



Interim Storage of Laid Up Submarines Front End Consultation

Ministry of Defence Response to Lancaster University's Final Report

April 2002

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1. **Forward**

by Under Secretary of State for Defence

When I launched the second phase of the study into the interim storage of laid-up submarines in May 2000, I announced the MOD's intention to consult as widely as possible to take the study forward. Lancaster University carried out the first of three planned stages on our behalf, and conducted a thorough public consultation that has resulted in some 65 recommendations.

I am particularly pleased that we are able to respond positively to so many, whilst others will need further consideration as the project progresses further. Where we have found it necessary to reject recommendations, we have sought to explain our reasons for so doing.

In publishing this document, we aim to demonstrate our continuing commitment to be open and honest as the project moves forward. The next stage will be to seek detailed proposals from industry, but public consultation will continue to be an important feature of the process.

A handwritten signature in black ink, consisting of a stylized first name 'L' followed by the surname 'Moonie'.

Dr Lewis Moonie

2. Acknowledgement

2.1 The MOD wishes to thank Lancaster University, Government Departments, regulatory authorities and members of the general public involved in the discussions and workshops that made up the Front End Consultation for Project ISOLUS for their time and commitment.

2.2 The hard work undertaken by Dr Jane Hunt and her team at the Centre for the Study of Environmental Change (CSEC) at Lancaster University to facilitate the workshops and compile the 'Front End Consultation Final Report' is especially acknowledged.

2.3 The views and recommendations arising from The Final Report and this, the MOD's official response are being used to inform Ministers and Other Government Departments. It will also be brought to the attention of industry, which will be expected to take the recommendations and views into consideration when defining their proposals.

3. Executive Summary

3.1 This document details the MOD's official response to the recommendations arising from the Front End Consultation carried out by Lancaster University, and should be read in conjunction with the Project ISOLUS Front End Consultation Final Report.¹

3.2 Whilst the majority of the 65 recommendations have been accepted in full, a small number will need to be considered further during later stages of the project. Only 3 of the recommendations have been rejected and where this has been necessary, a full justification has been provided.

3.3 Lancaster University's Report¹ recognised the main recommendations that arose from the consultation period. A detailed response to each recommendation can be found at Section 5 of this report, but are summarised as follows:

3.3.1 The influences and responsibilities of those outside the ISOLUS project (including inside and outside MOD) need to be recognised and addressed. (Recommendations 1, 2, 5, 6, & 58).

The importance of seeking advice and guidance and sharing 'best practice' with other organisations, both within the MOD and with Other Government Departments (OGDs), is fully recognised. A forum was set up at the start of the ISOLUS project where OGDs with an interest in nuclear issues meet regularly to discuss the project and emerging issues and policies. As with the Front End Consultation, the next phase of consultation will be carried out by an independent organisation and will include representation from the public. It will, in addition, be overseen by a Project Consultation Steering Group (PCSG). International collaboration and the provision of nuclear advice and assistance is also taking place.

3.3.2 There is public concern that the involvement of private companies will mean the project is driven by cost and pursuit of profit, rather than safety and it is important that MOD remains in control of the waste. The extent of this concern over privatisation should be brought to minister's attention. (Recommendations 4, 8 & 39).

It has to be recognised that the expertise and skills that are required for the removal of the reactor compartments and their storage or dismantling lies in the private sector. While responsibility will remain with the MOD, a close relationship will be necessary with the private sector.

3.3.3 The public concern about building further nuclear-powered submarines, particularly in the absence of a final disposal route, needs to be recognised (Recommendation 3).

¹ Lancaster University's ISOLUS Front End Consultation Final Report published in November 2001

These concerns have been drawn to Ministers and those in MOD with responsibility for the programmes for the procurement of new systems and platforms. Nevertheless, the Strategic Defence Review (SDR) in 1998 confirmed that nuclear powered submarines are a vital part of the UK's defence, and any decisions to be made on the future procurement programme stands outside the remit of the ISOLUS project.

Disposal issues are considered and costed in outline as part of the process of procuring new equipment.

3.3.4 A decision on the Renown project needs to be made as soon as possible (Recommendation 7).

The decision not to proceed with the proposed dismantling of HMS Renown in line with Babcock Rosyth Defence Limited's proposal was announced in November 2001.

3.3.5 The consultation exercise has been seen as a positive step but more must be done to engender trust and understanding. A clear response to the consultation findings, demonstrating how these have been taken into account, is required. More information must be made available – or an explanation given as to why this is not possible – and the next steps in the process must be publicised with more effort made to be inclusive in consultation, recognising local consultations will be necessary when sites have been identified. An expanded Steering Group should oversee consultation, which should be conducted by a third party, and the project should appoint an Advisory Group of interested representatives and impartial individuals. Funding of individuals and expert contributors should be considered. (Recommendations 9, 10, 11, 12, 13, 14, 45, 48, 49, 51, 52, 53, 54, 55, 56, 57, 59, 60, 61, 62, 63, 64 & 65).

The MOD's open approach during the Front End Consultation phase will continue, and obtaining public views is seen as key to the work being done on the ISOLUS project. Wherever possible, all decisions made on the storage of reactor compartments will take into consideration these views, and where this is not possible, full explanations will be given. The project website will continue to be utilised, and other ways of promoting and making available information to the public, and encouraging them to put their views forward are welcomed and will be considered. Any decision on funding will need to be in line with government policy on such matters, as well as taking into account how this issue has been handled on other similar exercises.

3.3.6 There was support for discontinuing long-term afloat storage and storing on land but retention of intact reactors, rather than further dismantling, was preferred. The free release of metals, which could be contaminated, should be avoided. The project needs to build in contingency for delays. (Recommendations 2, 15, 22, 23 & 24).

Long-term storage afloat is the MOD's current storage method, but the long-term availability of space and the uncertainty of when a National Nuclear

Waste Management Facility (NNWMF) will be available, make it necessary to look at the options for storage on land. Although the actual method of storage has yet to be decided, environmental impact statements and an analysis for best environmental practise will be undertaken. The preference expressed in the initial consultation for storing of reactor compartments intact rather than being further dismantled will be clearly indicated to potential contractors, and their proposals will be assessed against this.

3.3.7 The fact that there are risks should be accepted and their existence acknowledged. The project must make contingency plans for these risks and the land storage solution must allow for containment of the site. Safety should not be compromised by cost and best possible practise should be sought (Recommendations 16, 17, 18, 27 & 28).

