

The US/UK nuclear relationship

In January and February 2008 the Project on Nuclear Issues (PONI) interviewed a range of senior officials in the US and UK on their role in the Mutual Defence Agreement to mark the 50th anniversary of the Treaty. The full interviews are available as audio files on the PONI section of the website of the Center for Strategic and International Studies. The following points are taken from these interviews.

UK programme for a new warhead & involvement in RRW

“They [UK] will need a Reliable Replacement Warhead of their own. In fact they are working on one. It has a different name. It’s got a different acronym. But they are working on the same kind of a thing for their W76 variant” - Frank Miller ¹

“They [UK scientists] are participants in the working groups chaired by the Navy, in fact they are observers on some of the working activities that are chaired by the Navy for the Reliable Replacement Warhead” - John Harvey ²

Compare this with the reply from Des Browne on 19 November 2007 -

Nick Harvey: To ask the Secretary of State for Defence what meetings have taken place between UK and US officials on the research and development of new nuclear weapons, with particular reference to the reliable replacement warhead.

Des Browne: I refer the hon. Member to the answer I gave to the hon. Member for Blaenau Gwent (Mr. Davies) on 12 September 2007, Official Report, column 2074W. This explained that there is no programme to develop a new UK nuclear warhead but referred to the work currently being undertaken to inform decisions, likely to be taken in the next Parliament, on whether and how we may need to refurbish or replace our current warhead. Some of this work is being undertaken with the United States under the 1958 UK-US Agreement for Co-operation on the Uses of Atomic Energy for Mutual Defence purposes and includes reference to the proposed US Reliable Replacement Warhead (RRW). The UK remains committed to the principle that any future warhead developments are undertaken on a national basis. The RRW remains a US-only programme.³

Amendment of MDA to allow for exchange of RRW information

“We have recently taken steps to amend the MDA, .. not only to extend it but to amend it to allow for a broader extent of cooperation than in the past and this has to do with the RRW effort. ... There are some aspects in how we secure warheads against unauthorised use that we have not been as cooperative in sharing. .. But we believe that RRW will take that level of technology to the next step and because that level of technology has not been explicitly stated as a cooperative area and is such an

¹ PONI interview with Franklin Miller KGB, Senior Director for Defence Policy and Arms Control. 28/1/08 10.02 <http://www.csis.org/isp/pONI/us-uk/>

² PONI interview with John Harvey, Director, Policy Planning Unit, National Nuclear Security Administration. 40.25

³ Hansard 19 November 2007 Column 483W

integral part of our RRW effort we will need to have the Brits involved if we are going to have them involved in RRW.”

Interviewer – “Are we ?”

“Yes. Yes. There is no secret that is held more closely than the types of things that we do to protect our warheads against unauthorised use. OK. So, we have special clearance categories for that. OK. And in order for the Brits to be – because these kinds of things are so inherent to the design of the RRW – we will need to have, if we are to have cooperation with the Brits, meaningful cooperation with the Brits, in the RRW we will need to have cooperation in these technologies that we use to secure our systems against unauthorised use.”⁴

President Bush issued a statement to Congress which said that the amendment “revises text, principally in the Security Annex, to be consistent with current policies and practices relating to personnel and physical security.”⁵ However this annex was not made public and the link to RRW was concealed.

Effect of US RRW decision on UK policy

“If the US decides to stay with the legacy stockpile.. it is much more difficult for the UK to embark on a transformed stockpile, ie to go it alone, because there are so many inter-dependencies, just on the evolution of your nuclear deterrent stockpile .. in a large part I would expect the UK in many regards to follow the US”. - Glen Mara⁶

The UK programme is so dependent on US support that if the US does not develop a new warhead then it will not be possible for the UK to do so on its own.

Effect of US RRW decision on degree of collaboration

“There has been an increasing slope to expand and enhance collaboration .. If the US embarks on an aggressive transformation of the stockpile to smaller, safer and more reliable then that [collaboration] will increase and accelerate. If the US adopts a posture of legacy Cold War stockpile, to maintain that, that will not be so aggressive but will be equally coordinated. .. We need a greater transparency with regard to some of our data and experiments so that they can validate their calculations and predictions and better peer review ours – this is one area where we need further breaking down of the ease with which we can mobilise data transferring across the alliance and we hope we can facilitate that” - Glen Mara⁷

⁴ John Harvey 40.30

⁵ Message from President Bush to Congress 14 June 2004.

<http://www.basicint.org/nuclear/MDAamend.htm>

⁶ PONI interview with Glen Mara, Principal Associate Director for Weapons Programs, Los Alamos National Laboratory; 39.50

⁷ Glen Mara 12.00

Enhanced collaboration

“The last one [Nuclear Posture Review] was in 2002 and born out of the last one we are on the precipice of this Enhanced Collaboration. It is clear that the last formal Posture Review resulted in a richer and more extensive set of collaborations”.
“Enhanced Collaboration is the latest chapter of collaboration”. - Glen Mara ⁸

The term Enhanced Collaboration has been used in a few technical documents in recent years. However the significance of it and its origin in the US Nuclear Posture Review was not known.

US scientists imploding non-fissile plutonium at Aldermaston

“we also devised a technique, again through Charlie Martin, of imploding a non-fissile plutonium isotope. Now because it was plutonium the laws in the States would not allow you to implode this even though it was non-fissile, because it was plutonium. So again the American scientists would come across and use our laboratories because they couldn't use theirs.” -Stanley Orman ⁹

Hydrodynamic experiments

“There are some capabilities that the UK has that we don't have and that we borrow and one of them is this dual axis hydrodynamic – we have DARHT at Los Alamos but DARHT is not working yet, the way we want it to work. .. The UK does have this unique two axis facility that I believe we have been able to exploit and I think that has been valuable to us.” - John Harvey ¹⁰

Stanley Orman and Siegfried Hecker also referred to UK hydrodynamic expertise as a unique UK contribution to nuclear warhead development.

This is consistent with what is known about UK expertise with hydrodynamics. However there have been no earlier references to the US using AWE facilities in this way. It is reasonable to suggest that hydrodynamic facilities at AWE may have been used to support RRW.

UK supplied Tritium to the US

“At one time you [US] ran out of tritium and we were providing you with the trit” - Stanley Orman ¹¹

Some previous exchanges of nuclear material between the US and UK have been disclosed, but these have not included the UK supplying tritium to the US.

⁸ PONI interview with Glen Mara 2008 36.04 & 7.35

⁹ PONI interview with Stan Orman, former Deputy Director, Atomic Weapons Establishment, Aldermaston; 31.00

¹⁰ John Harvey 45.00

¹¹ Stan Orman 1.31.25