

Notes of the 7th ISOLUS (Interim Storage of Laid-Up Submarines) Advisory Group (IAG)
Held on 11th March 2009 at the Novotel Hotel, Reading

Attendees:

Les Netherton	(LN)	Environmental Health Advisory Services Ltd (Chairman)
Ian Avent	(IA)	Community Awareness Nuclear Storage And Radiation (CANSAR)
Dan Banks	(DB)	MOD - ISOLUS Team
David Collier	(DC)	Independent Specialist
Mike Cushen	(MC)	MOD – AD Projects and Change
Andy Daniel	(AD)	VT Nuclear Services
Dr Paul Dorfman	(PD)	University of Warwick
David Gatehouse	(DG)	Nuclear Decommissioning Authority
Chris Hargraves	(CH)	MOD - ISOLUS Deputy Project Manager
Dr Sue Jordan	(SJ)	Defence Estates (ISOLUS)
Peter Lanyon	(PL)	Nuclear Submarine Forum (NSubF)
Di McDonald	(DMc)	Nuclear Information Service
Paul Naylor	(PN)	Environment Agency
Shelly Mobbs	(SM)	Health Protection Agency
Nigel Parsons	(NP)	MOD - Assistant Director (AD) ISOLUS Project (from 16/03/09)
Bob Pirret	(BP)	Rosyth Local Liaison Committee
Gareth Rowlands	(GR)	MOD – Defence Equipment & Support (DE&S) Secretariat
Peter Stacey	(PS)	MOD - Representing Naval Base Commander Devonport
Jane Tallents	(JT)	NSubF
Maggie Taylor	(MT)	MOD - Assistant Director (AD) ISOLUS Project
Dr Bill Thompson	(BT)	Lancaster University
David Whitworth	(DW)	Nuclear Institute
Lt Steve Woodley	(SW)	MOD - ISOLUS team
Jon Mallon	(JM)	MOD - ISOLUS Team (Secretary)

Guest Speaker

Ian Watson	(IW)	Frazer Nash Consultancy
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Apologies

Tub Aves	Nuclear Institute
Peter Brazier	NDA
Stephen Lewis	Health & Safety Executive (HSE) - Nuclear Installations Inspectorate (NII)
Sandra Jack	Scottish Government
Alistair Berrill	MOD - Representing Naval Base Commander Clyde
Dr Jane Hunt	Lancaster University
Dr David Littlewood	The Centre for Professional Ethics, University of Central Lancashire
Rajnika Patel	CIRIA
Mark Toner	Scottish Environment Protection Agency
Son Mon Sutcliffe	Member of Public
Deborah Morris	MOD - ISOLUS Commercial Officer
Nicola MacLeod	MOD - ISOLUS Commercial Officer

1. Welcome and Introductions

The Chairperson (LN) welcomed all those present and asked everyone to introduce themselves, who they represent and their interest in the project. He thanked the members of the public for introducing themselves and advised that the meeting is held in public but is not a public meeting. Members of the public would have opportunity to comment at the end of each session. PL expressed his profound disappointment that the IAG had not been consulted since the September 2008 meeting and that, although keen to help, it was with serious reservations that the NGOs had decided to continue taking part in the ISOLUS project. PL, present on behalf of the Nuclear Submarine Forum, regretted that, having received project information in the document AD ISOLUS UPDATE only two days before the meeting, he had not been able to refer it to any of the NGOs whose views he tried to represent. Since the last IAG meeting in September 2008, he had thus been encountering a major information block from the MOD. He would need to see what went on here before he could judge whether NGOs could help. They would like to do so, but it was going to be difficult. He objected strongly to what had been going on, but he would do his best.

2. Action Grid from 6th IAG

JM apologised for the late distribution of documentation to the IAG due to other duties and undertook to ensure that documentation would be distributed a minimum of 2 weeks prior to the IAG meeting. PL pointed out that late reception of documentation prevented him canvassing views from the NGOs that he is trying to represent in time for the meetings, thereby hampering his role of trying to represent those views. The Chairperson accepted these views and advised that the information flow to IAG needed to be significantly improved and the MOD accepted that it would be.