There are bound to be risks associated with the requirement for storing reactor components, and these will be identified and documented in environmental impact statements, which will be made publicly available. Issues surrounding containment of the site, how problems will be responded to, as well as many other factors will be built into the project design. Such plans are a fundamental requirement for any facility carrying out nuclear activities, and are governed by principles laid out by the regulating authorities.

3.3.8 Public and workers exposure should be minimised and avoided where possible and practices for keeping dosage records of workers reviewed. The same principles should apply to non-radioactive toxic wastes in the reactor. Independent monitoring of the eventual site's security and management should be considered and the principles and practices of regulations publicised. (Recommendations 19, 20, 21, 26, 29, 30, 31 & 43)

No radioactive or toxic materials of a novel nature would arise from the dismantling of submarine reactors. The safety of all processes, facilities and workers involved (including dose management and record keeping) would, therefore, be regulated in full accordance with relevant legislation and subject to external review. Ways in which the results of monitoring that are already in the public domain can be given wider public access will be investigated further

3.3.9 While more than one site was recognised as a possibility, the preferred site was one with existing nuclear activity. In selecting a site, MOD needs to address risk of climate change, geological stability, need for expansion of facility and extension of the duration of storage. The site also needs controlled access and should avoid the need for transportation of the waste. In establishing a site, consideration needs to be given to identifying and maintaining the necessary skills base. (Recommendations 32, 33, 34, 35, 36, 37, 38, 40 & 41).

No site has yet been chosen, but it is recognised that it may be more practical to use a site that has previously been used for nuclear activity. Whether this is the case or a non-nuclear site is selected, clear justifications will need to be

made. All relevant factors will need to be considered as part of the selection process.

3.3.10 The consultation process should allow for participation of those who cannot speak freely. Similarly, the project should allow for employee dialogue with Regulators and for a 'whistle blower' route to report bad practice. (Recommendations 42 & 46).

Further work is required on how any further consultations will be conducted, but the intention is to include a wide range of people, with varying degrees of knowledge and skills. Existing UK legislation provides for dialogue between regulators and employees. In addition the MOD will look at policies that already exist for the reporting of bad practice, and will implement these wherever practical.

3.3.11 Confidence and public acceptability are enhanced if there is independent scrutiny of information, monitoring, management and practice, and of the consultation process itself. The public does not generally consider government agencies to be independent in this respect. (Recommendations 11, 14, 19, 21, 30, 31, 49 & 53).

Independent monitoring will need to be addressed further as the project develops, taking into consideration what can be learnt from the Front End consultation. Regulations exist for the management and recording of worker's doses, and are enforced by the Health and Safety Executive (HSE). Likewise, management procedures and appropriate security arrangements are already part of ensuring the safety of nuclear work. Organisations conducting such work will require review and assessment by nuclear regulators as well as independent peer reviews

4. Introduction

4.1 Project ISOLUS (Interim Storage of Laid-up Submarines) has been developed to:

“Define, develop and procure a safe and publicly acceptable method for the interim storage of radioactive material arising from decommissioned nuclear submarines.”

4.2 The Warships Support Agency (WSA) of the Ministry of Defence (MOD) is carrying out Project ISOLUS to determine how wastes from decommissioned nuclear submarines will be stored. Phase 1 of the two part study examined the feasibility of different methods of storage and concluded that land storage offers the best overall solution, although it did not determine which land storage method should be adopted, nor did it decide where the storage site should be located. The second phase of the study has now started involving seeking proposals from industry. It is expected that potential sites will emerge during this work.

4.3 Consultation with the public and groups with a vested interest, such as nuclear regulators, local authorities and environmental groups is seen as an important part of the project’s development. No decision on waste storage will be made until full consultation with these groups has taken place.

5. Front End Consultation

5.1 Three public and major stakeholder consultation phases have been planned, and the first or ‘Front End Consultation’ has been carried out on MOD’s behalf by the Centre for the Study of Environmental Change (CSEC) at Lancaster University.

5.2 This consultation was undertaken in 2001, and consisted of a number of discussion groups and workshops carried out all over the country, in locations both near to sites of nuclear activity and remote. The views expressed there have been captured and have resulted in 65 recommendations, which were published in the ‘Project ISOLUS Front End Consultation Final Report’¹, issued in November 2001. This is available from the project’s consultation website, <http://www.nucsubs.org.uk>, and comments can be submitted there, or to Dr Jane Hunt, CSEC, Lancaster University, Lancaster LA1 4YG. Copies in paper format are also available from WSA Secretariat, #3131, Birch 1c, MOD Abbey Wood, Bristol BS34 8JH

6. MOD's Response to the Consultation Findings

6.1 The recommendations, together with this document, which is the MOD's official response, is being used to inform Ministers, relevant authorities and industry of public opinion. Industry will be expected to consider the views when putting together their proposals.

RECOMMENDATION 1

6.2 *Consultation findings, which fall outside the remit of Project ISOLUS, should be passed to the relevant bodies.*

Accepted. It is acknowledged that public consultation over the future storage of decommissioned nuclear submarines has raised a wide range of nuclear issues. Clearly there are issues that can, and will be considered as part of the ISOLUS project development, whilst others are wider reaching and are matters for other organisations.

The findings of the consultation process are to be used to fully inform Ministers, and will also be passed on to other relevant areas within MOD. Other Government Department's, such as the Department for the Environment, Food and Rural Affairs (DEFRA), as well as public bodies such as the Nuclear Installations Inspectorate (NII) will also be informed.

RECOMMENDATION 2

6.3 *The ways in which public concerns relate to the practices and motivations of other stakeholders need to be taken into account. Stakeholder practices should be developed in ways that demonstrably address public concerns.*

Accepted. MOD will use its best endeavours to address specific public concerns and provide a clear statement of exactly what action will be taken. Where this cannot be done, MOD will explain why a particular action or remedy, which has been identified, cannot be accommodated.

RECOMMENDATION 3

6.4 *The appropriate bodies should be informed of the strength of feeling against building further nuclear powered submarines, especially in relation to the absence of a final disposal route for the radioactive wastes*

Accepted. It is acknowledged that there is a view that no more nuclear submarines should be built, especially in light of the absence of a final disposal route. It is outside the remit of the ISOLUS project to determine the future programme for the procurement of new systems and platforms. However, as with the response to Recommendation 1, this view will be passed to Ministers, and those in the MOD involved with the future build. It is worth noting that the Strategic Defence Review (SDR) in 1998 – a uniquely open re-examination of Britain's defence requirements - confirmed that nuclear powered submarines are a vital part of the UK's defence, and

any decisions to be made on the future procurement programme stand outside the remit of the ISOLUS project.

