

United States General Accounting Office



Report to the Chairman, Committee on  
Armed Services, United States Senate

July 1992

# STRATEGIC BOMBERS

## Need to Redefine Requirements for B-1B Defensive Avionics System



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Washington, D.C. 20548

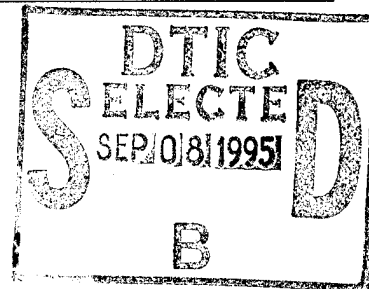
Strategic Bombers.  
Need to Redefine  
Requirements for  
B-1B Defensive  
Avionics System

National Security and  
International Affairs Division

B-249349

July 17, 1992

The Honorable Sam Nunn  
Chairman, Committee on Armed Services  
United States Senate



Dear Mr. Chairman:

This report is in response to your June 29, 1992, letter requesting us to address a series of questions regarding the B-1B bomber. It summarizes the detailed responses we provided to you in a July 1992 classified report.

### Background

While covering a broad range of issues, your questions, taken collectively, focused on whether the Congress should provide additional funds for the Air Force's current plan—the CORE program—to upgrade the B-1B defensive avionics system (ALQ-161A).

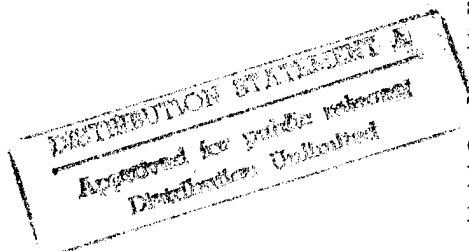
In a June 1992 classified report, we recommended that the Secretary of Defense direct the Secretary of the Air Force to determine the requirements of a defensive avionics system to support the future role of the B-1B bomber before proceeding with either the planned modifications to the ALQ-161A or acquiring a new defensive avionics system. In discussing our recommendation during the June 17, 1992, hearing before the Senate Committee on Armed Services, the Commander in Chief of the Air Combat Command stated that the Air Force is conducting a comprehensive review of the entire B-1B upgrade program that will be reviewed by the Chief of Staff of the Air Force in the August-September 1992 time frame. The review would include an evaluation of the operational requirements for electronic countermeasures and the acquisition strategy that goes along with it.

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### Results in Brief

More testing of the CORE-configured ALQ-161A is not necessary to determine whether to implement the CORE program. Flight testing has demonstrated that implementing the CORE modifications would provide similar operational capabilities to, and offer limited survivability improvements over, the currently fielded defensive avionics system.

The only purpose for additional testing of the CORE system would be to demonstrate that some problems with the maintenance diagnostic system have been resolved, after potential fixes have been identified. In that regard, while some improvements were achieved, user requirements were



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not met for such things as low false alarm rates and "cannot duplicate rates."<sup>1</sup>

However, even if the maintenance diagnostic capabilities were fully demonstrated, the CORE system should not be implemented until it is determined that the ALQ-161A design can support the future yet-to-be-defined operational requirements to meet the B-1B's changing role from a nuclear penetrator to a conventional bomber. If the CORE program were to proceed before the results of the Air Force's planned review of the B-1B upgrade program, scheduled in the August-September 1992 time frame, were considered, the Air Force would not have reasonable assurance that the electronic countermeasure requirements for the B-1B in its future conventional role would be met and that resources would be effectively used.

Future threats to the bomber force could consist of virtually all air defense systems and weapons fielded today. The differences between nuclear and conventional operations are significant, and we do not believe that conventional capability can be estimated from prior information on planned nuclear operations.

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## Matters for Congressional Consideration

The Congress may wish to withhold or otherwise restrict the availability of funding for the ALQ-161A upgrade until the results of the Air Force's planned comprehensive review have been adequately considered.

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## Scope and Methodology

In preparing our responses to your questions, we relied heavily on information obtained and analyzed in evaluating various aspects of the B-1B program during the past 4 years.

Your letter also invited any comments we might wish to make on the Air Force's Bomber Roadmap. We are currently reviewing the present and planned conventional capabilities of the bomber force, and we will be addressing the Roadmap in our future report on that work.

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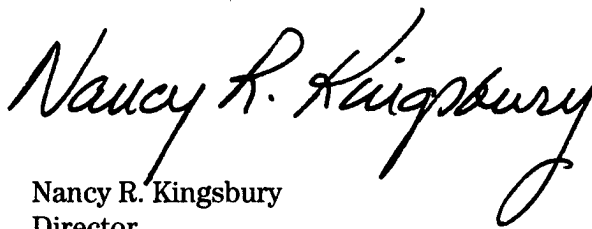
<sup>1</sup>A "cannot duplicate rate" is a maintenance action for any reported discrepancy that cannot be duplicated by maintenance technicians.

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As arranged with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution of it until 10 days from its issue date. At that time we will send copies to the Secretaries of Defense and the Air Force, other appropriate congressional committees, and the Director of the Office of Management and Budget.

Please contact me at (202) 275-4268 if you or your staff have any questions concerning this report. The major contributors to this report are listed in appendix I.

Sincerely yours,

A handwritten signature in cursive script that reads "Nancy R. Kingsbury". The signature is written in black ink and is positioned to the right of the typed name.

Nancy R. Kingsbury  
Director  
Air Force Issues

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# Major Contributors to This Report

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