Action 7.1: Secretary to ensure Documentation is circulated within appropriate timescales

The Chairperson reviewed the actions and requested that individuals make comment as appropriate. It should be noted that action 1.6 was superseded and transferred to action 7.2.

Action 7.2: Paul Dorfman to provide a point of contact for Environmental Justice

Post Meeting Note: A revised action grid is presented at Annex A providing the status of each action, including those generated from the 7th meeting.

3. ISOLUS Project Update

a.) HMS Victorious Reactor Head Press Article

SW gave a presentation regarding the recent press article about the cutting up of the reactor head from HMS Victorious in Devonport Royal Dockyard. SW stressed that this was not connected to ISOLUS project and was the remit of the MOD team that holds responsibility for submarine Long Overhaul Periods (Refuel) – LOP(R). He advised that as part of a LOP(R) many 1000s items are refurbished and 2500+ items renewed. For Vanguard class submarines this included the reactor head which was removed to allow the reactor to be refuelled. When considering the radiation dose to workers, cost and time implications it was considered (by the MOD) that it would be better to put a new head on the reactor after refuelling than refurbish and refit the old one. The old head, which is radioactive and classed as LLW is being disposed of accordingly. For security and practical reasons (to fit in the containers for the LLWR) the head is being cut up at Devonport before being transported. The reactor heads on HMS Vigilant and HMS Vengeance would also be renewed during their LOP(R)s. The head from HMS Vanguard was renewed during her LOP(R), however, before the head was disposed of to the LLWR, it was subjected to destructive testing to confirm

that the reactor head material was ageing as predicted, the results have indicated this to be the case.

IA questioned whether it was appropriate that IAG should have learned about the cutting-up of the reactor head via leaks to the media; for them at Plymouth "Cutting-up" is a very emotive word. IA asked whether it might be the case that the nearest couple of inches of the reactor head to the reactor core might need to be removed, or that the reactivity of the whole head might be averaged out, to obtain the necessarily low levels of radioactivity overall.

In response to questions from IA, it was explained that the head was classed as LLW and not Intermediate Level Waste (ILW) as it was not near to the nuclear fuel and only those components close to the fuel (mainly reactor internals) would be ILW. Measurements of reactor internals that are currently in storage revealed that only the centre section (that was next to the fuel) was ILW. The top and bottom of the RPV being slightly further away from the fuel were LLW.

DW confirmed that in Civil Nuclear Power stations a number of reactor heads have been replaced after reactor refuelling worldwide. MOD ISOLUS team were unable to provide details of any heads that may have been replaced on Swiftsure and Trafalgar class submarines, although CH thought it possible that 2 or 3 heads from S and/or T class submarines (similarly replaced during reactor refuelling) may be at Devonport awaiting disposal.

PN clarified that the reactor head from HMS Victorious was not covered by a specific waste disposal authorisation but would be disposed of in accordance with authorisation conditions at Devonport. In general the Environmental Agency and Nuclear Installations Inspectorate would expect waste to be disposed of if a waste route was available.

BP confirmed that refuelling a reactor is subject to a full safety case including emergency exercises.

JT questioned the MOD's partiality in deciding what was "in" and what "out". Often the MOD had sought to reassure us about ISOLUS by saying that every part of the reactors had been cut up at one time or another, but now they were trying to say that this cutting-up was not part of ISOLUS. They couldn't have it both ways. She asked for a route to be developed to enable the information lines to IAG to be opened up to prevent rumours influencing us.

GR described the FOI system, but JT suggested that such formal routes did not fit the IAG's role, for that cannot inform us early enough. MC replied that it would be better to ask them (the MOD) direct, and not to go via the FOI Act.

DC expressed how frustrating and unsatisfactory it was that a string of things had to come out, related to the dockyard and submarines, but in the press, in order for IAG to learn of them. He strongly urged that IAG would much rather learn about things from the MOD than from the media, for that somehow undermined our involvement.

IAG members advised an early brief from MOD on issues such as the head cut up would be beneficial and that finding out about such issues from the press was disappointing. JM undertook to attempt to identify relevant ISOLUS press articles to brief IAG as soon as possible, with IAG members advising early notice if they are aware of additional articles, although as stated earlier the RPV head is not part of the ISOLUS project.