In addition, Defence Minister Dr Moonie has recently stated, “I note that some consultees want an end to building nuclear submarines until we have a long term disposal solution. We are tackling the issue of disposal, but we cannot ignore the fact that nuclear powered submarines are a key component of our defence”.

RECOMMENDATION 4

6.5 Further action and decisions need to be clearly justified in terms of their ethical premises and principles, with cost being subsidiary to this.

Accepted. The ISOLUS project is being developed under a strategy of openness and honesty with the public, in an effort to fully explore public opinion on ISOLUS related issues, as well as to develop a project that will achieve wide reaching public acceptability. Industry involvement in the requirement will need to embrace this same open attitude, and those companies that have expressed an interest in taking this project forward have been informed of the need to accept this approach.

As part of its evaluations, the MOD will be looking for the best solution to fit the requirement. All factors will be taken into account, with safety key amongst them. Whilst costs to the taxpayer will also need to be a consideration, the safety aspects of the requirement will not be sacrificed in order to make the solution more affordable, nor will the requirement for openness be overlooked.

RECOMMENDATION 5

6.6 Relevant bodies should be informed of the strength of feeling regarding the need for international collaboration, and public information on the collaboration, which is taking place, should be available.

Accepted. The view of the public and stakeholders that radioactive waste is an international problem is acknowledged, but international agreements determine that nuclear waste must be returned to the country of origin for storage. As such, the future storage of the Royal Navy’s decommissioned nuclear submarine fleet is a matter for the United Kingdom Government to resolve. The Department of Trade and Industry (DTI) does, however, co-ordinate UK policies and activities in this area and manages UK contributions to international assistance programmes while also maintaining bilateral efforts. The DTI is also responsible for managing a new three year £85 million programme of assistance to help tackle the wide range of nuclear safety and security problems faced by the states of the Former Soviet Union. The programme will include assistance in dealing with spent fuel and nuclear waste in NorthWest Russia.

RECOMMENDATION 6

6.7 Project ISOLUS should establish and maintain relationships with government bodies involved in the development of radioactive waste policy, closely monitor the development of this policy and assess its relevance for Project ISOLUS.

Accepted. It is crucial that cross-departmental consultation should take place between the MOD and other government departments, in order that emerging issues can be discussed openly, and changes to policy and legislation that may affect the project can be disseminated. These include the Department for the Environment, Food and Rural Affairs (DEFRA), the Environment Agency (EA), the Scottish Environmental Protection Agency (SEPA), the Food Standards Agency (FSA), The Scotland Office, The Scottish Executive, The Health and Safety Executive (HSE) including the Nuclear Installations Inspectorate (NII), and the Radioactive Waste Management Advisory Committee (RWMAC).

MOD will retain close links with DEFRA on the formulation and implementation of its consultation strategy, for the management of radioactive waste.

RECOMMENDATION 7

6.8 A clear statement on whether the BRDL proposal will proceed or not should be made at the earliest possibility.

Accepted. It was announced in the House of Commons on 27 November 2001 by Under Secretary of State (USofS) for Defence, Dr Lewis Moonie, that the MOD has decided not to proceed with the proposal from Babcock Rosyth Defence Limited (BRDL) to dismantle the decommissioned nuclear-powered submarine, HMS Renown.

Although BRDL's proposal was technically feasible, the regulatory approvals required by the company before authorisation for the dismantling could be given would not be available before early 2002. The MOD is currently in the process of inviting industry views on the ISOLUS requirement, and so any advantages that might be gained from dismantling Renown and using the knowledge for that work in exploring broader land storage options with industry, are not now realisable.

HMS Renown will continue to be stored at Rosyth, and when final decisions have been reached on land storage, she will be treated in the same way as the other decommissioned submarines stored at Devonport and Rosyth.

RECOMMENDATION 8

6.9 Openness and trust should be pursued by the MOD.

Accepted. The MOD remains committed to the full and open approach, which has been a feature of the ISOLUS project. It will continue this with further rounds of public consultation. It is the intention that when industry outline proposals have been received a further public consultation will be launched. This will lead to a short list of companies invited to enter into detailed negotiations. Following this, there will be further public consultation before any decisions are made on the most appropriate storage method and location(s).

In addition, it is planned that a Project Consultation Steering Group (PCSG), whose primary role will be to oversee how the next phases of the consultation will be

handled, will be set up. This group will include representation from the public amongst its membership.

RECOMMENDATION 9

6.10 Understanding public views and respecting their legitimacy should be encouraged at all levels; decisions should clearly demonstrate this respect and those public concerns have been addressed.

Accepted. The process of obtaining public views and recommendations is a key part of the work being carried out on the ISOLUS project. While decisions will be taken in the light of those views, inevitably there may be some that have to be rejected. Where this is the case the reasons for this action will be made known.

RECOMMENDATION 10

6.11 It is recommended that the MOD recognise that consultation of itself can engender more positive relationships.

Accepted. In an era of ‘Open Government’, the MOD recognises that more has to be done to break down the public perceptions of secrecy, and that the Department acts in its own interests. It is hoped that by involving the public in the work being carried out on ISOLUS, a solution will be reached that is publicly more acceptable and which contributes to a more positive and open relationship between the MOD and the public.

RECOMMENDATION 11

6.12 Bodies who are widely seen to be acting in the interests of people and the environment should be enabled to provide authority to information through their review and verification of that information (see also Recommendation 19 and Recommendation 50).

Accepted. The value of independent oversight is acknowledged – see the response to Recommendation 19. It is intended to make as much information as possible freely available to the public, including independent bodies.

RECOMMENDATION 12

6.13 The MOD should review approaches to information provision being developed in other agencies, and considers ways of providing more publicly accessible information.

Accepted. The MOD has sought to make the ISOLUS project accessible to the public by holding public consultations, setting up and maintaining the ISOLUS website, issuing press releases, distributing leaflets, and answering individual enquiries from members of the public. It will continue to look at other ways of releasing information. The MOD has links with Other Government Departments (OGDs), and regularly holds a forum to discuss issues relating to Project ISOLUS. The ways in which OGDs make information publicly available will be explored at these forums and also in discussions with the Department for the Environment Food and Rural

Affairs (DEFRA) in relation to their ongoing public consultation on radioactive waste management. In addition, consideration will be given to using advice and expertise available from external organisations.

RECOMMENDATION 13

6.14 The MOD should specifically consider the ways in which the local media can be utilised in relation to consultation at specific sites, and seek out other local information channels for similar use.

