in the future, is minimised, so far as is practical.

⁶ The Decommissioning of the UK Nuclear Industry's Facilities – Amendment to Command 2919, DTI Paper, September 2004.

⁷ Policy for the Long Term Management of Solid Low Level Radioactive Waste in the United Kingdom, 26 March 2007.

⁸ Response to the Report and Recommendations from the Committee on Radioactive Waste Management (CoRWM) by the UK Government and the devolved administrations, 2006.

⁹ The Decommissioning of the UK Nuclear Industry's Facilities – Amendment to Command 2919, DTI Paper, September 2004, para 3.

¹⁰ These stakeholders will include Chief of Material (Fleet) and Defence Estates who will provide to DGSM the assurance that the areas of the disposal process for which they are of responsible is understood and appropriately resourced.

¹¹ The BPM principle has most recently been defined by a statement of the UK Government and the devolved Administrations' policy on the decommissioning of nuclear facilities "The Decommissioning of the UK Nuclear Industry's Facilities", Sep 2004. BPM requires operators to take all reasonably practical measures in the design and operational management of their facilities to minimise discharges and disposals of radioactive waste, so as to achieve a high standard of protection for the public and the environment.

- e. Ensure, from the conceptual stage, that for all activities involving radioactive materials, the method of eventual disposal has been considered and resources identified for all waste that is held or will be generated in the future. This includes, where required, the provision of decommissioning and disposal plans.
 - f. Conform, where reasonably practicable, to the “Environment Agency’s Radioactive Substances Regulation and Environmental Principles”, follow the Environment Agency’s risk screening and appraisal methodologies and Health and Safety Executive requirements on the treatment and interim storage of radioactive waste.
8. The decommissioning and disposal strategy, for radioactive waste and residual nuclear material arising from the nuclear programme, should take into account all relevant factors, assessing and presenting them in a transparent way as possible. It should be underpinned by objective information and arguments, whilst taking due account of security and operational imperatives. Examples, but not exhaustive, of these should include:
- a. Ensuring worker and public safety.
 - b. Maintaining site security.
 - c. Minimising waste generation and providing for effective and safe management of wastes created.
 - d. Minimising environmental impacts, including reusing or recycling materials whenever possible.
 - e. Maintaining adequate site stewardship.
 - f. Using resources effectively, efficiently and economically.
 - g. Identify adequate funding requirements.
 - h. Maintaining access to an adequate and relevant skills and knowledge base.
 - i. Using existing best practice wherever possible.
 - j. Conducting research and development to develop necessary skills, techniques, facilities or best practice.
 - k. Consulting appropriate public and stakeholder groups on the options considered and the contents of the strategy.
 - l. Ensuring that the strategy complements, and is coherent with, decommissioning and disposal strategies published by defence contractors (eg. Atomic Weapon Establishment).
 - m. Providing the strategy for review by Defence Nuclear Safety Regulator (DNSR), who will work jointly with relevant statutory regulators.

These factors should be applied throughout the decommissioning and disposal process to ensure that programmes are optimised, and to help to establish the earliest practicable timetable for the operations subject to Departmental approvals.

GOVERNANCE

9. For the MoD to discharge effectively this responsibility, the roles and responsibilities with respect to policy and strategy need to be clearly defined. The co-ordination of this activity will be

undertaken by the MoD's Defence Nuclear Executive Board (DNEB), which will also act as the de facto customer, in setting the requirement and seeking the provision of adequate funding.

a. Policy. The MoD lead for policy on the delivery of decommissioning, and the disposal of radioactive waste and residual nuclear material, for the Nuclear Programme, will be the DNEB. Director Chemical Biological Radiological and Nuclear Policy (D CBRN Pol) will provide guidance on the wider policy aspects and implications for the Nuclear Programme. Director Safety and Claims (D S&C) will provide specific advice on radioactive waste and radiation protection policy issues, see fig 1 at the Annex. In addition, D S&C will be responsible for:

- (1) Ensuring that stakeholders are consulted and involved on changes in national radioactive waste policy or future legislation.
- (2) Liaising with stakeholders to ensure that changes in cross government radioactive waste policy do not unduly constrain current or future Defence activities.
- (3) Representing the MoD on wider radioactive waste policy committees in conjunction with the relevant subject matter expert.

b. Strategy. The MoD lead for strategy will be DGSM, see fig 2 at the Annex, who will ensure a coherent programme is in place, and, through the DNEB as the Customer, seek appropriate funding to undertake the activities necessary to achieve the decommissioning of, and the disposal of the arisings from, the MoD's Nuclear Programme. Additionally DGSM will, in due course, act as a source of advice and best practice within the MoD regarding strategies for the disposal of radioactive waste and residual nuclear material.

c. Assurance. Assurance about the effectiveness of this policy and the strategy, and the safety and environmental protection issues that emerge from them, will be provided. DNSR (working jointly with relevant statutory regulators) will provide assurance through the Chairman, Defence Nuclear Environment and Safety Board. In particular DNSR will lead a review of the strategy framework, methodology and supporting documentation.

CONCLUSION

10. As a responsible nuclear owner and operator, the MoD understands, and is fully committed to discharging, its responsibilities regarding the decommissioning and disposal of radioactive waste and residual nuclear material arising from the Nuclear Programme. Whilst in no way underestimating the task ahead, the MoD remains confident that, in conjunction with stakeholders (OGDs and NGOs), it is able to deliver the policy set out above.