PL criticised the reactive handling by the MOD of the cutting-up as totally inadequate. He reminded the meeting that one of the major reasons for the setting up of IAG 2 years ago was so that we could advise the MOD on public relations and on future consultations. He outlined several aspects of the episode that NGOs felt bore worryingly on the IAG's roles.

It was PL's view that to avoid public relations disasters such as the RPV article at Devonport recurring, a proper and proactive PR system should be in place.

The MOD welcomed the need for a proper and proactive PR system to be in place for the Submarine Dismantling Project, but would however re-iterate that the RPV issue at Devonport was outside of the scope of the Submarine Dismantling Project.

DMc said that this was a matter of political control of a technical problem. She suggested that there ought to have been someone, somewhere, in the MOD all the time looking at the public perception side of all this – at what was publicly acceptable. Some of the IAG felt the MOD probably didn't think as forwardly as that and that they probably ought to have done.

Action 7.3: Jon Mallon to Identify ISOLUS press articles for early briefing to IAG

Action 7.4: IAG members to advise press articles not covered by action 7.3 to Jon Mallon

PL considered that the head cut up issue was an issue for ISOLUS and was a PR catastrophe for ISOLUS and such mistakes can increase problems for eventual public consultation. PL also pointed out MOD requires a Communications/PR strategy to avoid damaging the integrity and public perception of the project; this was supported by DW who also considered that communications had been poor particularly in the last few months. MC agreed that more proactive communications was required and that a PR Communication strategy would be developed.

Action 7.5: MOD with IAG assistance to develop a PR and Communication Strategy

b.) Project Developments

MT gave an update on project developments since the last IAG (see attached presentation, Annex B):

- The project name will be changed to the 'Submarine Dismantling Project (SDP)' to better reflect the direction of the project. The name had been accepted by the MOD ISOLUS Steering Group (MISG) MT said that the name change had not yet obtained formal approval. Subsequently she said that all of the matters in it were recommendations only, and that the name change would come from Ministerial Submission.
- The ISOLUS team has been expanded and re-organised to reflect the direction of the Submarine Dismantling Project.
- A six phase project plan was being developed (for details see attached presentation).
- The plan included cutting up at least one submarine as a Technology Demonstrator to prove the industrial processes required. However it is assumed that this will not take place until a storage solution for SDP ILW had been put in place. The recommendation for ILW storage would be made in 2010.

PL remarked that these developments, which had been divulged to MISG 4 months beforehand and must have been brewing for some time before that, were of crucial interest to IAG, yet they were only now being revealed to IAG, and in a presentation that was unintelligible. He argued that IAG should have been told months ago. Yet the very first time IAG had been told anything at all about it by the MOD was two weeks ago. MT confirmed that SDP intended to involve the IAG in the programme development and that she had presented a high level programme at the previous IAG meeting. SDP are continuing to develop and refine the detail of the high level programme and felt a level of maturity was required prior to a more public presentation. DC considered that IAG should be consulted on the overview so that their input could be included in the detailed planning. MC stated that IAG recommendations were welcome although timescales for implementing the

project were vital. SM advised that 'Consult IAG' lines should be inserted into the programme to ensure IAG was consulted at the appropriate times.

SJ confirmed that the current assumption regarding conducting the overall Environmental Assessment was that MOD would not seek any Defence Exemption – it is planned that the project Strategic Environmental Assessment (SEA) will follow statute requirements. The SEA will make reference to the technical options being considered. It is planned that the SEA will be used as part of the planned Public Consultation. CH confirmed that the SEA would cover all activities including the different technical options. PL asked if the technical demonstrator wasn't going to develop the engineering details until 2010, what was the public consultation going to be on in 2009? (LN said from the Chair that early warnings to the IAG were going to be needed in future about all matters such as these.

c.) Scope

MT presented a draft paper covering the scope of SDP (included at Annex C) and confirmed that SDP was scoped to dismantle 27 submarines, the technology demonstrator will come from one of the 27. DMc did not consider that the paper covered the issues and that it should include an apology for the misleading information that has been released in the past. PL suggested an admission rather than an apology for such information may be acceptable. The MOD noted the concerns raised and MC requested comments on the scoping paper within 2 weeks.