Accepted. No site(s) have yet been selected. When the project reaches that stage, the local media will be invited to become involved. MOD will continue to issue press releases as appropriate, and is willing to take forward suggestions from the media on how the system may be improved. Avenues for further promoting the project and ensuring that public information is available will be fully explored before the next stage of consultation

RECOMMENDATION 14

6.15 Serious consideration should be given to ways in which further details of the submarines, relevant to all aspects of the interim storage of the radioactive wastes, can be made public or made available for independent expert scrutiny. MOD compliance with Radiation Preparedness and Public Information Regulations (REPPIR) should be publicly stated. Where information cannot be made available, the reasons should be clearly and publicly explained.

Accepted. Details of wastes from nuclear submarines are publicly available in the 'United Kingdom Radioactive Waste Inventory', which provides information on the quantity, radioactive components and location of high, intermediate and low level radioactive waste. This inventory is issued jointly by the Department for the Environment, Food and Rural Affairs (DEFRA) and United Kingdom Nuclear Industry Radioactive Waste Executive Limited (UK NIREX Ltd). The inventory was last published in 1998 and the latest one is due to be published in 2002. The dismantling process will be conducted in compliance with all relevant legislation. There are a series of levels for holding radioactive wastes on a site that have to be exceeded before REPPIR comes into effect. MOD and defence contractors' sites are compliant with REPPIR. Reports of the Hazard Identification and Risk Evaluation required by the regulations will be made available to the public. Emergency response arrangements, already in place in conjunction with local agencies, will continue under REPPIR at these sites.

Any option selected for Project ISOLUS will be required to comply fully with all relevant UK statutory provisions including the Radiation Emergency (Preparedness and Public Information) Regulations 2001 (REPPIR).

RECOMMENDATION 15

6.16 The consideration of intergenerational equity lends some weight to the preference for leaving reactor compartments intact and this should be taken into account.

Noted for further consideration. This view is appreciated. However, another view might be that the dismantling and packaging of the waste should be undertaken by this generation, and not left to succeeding generations. The various options open for dealing with the reactor compartments will be subject to analysis for Best Practical Environmental Options (BPEO) and environmental impact statements. From this will evolve a result that will have the least impact on today's workforce, and will result in the least work left for future generations. Factors that will need to be taken into account include the existence of a waste stream, the availability of technology and a skilled workforce at sites. Further consultation will take place on this matter before a final decision is made.

RECOMMENDATION 16

6.17 Although assessed as relatively low, the risks associated with submarine wastes should not be presented as insignificant; this is likely to be counterproductive in terms of generating public acceptability.

Accepted. Presentation of information on the risks, in the form of Environmental Impact Statements (EIS) will not represent them as insignificant, but present the current knowledge and assessment of those risks.

RECOMMENDATION 17

6.18 Public acceptability will be enhanced the more 'best possible' practice is utilised (rather than best practicable means), and thus best possible practice should be pursued and not be constrained by cost, unless a robust case for doing otherwise can be publicly justified.

Accepted. As part of its evaluations, the MOD will be looking for the best solution to fit the requirement. All factors will be taken into account, with safety key amongst them. Whilst costs to the taxpayer will also need to be a consideration, the safety aspects of the requirement will not be sacrificed in order to make the solution more affordable. See also Recommendation 4.

RECOMMENDATION 18

6.19 Residual risks and uncertainties should be acknowledged in communication activities, and judgements about them debated and justified.

Accepted. There are risks in every activity. Where there are relevant and identified risks with the ISOLUS requirement, these will be made public.

RECOMMENDATION 19

6.20 Recording and record keeping practices in relation to worker exposure to radiation should be independently reviewed (see also Recommendation 30).

Rejected. Worker doses and working practices are controlled by the Ionising Radiations Regulations 1999 (IRR99) and are enforced in the UK by the Health and Safety Executive (HSE).

It is a requirement of IRR99 that radiation doses be controlled. HSE often check working practices to ensure compliance. In addition classified workers should have their radiation doses monitored using dosimeters supplied by an approved HSE Approved Dosimetry Service. An HSE Approved Record keeping service must also keep dose records. Employees and Employers have access to these records. HSE also have access and obtain annual statistical information in the form of the Central Index of Dose Information (CIDI), which is available on the HSE web site. Working practices will also be the subject of safety representative scrutiny, as is the case for all work.

RECOMMENDATION 20

6.21 Doses to the public and workers should be minimised and avoided where at all possible. Records of doses should be in the public domain.

Accepted. The results of radiation surveys are published in the Marine Environmental Radioactivity Surveys for Nuclear Submarine Berths reports, available from Her Majesty's Stationery Office (HMSO). The Food Standards Agency (FSA), Department for the Environment, Food and Rural Affairs (DEFRA), the Scottish Environmental Protection Agency (SEPA), and the Scottish Executive amongst others publish annual reports on environmental monitoring around nuclear sites, including those with defence involvement. They are available on the website www.foodstandards.gov.uk.

As part of the ISOLUS work, the possibility will be explored for information to be posted on the ISOLUS website, with agreement from workers and in such a form that individuals cannot be identified. It may, however, be difficult to distinguish between doses acquired by workers through ISOLUS work and that acquired as a result of any other nuclear work.

The work of HSE and the application of IRR99 is reviewed by the Ionising Radiation's Advisory Committee.

RECOMMENDATION 21

6.22 Where options and choices that have implications for the management of the toxic substances within the submarines are considered, similar principles to those raised in relation to radioactive wastes should be applied. Information on the toxic substances contained in the submarines should be publicly accessible, especially at sites proposed for dismantling the submarines.

Accepted. Environmental Impact Statements (EIS), which are required as part of the project planning process will address relevant toxic substances that have an effect on the environment. EIS are made available to the public. Legislation is in place for special wastes and hazardous substances, and this will be complied with. The same duty of care will be applied to all hazards whether they are nuclear or conventional.

RECOMMENDATION 22

6.23 Metals contaminated with very low levels of radiation should not enter the scrap metal market; a policy of 'dilute and disperse' is not acceptable.

Rejected. No materials will be released into the re-cycling market unless they comply with the standards set by the relevant environmental regulator (Environment Agency (EA) in England and Wales and the Scottish Environmental Protection Agency (SEPA) in Scotland). However, it has to be recognised that almost all metals/materials, even as first made, are radioactive to some degree.

RECOMMENDATION 23

6.24 Afloat storage should be discontinued.

Accepted. The MOD's current policy is to subject submarines to a regular maintenance programme and store them afloat for up to 30 years. This process could be extended well beyond that period.

