

# Appendix B

## Terms of Reference

1 August 2001

**NAVAL RESEARCH ADVISORY COMMITTEE (NRAC)  
PANEL ON SCIENCE AND TECHNOLOGY (S&T)  
COMMUNITY IN CRISIS  
TERMS OF REFERENCE**

**BACKGROUND:** This is a joint NRAC study, with representation from the Army Science Board, the Air Force Scientific Advisory Board, and sponsored by the Director Defense Research and Engineering.

Over the past 50 to 75 years, the Department of Defense (DoD) laboratories and technical centers have made incalculable contributions to the technological superiority of US warfighting forces. However, these organizations find themselves in crisis, today. This situation has been caused by a number of factors, among which are:

- ❑ Difficulty recruiting and retaining world-class scientists and engineers.
- ❑ An inability to renew aging facilities and equipment.
- ❑ An aging workforce caused by years of downsizing, hiring freezes, and very limited recruiting.
- ❑ Changes in the roles of the laboratories, themselves, caused by consolidations, closures, increased outsourcing, a lack of stability in their Research and Development (R&D) programs, transfers of headquarters functions, and a rapidly evolving world economy.

Some of these problems began more than 20 years ago; and there have been more than 100 “Blue Ribbon” studies of the DoD laboratories since the 1960s. Although some progress has been made, many of the more important recommendations resulting from these studies have not been implemented. Nevertheless, the negative trends must be reversed if the DoD is to ensure the innovative development of revolutionary capabilities for future military forces.

**SPECIFIC TASKING:**

1. Consider what the role(s) of the DoD laboratories should be in the 21<sup>st</sup> Century, given their situation today. Focus should be on the components devoted primarily to performing Science and Technology (S&T) work in-house. Identify the differences that do or should exist between S&T-oriented research laboratories and technical centers performing mostly acquisition support, in-service engineering, and higher-category R&D work.
2. Identify the desired characteristics of a world-class S&T laboratory in terms of professional staff, infrastructure, budgeting process, support services, etc.