DW said the biggest surprise in MT's presentation was the sudden advance in the Project's momentum. The cancellation of the Dec 2008 IAG was purported to be because the momentum had gone down and there was nothing to be said. Yet now we learn that the momentum has instead gone up. This is indicative of a continuing issue in the Group about communications. If you tell people what you are going to do, and have feed-back in stages, you learn of the pitfalls in advance. If you only tell people afterwards, you've got the pitfalls whether you like them or not. He felt that this was symptomatic of the problems in the Group. He himself had no idea that all this new work was going on.

MC agreed that this was a problem, and undertook to look at the whole matter of public relations and to develop work streams of communication.

d.) Public Consultation

JM gave a presentation on the planned SDP Public Consultation (included in the presentation at Annex A) confirming that SDP were aiming to hold a Public Consultation towards the end of 2009. The Consultation would cover a proposed dismantling site, a proposed ILW storage site and the proposed technical options including cut-up or cut-out. DC stressed that the decision regarding the technical option (cut-up/cut out) needed stakeholder engagement as strong opinions existed on this issue.

PL noted that the MOD kept saying what it had decided, about the consultation, as it did about the rebranding of ISOLUS, whereas it was IAG that had been appointed to advise on such public matters. JM noted the consideration and explained that the convenor contract was subject to competition through the Official Journal of the European Union. PL said that nevertheless IAG ought to have been consulted on at least the criteria behind the sort of contract sought for the consultation convenors. For the MOD to have done all these things without the IAG having an inkling was flawed.

DC advised that several IAG subgroups may be required to advise on the Public Consultation especially as the Consultation deals with both national and local issues and will be complex. Robust underpinning will be required for the Consultation document. It was agreed that the MOD

would review the consultation programme and provide an indication of when sub-groups would be required and for what activities.

LN asked the MOD if they want the IAG to set up and advise on the following proposed sub-groups;

- Consultation;
- SEA;
- Technical Options Study;
- Technology Demonstrator working Group.

DG suggested that we should create decision making points and reference where the IAG fits in. All IAG members agreed that SDP take an action to produce a plan of key decision markers by the end of next week (20 Mar 09).

Action 7.6: MOD Review Consultation programme and indicate what and when subgroups are required

PL considered that the timescale for producing the Consultation document is very short given the scale of the task. Several other IAG members agreed.

PL stressed that a key IAG role was to advise on Public Consultation and IAG should have been consulted on the convenor contract prior to the details going out to interested parties – JM noted the consideration and explained that the convenor contract was subject to competition through the Official Journal of the European Union.

In relation to the Technology Demonstrator programme the IA questioned whether the site that conducted the Technology Demonstrator would definitely be the dismantling site since the Technology Demonstrator programme commenced before the Main Gate Business Case decision was made. MC advised that it was a working assumption that the sites for the Technology Demonstrator dismantling and ILW storage would be the same as the main SDP programme, however he stressed that this assumption could change as lessons were learnt through the Technology Demonstrator.

4. Technical Options Study Report

a) Final Report Update

IW of Frazer Nash Consultancy gave a presentation on the Technical Options Analysis Study that was undertaken and the paper produced. To the original methodology of the Study described at IAG 5 was added a Structured Commentary, noting what differentiated between the three options, since this was important to the stakeholders. Originally too a standard approach of weighting and scoring activities had been planned, but in the event this proved not to be appropriate. IW said that the Peer Review system had worked very well and been extremely useful.

DC commented:

- The methodology used was so immense and ambitious that it was not a surprise when it was changed;
- The study was very good at filtering information;
- It involved a wide range of stakeholders;
- It didn't involve independent technical specialists;

- Advised to 'take it for what it is, and not for what it isn't'.

PD gave feedback:

- It was run fairly;
- The study factorises the options, was successful in 'outing' differences of opinion, but doesn't give a clear solution;
- Applied weightings were dropped as problems with information and data sufficiency were experienced;
- Problems were experienced with notes & appendixes.
- PD strongly disagreed with FNs assumptions about stakeholders. FN felt that NGO members (non-expert) were non-rational whilst FN felt that experts were rational. This 'public knowledge deficit model' way of thinking is deeply problematic. PD viewed NGO input as cogent, informed and rational.