While this is the MOD's current storage method, uncertainty of when a national nuclear waste management facility will be available, and the long term interim availability of space for the storing of submarines afloat, make it necessary to look at a long term land storage scenario. The MOD is pleased to note that this strategy is in line with public preferences.

RECOMMENDATION 24

6.25 Contingency plans for dealing with delays and limitations of access to necessary facilities need to be considered, so those situations such as that pertaining to the Valiant do not arise.

Accepted. The need for contingency planning is recognised. The delay to Valiant was the result of a number of unforeseen events, which combined to cause the delay. All have been resolved and MOD intends to proceed with the defuel as soon as preparations are complete.

RECOMMENDATION 25

6.26 Project ISOLUS should proceed with developing interim storage on land.

Accepted. We acknowledge the support for developing the interim land storage project. The aim of the ISOLUS project is to investigate options for the storage of intermediate level waste, be it in the form of land storage of reactor compartments, packaged or unpackaged waste.

RECOMMENDATION 26

6.27 Continuous monitoring of the stored wastes should be undertaken.

Accepted. However, the extent to which this is ‘continuous’ in practice will depend on the solution adopted. It will be a requirement of any safety case for the storage facility to ensure that appropriate monitoring arrangements are put in place. Provisions already exist in nuclear storage facilities for monitoring by the Nuclear Installations Inspectorate (NII) and the Environment Agency (EA), appointed for such purposes.

RECOMMENDATION 27

6.28 Plans for responding to problems, including the flexibility to respond to unanticipated problems should be developed.

Accepted. Such plans are a fundamental requirement for work with Ionising Radiations and for facilities handling radioactive materials. Any option selected for Project ISOLUS will be required to comply with the relevant statutory requirements (see also Recommendation 14).

RECOMMENDATION 28

6.29 The store itself should provide a level of containment, and be capable of being temporarily sealed in the event of leakage to provide environmental isolation within the building.

Accepted. Any store provided or utilised for the waste arising from the ISOLUS project would need to meet all relevant legislative requirements. The capability to seal the store will have to be taken into account in the design of the project, and will be dependent upon the risks of discharge that can be foreseen. Any containment required to safeguard any perceived gaseous, liquid or solid discharges will be built into the project design.

RECOMMENDATION 29

6.30 Provision should be made for local publication of all monitoring results at waste storage sites and at sites where submarines are dismantled.

Accepted. It is recognised that whilst the results of monitoring at present are placed in the public domain in a way that meets legal requirements, this may not be in a form which is readily available to the general public. Further work will be undertaken as the project progresses to try and establish a means of providing the results in a more accessible and acceptable form to local populations.

RECOMMENDATION 30

6.31 Consideration should be given to additional means for providing independent monitoring, and/or independent peer review of monitoring.

Accepted. This will need to be addressed as the project develops. It may be possible to arrange for an independent authority, such as a university, to carry out environmental monitoring and/or review results. This has been carried out in the past at Rosyth by consultants, on behalf of the local authority. Outside the immediate

boundary of the site itself, it would, of course, be open for any individual or group to take samples and measurements.

RECOMMENDATION 31

6.32 Consideration should be given to means of independent auditing of management and security procedures and practices.

Accepted. Management procedures and appropriate security arrangements are already part of ensuring the safety of nuclear work. Regulators will require organisations conducting such work to subject their safety justifications to independent peer review, and the regulators themselves will then conduct further review and assessment. A similar approach applies to the auditing of actual practices.

RECOMMENDATION 32

6.33 A site with existing, relatively large scale, nuclear activity should be used, unless there are strong and clearly justified reasons otherwise.

Accepted. No site has yet been chosen, but it is recognised that it may be more practical to use an existing licensed site that has been used for nuclear activity. If such a site is not selected, clear justifications will have to be made, an option study and Environmental Impact Assessment (EIA) will need to be carried out and an application made for the issue of a 'nuclear site licence'. Even if an existing nuclear licensed site is selected, an option study and EIA would still be required.

RECOMMENDATION 33

6.34 Geological stability and the implications of climate change need to be assessed in relation to the site(s) used for storing the wastes.

Accepted. Before approval can be given for the chosen facility, these issues, along with others will have to be considered as part of safety justifications to satisfy regulators that the site can be operated safely.

RECOMMENDATION 34

6.35 The wastes should be stored in a site where unauthorised access is prevented.

Accepted. The prevention of unauthorised access is a fundamental legislative requirement for all nuclear sites. The ability to prevent unauthorised access will be one of the many factors to be considered.

RECOMMENDATION 35

6.36 The possibility of storing the wastes at more than one site should not be discounted.

Accepted. Although the preference is for all waste to be stored on one site, no option has been ruled out at this stage, and if there are clear advantages for storing on more than one site, these will need to be taken into account.

RECOMMENDATION 36

6.37 The MOD should be explicit about the potential for expansion of storage beyond the existing 27 submarines, and should clarify, as far as possible, what this potential could imply for the storage site(s).

Accepted. It is currently envisaged that the planned facility will only be utilised for the storage of radioactive wastes from submarines of which there are 27 currently stored afloat or in service. There will be a need to cater for the submarines currently in build or planned to be built. This could be at the original ISOLUS facility or at a new location. Depending on the timing of the provision of the National Radioactive Waste Management Facility (NRWMF) it may be possible to utilise storage space vacated by the earlier submarine radioactive waste.

RECOMMENDATION 37

6.38 The MOD should be explicit about the responsibility, location and management of the waste beyond the initial 30 year period, and clarify, as far as possible, the implications for the storage of site(s).

Accepted. MOD will retain responsibility for all waste until its final disposal. The initial 30 year ISOLUS contract will have an option for a follow on contract, to continue storage of the radioactive waste, together with provision for its processing and packaging in readiness for final disposal.

RECOMMENDATION 38

6.39 Transportation of the wastes should be minimised, and should avoid centres of population, subject to other considerations, unless there are strong and publicly acceptable reasons otherwise.

Accepted. It is the MOD's aim that transportation of waste will be minimised, wherever possible. If there is a requirement to transport the intact reactor compartments, then the preferred method will be to undertake this by sea, in view of the sheer size and bulk of the compartments. Any transportation will be required to comply with the relevant statutory requirements.

RECOMMENDATION 39

6.40 The Minister should be informed of the strength of feeling against privatisation, and the problems of trust and confidence in contractors, and serious consideration is given to ways of organising Project ISOLUS that maximise the control, responsibility and accountability of the MOD.

