



ACQUISITION,
TECHNOLOGY
AND LOGISTICS

THE UNDER SECRETARY OF DEFENSE

3010 DEFENSE PENTAGON
WASHINGTON, DC 20301-3010

APR 26 2010

MEMORANDUM FOR CHAIRMAN, DEFENSE SCIENCE BOARD

SUBJECT: Terms of Reference – Defense Science Board (DSB) Task Force on the Assessment of Nuclear Treaty Monitoring and Verification Technologies

During the coming years, the United States is expected to engage in a series of treaty negotiations on nuclear weapons and nuclear forces. In addition, the rapid growth in nuclear power worldwide will likely stress the implementation practices of existing material control agreements, as well as poise more nations with the ability to acquire nuclear weapons of their own. Monitoring and verification measures are an integral part of all the existing, modified, or new agreements. Potential requirements for new or expanded monitoring and verification requirements place a renewed focus – after almost 2 decades of limited investment – on the adequacy of the Nation's technical tools to support monitoring and verification, both as part of the cooperative verification regimes of the treaties and through national intelligence.

You are to form a DSB Task Force to accomplish the following:

1. Research and summarize anticipated directions in nonproliferation and arms control agreements and the environments in which they might be implemented (for example, the level of transparency and cooperation that will be desired/required in post-Cold War arms control agreements, including treaties among nuclear states in addition to the United States and Russia);
2. Project the demands and challenges placed on existing agreements enforced by the International Atomic Energy Agency with the growth in nuclear power over the next 15 to 20 years, and assess the adequacy of current practices and resources to maintain confidence that inspected nations remain non-proliferators;
3. Assess current and programmed technical capabilities and gaps to support the anticipated monitoring and verification regimes;
4. Address what could be adapted from technical advances made for a number of other existing monitoring purposes, such as those developed for applications related to the following:

a. Close-in and/or unmanned intelligence, surveillance, and reconnaissance systems to support conventional warfighting and counter-improvised explosive device operations;

b. Stockpile stewardship;

c. Nuclear forensics and attribution;

d. Nuclear weapons effects; and

e. Nuclear defense and interdiction programs.

5. Propose new initiatives, including identification of the technologies, research, development and testing program, and red/blue teaming requirements to fully vet new concepts; and

6. Perform a net assessment to understand the potential limitations and regrets associated with possible technical implementation paths.

The Task Force should recommend a comprehensive set of time-phased technical programs that could be conducted by the Department of Defense, the Department of Energy, the Intelligence Community, or a combination of these agencies, with consideration of what other agencies might also require (e.g., Department of State), contribute (e.g., Department of Homeland Security), or enable (e.g., Office of Science Technology and Policy).

The study will be co-sponsored by me as the Under Secretary of Defense for Acquisition, Technology and Logistics; the Administrator of the National Nuclear Security Administration (NNSA); and the Director of National Intelligence (DNI). Dr. Miriam John and Dr. Donald Kerr will serve as Chairpersons of the Task Force. Mr. Rhys Williams of NNSA, Dr. Tom Hopkins from DATSD(NCB), and Mr. Michael Toomey of ODNI will serve as co-Executive Secretaries, and Major Michael Warner, USAF, will serve as the DSB Secretariat Representative.

The Task Force will operate in accordance with the provisions of P.L. 92-463, the "Federal Advisory Committee Act," and DoD Directive 5105.4, the "DoD Federal Advisory Committee Management Program." It is not anticipated that this Task Force will need to go into any "particular matters" within the meaning of title 18, U.S. Code, section 208, nor will it cause any member to be placed in the position of acting as a procurement official.



Ashton B. Carter