Both Peer Reviewers said they have not yet seen whether the stakeholders' comments have been picked up, and they needed to do this before their final note is issued.

IA commented that he was originally concerned about using Frazer Nash as they are a subsidiary of Babcock Marine but felt that they were very professional and good to work with.

The dose to worker issue was discussed briefly. BP commented that the dose to workers is a function of process and not radioactivity and that dose to workers is dependant on how much money will be spent on the processes. This statement was supported by DC yet he pointed out that some stakeholders were concerned that this was a discriminator, also that they might be personally affected by the dose.

CH clarified that the outcome of the study indicated that reduction from 3 down to 2 possible options may be justifiable – Option 2 (remove and interim store the major items from the RC) was not viewed as a favourable option by the group in any of the attribute areas considered. The options study will feed into the Technology Demonstrator Project and the remaining two options are now the main focus for technical studies; the 2 remaining options being

- cut-out and storage of the entire RC
- cut-up of the RC with packaging and storage of the resultant ILW

CH posed the question as to whether a sub-group is required; if so how do we form a sub-group and will it help move the technical studies forward? DG recommended that sub-group creation is closely followed by agreement of the TORs for the sub-group and decisions on solutions are made very quickly.

PS commented that the dismantling site had not been selected but the site Licensee would be responsible for any work and an interface with the Licensee should be established very early on. This was noted by the MOD, however could only be possible post Public Consultation i.e. when the decision on dismantling site was made.

BP commented that once the options study report is issued then people may be able to shed light on missing information that could help and inform the next steps. PD commented that during the BNFL dialogue on decommissioning Magnox reactors, many stakeholders had supported the 'do something now' option. CH commented that the difference between the remaining options is a timing issue. LN commented that this is a possibility for a sub-group on tech studies to discuss.

IA enquired whether there is a fiscal advantage to storing the RC and not chopping it up and whether there any external pressures to choose the chopping up option. MC replied that an Investment Appraisal will be completed before any decision is made.

MC posed the question how do we reach a decision on the remaining two options? This resulted in a lengthy discussion whereby it was agreed that a process for making this decision was required and that the IAG should be involved. LN as Chairperson reminded and advised the IAG that the ISOLUS Advisory Group are there to provide advice on process which although including the decision-making process did not include actually making the decisions.

SM commented that we need to debate this when we go to Public Consultation.

JT questioned why did we do the options study if we plan to simply do the Technology Demonstrator and see how much dose workers get and how much waste is produced? DC commented that the purpose of the options study was analysis and not decision making.

IA questioned why the IAG was not discussing the location of the dismantling site as people won't want a nuclear scrap yard in their back yard – an issue of profound importance. This was noted by the MOD, however no decision had been made on the site location as site selection would form part of the SEA options and would be part of the planned Public Consultation.

Discussion took place over a question raised by PN on whether the MOD will have made a decision on options prior to the Public Consultation. MC advised that that at the Public Consultation MOD will indicate its preferred option based on the findings of the SEA and an Investment Appraisal but actual decisions will not be made until the outcome of the Public Consultation is known.

DW observed that the fact that some stakeholders regarded some of the data as incredible was deeply significant for the coming public consultation, and needed to be addressed by the consultation subgroup

b) Peer Review of Technical Information (Ref Item 4 6th IAG)

Discussion was made over the principle of independent Nuclear Experts; this was preceded with a warning statement from the Chairman ensuring that no named individuals, companies or consultants are to be singled out in the discussion.

CJH made several comments:

- We can't select just one expert, we will need more than one individual;
- We have to decide if we act on the options study's recommendation to gain information on estimated amount of waste;
- Do we want independent expert advice?

LN made comment that an independent reviewer has been suggested. PD commented that we had trouble with the options study and we need someone credible and critical. BP commented that he interpreted DG's comments to mean that we have the required experience on the IAG to peer-review process, but the IAG cannot peer-review technical aspects. JT made comment that by having an Independent Nuclear Expert who is critical reviewing the reports early, it will be possible to view these comments prior to the Public Consultation when the Independent Nuclear Expert is freely able to comment. DMc agreed that waiting until after the Public Consultation is too late to address the concerns and that an Independent Nuclear Expert that is recognized by the NGOs should be brought onboard early.