Accepted. Whilst these views will be drawn to the attention of ministers, it must be recognised that the expertise and skills required to dismantle the submarines and to

store the radioactive waste lie in the private sector, and for the requirement to be successful, involvement from industry will be unavoidable. The form that this relationship will take has still to be decided, but it is clear that a close partnership will need to exist between the MOD and the contractor. MoD will retain responsibility for the waste until final disposal. See Recommendation 37.

RECOMMENDATION 40

6.41 When assessing proposals, consideration should be given to the availability of suitable expertise in both the geographical area and the relevant areas of knowledge and experience, and for how this expertise will be maintained over time.

Accepted. The availability of suitable expertise is recognised as an issue. The Department of Trade and Industry (DTI) has initiated a Nuclear Skills Group to examine the long term position of skills for the nuclear industry. The group draws its members from various government departments, including MOD, industry and academics. The group's first step is to establish a baseline of nuclear skills in the UK. The work of the group will be important to the success of the ISOLUS project.

RECOMMENDATION 41

6.42 An audit of the skills and knowledge bases required over the first 30 years of storage, and beyond, should be conducted and used to develop plans for the maintenance of such skills and knowledge bases.

Accepted. This work will be informed by the study currently being undertaken by the DTI's Nuclear Skills Group (see Recommendation 40), and will be augmented by work the MOD will carry out as part of the ISOLUS project development.

RECOMMENDATION 42

6.43 Provision of whistle blowing should be made within the management plan.

Accepted. Policies are being developed in the civil nuclear industry to protect people who report bad practices and instances. The MOD will examine these as part of the project, and will implement them where it is practical to do so.

RECOMMENDATION 43

6.44 The principles and practices of regulation should be made more publicly accessible, especially around potential sites. The responsibilities of different bodies need to be made clear. Regulators should seek to engage in two-way communication, especially with affected populations. The responsibilities of various regulatory bodies need to be reviewed to assess duplication or lack of contiguity in regulatory responsibilities for nuclear submarines.

Accepted. The Health and Safety Executive (HSE)/Nuclear Installations Inspectorate (NII) and the environment agencies have developed memoranda of understanding governing their relationships in regulating nuclear sites. Similarly, MOD has (or is developing) memoranda separately with each of these organisations detailing

arrangements to be applied where defence activities are exempted from relevant legislation. These memoranda are reviewed regularly and are (or will soon be) published on relevant websites. Regulators (including MOD's internal regulator) publish regular reports on their activities and attend local liaison committees at which representatives of communities local to nuclear sites can discuss matters with them. In addition, Local Liaison Committees (LLC) have been established at all nuclear sites to provide public information on activities being undertaken on such sites. Both the Nuclear Installations Inspectorate (NII) and the relevant environment agency attend these meetings and provide relevant information and are available to answer questions. If a new site was to be selected then it could be expected that an LLC would be established. In addition, NII provide quarterly reports of their activities to LLC members. Such reports are also available on the Health and Safety Executive's (HSE) website, www.hse.gov.uk.

RECOMMENDATION 44

6.45 Serious consideration is given to supporting the case for civil regulation of waste stores specifically, and with other MOD nuclear activities more generally.

Rejected. Storage of waste on civil nuclear licensed sites (including defence-related sites) is regulated fully by the civil regulators. Identical requirements are placed on the storage of waste on MOD operated sites, and this is regulated by the relevant environment agency together with the MOD internal regulator. Substantial aspects of defence nuclear activity are subject to civil regulation. Where exemptions exist, the Secretary of State for Defence requires equivalent arrangements to be put in place, so far as is practical. See also the response to Recommendation 43 above.

RECOMMENDATION 45

6.46 Further phases of consultation should aim to include anyone who wishes to be included, as far as this can be made possible.

Accepted. The intention of the Front End consultation process was to inform the MOD how the public wish to be consulted in the future, and to get an understanding of those views that should be taken into account when developing the ISOLUS requirement. For this reason, it was not intended to have intense consultations in just one area, but to get a broad base of views from different areas of the country, including those areas where it is unlikely that the work will be carried out.

The intention is that once proposed sites have been identified, the consultation process will begin to concentrate more on those particular areas, with the aim of including as many people as possible in the process.

The MOD recognises that it is possible that people who feel they should have been consulted have been missed out, and the Front End consultation process has helped to identify those people. The MOD is open to suggestions for looking at ways of making the process as wide reaching as possible in the future.

RECOMMENDATION 46

6.47 The consultation design should enable those who may not feel they can speak freely to contribute.

Accepted. However, further work is required on how further consultations should be conducted, and the Project Consultation Steering Group (PCSG) (see Recommendation 8) will aid this work. The MOD will address all the matters raised in the consultation process, with the aim to take forward as many practical recommendations as possible.

RECOMMENDATIONS 47

6.48 Counter experts should be included in future phases of consultation (see also Recommendation 50).

Noted for further consideration. It is intended that a wide range of people, with varying degrees of knowledge and skills, and in varying locations will be included in further consultations.

RECOMMENDATION 48

6.49 The Steering Group in future stages of consultation should be reconvened to include a lay person, a national ENGO, and representation of relevant international experience. Once sites are identified, people from sites under consideration should also be represented in the Steering Group(s). It may be necessary to fund individuals to enable them to serve on the Steering Group

Accepted. It is accepted that a Project Consultation Steering Group (PCSG) should continue to operate. While detailed consideration will be given as to who should be included in its membership it is accepted that there may be benefit in including the type of individuals referred to in the recommendation. This aim will, however, need to be balanced with the need to keep the group to a workable size. The feasibility of funding those members will be explored, taking account of Government policy and in consultation with the civil nuclear industry.

RECOMMENDATION 49

6.50 A Steering Group for future consultation should continue to be convened and serviced by an independent third party. How the Steering Group might provide a greater degree of accountability for the consultation process, especially in terms of ensuring findings are taken into account, should be given further consideration.

Accepted. See Recommendation 48. It is intended to appoint an independent organisation to undertake future consultations, and for an independent organisation to convene the Project Consultation Steering Group (PCSG). Due consideration will be given to what can be learnt from the Front End consultation and ways in which the process may be improved upon.

RECOMMENDATION 50

6.51 Consideration is given to establishing an independent advisory group to provide input to Project ISOLUS. Consideration should also be given to convening a technical advisory group, which should include counter expertise (see also Recommendation 47)

Noted for further consideration. It is noted from earlier recommendations that the views expressed in this consultation are that MOD would be expected to retain responsibility and accountability for this work. It will therefore be necessary to explore how the advisory group recommended could be established without conflicting with this aim.

RECOMMENDATION 51

6.52 The public preference for independent oversight of radioactive waste management should be communicated to the relevant bodies (see also Recommendation 1).

Accepted. This recommendation will be passed to the Department for the Environment, Food and Rural Affairs (DEFRA), the Nuclear Installations Inspectorate (NII), environment agencies and the Radioactive Waste Management Advisory Committee (RWMAC).

RECOMMENDATION 52

6.53 The MOD's response to these recommendations should clearly indicate where consultation outcomes have been taken into account, and where not. The reasoning behind plans and decisions should be fully transparent. The response should be in the public domain and easily accessible (for example, on the website, in printed form available on request, and distributed to participants in the Front End Consultation).

Accepted. The MOD response to the Front End Consultation Final Report¹ gives an indication of how we should take the recommendations forward, and will be published on the ISOLUS project website at www.nucsubs.org.uk. Copies will be sent to participating members of the Front End consultation and will also be made available on request.

A small number of recommendations will be addressed more fully as the project progresses.

RECOMMENDATION 53

6.54 Further stages of consultation should undertake to publish all outputs, unless there are strong and clearly justified reasons otherwise.

Accepted. It is intended to continue publishing the findings of this, and future consultations on the ISOLUS website. Where the MOD is unable to do this, justifiable reasons will be provided.

RECOMMENDATION 54

6.55 An independent third party or parties should conduct subsequent stages of consultation.

Accepted. MOD intends to engage an independent practitioner, for example, a university or commercial enterprise to take forward recommendations made by the Project Consultation Steering Group (PCSG) and undertake future consultations (see also Recommendation 49).

RECOMMENDATION 55

6.56 A fund should be made available to which prospective participants can apply for funding, and clear guidelines developed regarding the provision of such funding.

Noted for further consultation. Prior to the next stage of consultation, a decision on funding prospective participants will need to be made (see also Recommendation 48).

Any such decision will need to be in line with government policy on such matters, and also need to consider how this issue has been handled on other, similar exercises.

RECOMMENDATION 56

6.57 Widespread publicity should be given to subsequent consultation activities to maximise awareness and to inform people who may wish to participate of their opportunity to do so.

Accepted. The MOD has attempted to give wide spread coverage to the ISOLUS project, and be as open and honest as possible in its approach. It is impossible to reach everyone, and people may not have been included in the consultation processes, who feel that they should have been. The MOD will look at ways of improving on this issue for the next stage of consultations, and is willing to look at any recommendations that the public may have, in order for there to be widespread publicity to the requirement and its issues.

RECOMMENDATION 57

6.58 As much information as possible should be publicly available, including all safety related information. Where information is not made publicly available, reasons should be given as to why this is the case.

Noted for further consideration. While the intention is to make as much information publicly available as possible, there may be instances where this is not possible, for example, for commercial and security reasons. In such cases, the reasons for non-disclosure will be made clear.

RECOMMENDATION 58

6.59 Project ISOLUS should provide information, or indicate where such information can be found, on areas where the knowledge bases are disputed or

uncertain, such as the health effects of low-level radiation, and notify relevant bodies of particular areas of concern raised by consultees.

Accepted. Full consideration will be given to releasing as much information as possible, and where this is not possible, full justification will be provided. Areas of concern arising out of the consultation will be brought to the attention of relevant bodies.

RECOMMENDATION 59

6.60 The consultation and decision processes should be laid out more lucidly, and be more accessible, with (in as far as is currently possible) a clear timetable of action. It should be clear from the outset of any activities what the objectives of the consultation are, its relationship with and timing within the decision-making process and linked processes, and how the consultation findings will be used.

Accepted. At this time, the exact route for the decision making process and the consultation period has yet to be finalised. Details will be released as they become available and will form part of the next round of consultations.

RECOMMENDATION 60

6.61 A broad range of the public and other stakeholders should be actively included in the next phase of consultation (see also Recommendation 45).

Accepted. The next round of consultations will include as broad a range of the public as possible, and the process for the carrying out of this work will be overseen by the Project Consultation Steering Group (PCSG) prior to the issue of the invitation to industry to submit outline proposals (ISOPS). MOD intends that the people consulted at as part of the Front End consultation process will be further involved or at least informed on the next stage of consultation.

RECOMMENDATION 61

6.62 Principles emerging from the Front End Consultation, as identified by the Front End Steering Group, should be used for the next stage of consultation. Reference should also be made to principles of best practice as identified by a range of other sources.

Accepted. The next round of consultations will be carried out by an independent organisation, and will be overseen by the project Project Consultation Steering Group (PCSG), who will formulate and provide a clear outline of the way forward, taking into consideration the principles of best practice, drawn from a variety of organisations, as well as the principles emerging from the Front End Consultation. See also Recommendation 49.

RECOMMENDATION 62

6.63 People with local knowledge will need to be included in the consultation team (see also Recommendation 54).

Accepted. However, until the exact details of industry proposals are known, it will be difficult and unwise to predict who will be invited to participate in further consultations. It is intended that a wide range of people, with varying degrees of knowledge and skills, and in varying locations will be invited (see also Recommendation 47). Once a particular site has been identified and forms the focus of consultation, people with local knowledge will clearly be required to contribute to the efficient conduct of consultation.

RECOMMENDATION 63

6.64 The next stage of consultation should take place not later than the time at which the Outline Proposals are received. In the meantime, Chief Executives of Local Authorities, and other appropriate bodies, should be informed by the MOD of the decision-making and consultation process (including the process prior to Outline Proposals being received) and its projected timetable. The information should also be posted on the consultation web site and provided to those who participate in the Front end Consultation (see also Recommendation 59).

Accepted. The next stage in the consultation process, and the manner in which it is carried out will need to consider how the communities near to proposed site(s) are involved, whilst ensuring that those communities living near site(s) that are not in serious contention are not alarmed unduly. The means as to how best to inform local authorities will be investigated.

RECOMMENDATION 64

6.65 Consideration is given to providing expert advice on consultation and public acceptability, and the means, by which this can be done, to potential contractors.

Accepted. It is recognised that any consultations carried out by an independent organisation on the MOD's behalf should be undertaken to a high standard. All ISOLUS bidders will be encouraged to use the same organisation for the provision of advice and guidance on the consultation process and findings, in an effort to ensure a common approach.

RECOMMENDATION 65

6.66 Once potential sites are identified, consultation techniques should include the provision for people from different sites to meet together to pursue more acceptable solutions.