SM summarized that an independent reviewer has been suggested. MC confirmed that he recognizes this recommendation. LN requested that the secretary minutes this recommendation.

Action 7.7: MOD to consider the use of an Independent Nuclear Expert prior to Public Consultation

SM stated that a Public Consultation is not just producing a document and that Public Consultations have been conducted before and the MOD need to seek advice on this matter drawing on and utilizing the experience within the IAG.

5. Revised Complaints / Clarification Procedure

LN asked (if) the IAG for comments on the Complaints / Clarification Procedure prior to endorsement. Nil comments were made, therefore the Chairperson accepted that the Complaints / Clarification Procedure was endorsed.

6. Learning Points from FEC/CIOP Process

IAG had asked for release of historical documents to help it advise the Project on ways of reconciling with the public the difficulties raised by the CIOP in 2003. Members were invited at IAG 6 to comment on these documents and PL's comments had been circulated.

In the documents released PL had found 5 places where the MOD's aspirations in 2003, about ISOLUS and industry, had never come to fruition, including clear statements about developing meaningful public relations. There were 5 stages where what MOD had aspired to could have led to a successful and constructive consultation, but that proved instead to be not realised. PL commented we must make sure that we do not have the same situation in the future.

LN said we must feed this into the Consultation Subgroup's deliberations.

PL commented that he had mentioned in his paper that there were 2 anomalies within the lessons learned points from the FEC and CIOP and five errors of process (detailed in his attached paper). PL stated his opinion that nearly all the MOD's problems had stemmed from those errors, and that MOD needed to admit to these so that we could decide how to reconcile with the public, in order that the Project could progress.

In November 2008 at the MISG meeting the MOD proposed a 5 phase plan and name change. MC commented that he is happy to be more informative and had received an action to discuss review the communications and PR strategy and agreed that lessons need to be learnt and comments would be taken forwarded into the next consultation. (Action 7.5).

7. IAG Operation

The TORs of the IAG were discussed, PL asked if the IAG was here only when invited or were here to keep an eye on things all the time or to only contribute when the MOD saw fit? The Chairperson agreed that, as IAG's remit included advising on ethical matters, it really needed to be able to keep an eye on things all the time, and that this meant the role of the MOD must be to keep us briefed – which was what the morning's decisions about communications had been about. He placed an action on himself to look into TORs and requested for member to please send him comments on TORs for review.

Action 7.8: Chairman to review TORs with IAG members and New Convener

As part of the discussion on the terms of reference, the project name change was discussed. The change of name to 'Submarine Dismantling Project' had been agreed at the last MISG. SM advised not to delay and to complete the name change ASAP.

8. Update on Cancer and Leukemia Studies

SM advised that there is a new study published on UK radiation workers and offered to send a copy to IAG members on request. SM included a rough translation of the German Radiation Protection Commission (SSK) review of the KiKK study in the IAG document pack. PL questioned the dignity of the document claiming it doesn't do credit to the SSK paper given its poor translation into English. He advised that the study raised questions about the adequacy of the ICRP model as the model could not explain the KiKK study findings. SM stated that the rough translation of the paper was only issued to members as information she did not think that and that this was the appropriate forum for debate on scientific studies. SM also stated that no dose information was used in the KiKK Study and hence it cannot be used to challenge the ICRP dose model. PL remarked that nevertheless the fact that there was no explanation for the KiKK Study findings threw doubt on the ICRP model. He noted that the KiKK was a very powerful study as it looked at all of the German nuclear power stations and it showed that children nearer to nuclear stations in Germany have an increased risk of cancer and leukemia. DMc commented that this is not a debate for us to solve and is not for the IAG to debate. PD noted that the study was clearly significant, and it was important for IAG to understand developments in radiation protection.

9. Technical Summary Reports

SW commented that he will be issuing the asbestos study soon.

Preview and Review

The Chairman asked members to send in to him comments on the Preview and Review Paper that was under consideration.

10. Any Other Business

No other Business was discussed.

11. Date of next meeting

The date of the next meeting was discussed and prospectively confirmed as Tuesday 7th July 2009.