Accepted. It is recognised that there is value in bringing people together to discuss common issues, as part of the decision making process. This was attempted in the initial consultations, but with limited success, as people are, quite understandably concerned with protecting their own locality. The MOD supports the recommendations, and will endeavour to encourage this practice in future consultations.

7 Glossary of Terms and Acronyms

BRDL	Babcock Rosyth Defence Limited
BPEO	Best Practical Environmental Option
CIDI	Central index of Dose Information
CSEC	Centre for the Study of Environmental Change
DEFRA	Department for the Environment, Food and Rural Affairs
DTI	Department for Trade and Industry
EA	Environment Agency
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statements
ENGO	Environmental Non-Government Organisation
FSA	Food Standards Agency
HMSO	Her Majesty's Stationery Office
HSE	Health and Safety Executive
IRR	Ionising Radiations Regulations (IRR)
ISOLUS	Interim Storage of Laid Up Submarines
ISOPS	Invitation to Submit Outline Proposals
LLC	Local Liaison Committee
MOD	Ministry Of Defence
NRWMF	National Radioactive Waste Management Facility
NII	Nuclear Installations Inspectorate
OGD	Other Government Department
PCSG	Project Consultation Steering Group
REPIR	Radiation Preparedness and Public Information Regulations
RWMAC	Radioactive Waste Management Advisory Committee
SDR	Strategic Defence Review
SEPA	Scottish Environmental Protection Agency
UK NIREX Ltd	United Kingdom Nuclear Industry Radioactive Waste Executive Limited
USofS	Under Secretary of State
WSA	Warships Support Agency

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- Recommendation 2**, The ways in which public concerns relate to the practices and motivations of other stakeholders need to be taken into account. Stakeholder practices should be developed in ways that demonstrably address public concerns. 9
- Recommendation 3**, The appropriate bodies should be informed of the strength of feeling against building further nuclear powered submarines, especially in relation to the absence of a final disposal route for the radioactive wastes. 9
- Recommendation 4**, Further action and decisions need to be clearly justified in terms of their ethical premises and principles, with cost being subsidiary to this. 10
- Recommendation 5**, Relevant bodies should be informed of the strength of feeling regarding the need for international collaboration, and public information on the collaboration which is taking place should be available. 10
- Recommendation 6**, Project ISOLUS should establish and maintain relationships with government bodies involved in the development of radioactive waste policy, closely monitor the development of this policy and assess its relevance for Project ISOLUS. 11
- Recommendation 7**, A clear statement on whether the BRDL proposal will proceed or not should be made at the earliest possible opportunity. 11
- Recommendation 8**, Openness and trust should be pursued by the MOD. 11
- Recommendation 9**, Understanding public views and respecting their legitimacy should be encouraged at all levels; decisions should clearly demonstrate this respect and that public concerns have been addressed. 12
- Recommendation 10**, It is recommended that the MOD recognise that consultation of itself can engender more positive relationships. 12
- Recommendation 11**. *See* Recommendations 19 and 50. Bodies who are widely seen to be acting in the interests of people and the environment should be enabled to provide authority to information through their review and verification of that information (see also Recommendations 19 and 50). 12
- Recommendation 12**, The MOD should review approaches to information provision being developed in other agencies, and considers ways of providing more publicly accessible information. 12
- Recommendation 13**, The MOD should specifically consider the ways in which the local media can be utilised in relation to consultation at specific sites, and seek out other local information channels for similar use. 13
- Recommendation 14**, Serious consideration should be given to ways in which further details of the submarines, relevant to all aspects of the interim storage of the radioactive wastes, can be made public or made available for independent expert scrutiny. MOD compliance with REPPIR should be publicly stated. Where information cannot be made available, the reasons should be clearly and publicly explained. 13
- Recommendation 15**, The consideration of intergenerational equity lends some weight to the preference for leaving the reactor compartments intact and this should be taken into account. 14
- Recommendation 16**, Although assessed as relatively low, the risks associated with submarine wastes should not be presented as insignificant; this is likely to be counterproductive in terms of generating public acceptability. 14
- Recommendation 17**, Public acceptability will be enhanced the more 'best possible' practice is utilised (rather than best practicable means), and thus best possible practice should be pursued and not be constrained by cost, unless a robust case for doing otherwise can be publicly justified. 14
- Recommendation 18**, Residual risks and uncertainties should be acknowledged in communication activities, and judgements about them debated and justified. 14
- Recommendation 19**. *See* Recommendation 30 Recording and record keeping practices in relation to worker exposure to radiation should be independently reviewed (see also Recommendation 30). 15

- Recommendation 20**, Doses to the public and workers should be minimised and avoided where at all possible. Records of doses received should be in the public domain. 15
- Recommendation 21**, Where options and choices that have implications for the management of the toxic substances within the submarines are considered, similar principles to those raised in relation to radioactive wastes should be applied. Information on the toxic substances contained in the submarines should be publicly accessible, especially at sites proposed for dismantling the submarines. 15
- Recommendation 22**, Metals contaminated with very low levels of radiation should not enter the scrap metal market; a policy of 'dilute and disperse' is not acceptable. 16
- Recommendation 23**, Afloat storage should be discontinued. 16
- Recommendation 24**, Contingency plans for dealing with delays and limitations of access to necessary facilities need to be considered, so that situations such as that pertaining to the Valient do not arise. 16
- Recommendation 25**, Project ISOLUS should proceed with developing interim storage on land. 16
- Recommendation 26**, Continuous monitoring of the stored wastes should be undertaken. 17
- Recommendation 27**, Plans for responding to problems, including the flexibility to respond to unanticipated problems, should be developed. 17
- Recommendation 28**, The store itself should provide a level of containment, and be capable of being temporarily sealed in the event of leakage to provide environmental isolation within the building. 17
- Recommendation 29**, Provision should be made for local publication of all monitoring results at waste storage sites and at sites where submarines are dismantled. 17
- Recommendation 30**, Consideration should be given to additional means for providing independent monitoring, and/or independent peer review of monitoring. 18
- Recommendation 31**, Consideration should be given to means of independent auditing of management and security procedures and practices. 18
- Recommendation 32**, A site with existing, relatively large scale, nuclear activity should be used, unless there are strong and clearly justified reasons otherwise. 18
- Recommendation 33**, Geological stability and the implications of climate change need to be assessed in relation to the site(s) used for storing the wastes. 18
- Recommendation 34**, The wastes should be stored in a site where unauthorised access is prevented. 19
- Recommendation 35**, The possibility of storing the wastes at more than one site should not be discounted. 19
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