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STATEMENT OF
MILTON SOCOLAR
ACTING COMPTROLLER GENERAL
OF THE UNITED STATES
BEFORE THE
SUBCOMMITTEE ON LEGISLATION AND NATIONAL SECURITY
COMMITTEE ON GOVERNMENT OPERATIONS
HOUSE OF REPRESENTATIVES



Mr. Chairman and Members of the Committee:

I am pleased to testify regarding our recent report covering a review at your request of missile system failures at the North American Air Defense Command and the relationship of computer acquisition processes to command and control system development difficulties. Billions of dollars have been invested in our strategic defense capability. This investment has been jeopardized by deficiencies in our current early warning system.

At NORAD, as you requested, we evaluated the actions that have been taken to correct recent missile warning system failures. We evaluated the extent to which computer acquisition policies, directives and procedures implementing the Brooks Act, PL 89-306, might have engendered problems that have been experienced in upgrading NORAD's computer system and we assessed whether the Brooks Act would in any way hinder corrective actions which still need to be taken.

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NORAD has been upgrading its computers in the Cheyenne Mountain Complex, in Colorado Springs, since they became operational in 1966. NORAD was aware from the start that the missile warning and space surveillance system computers originally installed would not meet growing mission requirements past the mid-1970s. In December 1968, NORAD published a plan for its 427M program to replace the Cheyenne Mountain Complex computers by 1975. These computers were, and remain, the single data analysis center for NORAD's world-wide system of missile warning and space surveillance sensors.

In 1970, the Joint Chiefs of Staff established a program for all Unified and Specified Commands to improve and standardize computers in the World Wide Military Command and Control System, WWMCCS. NORAD, as a Specified Command of the Joint Chiefs of Staff, was included.

NORAD concluded that the computers planned for WWMCCS would not be adequate for mission requirements. The Commander of NORAD lodged a protest with the Air Force Chief of Staff, but was forced to accept the Joint Chiefs mandate precluding a separate competitive procurement of computers specifically responsive to NORAD requirements. The inadequacy of the World Wide Military Command and Control System standard hardware and software to meet NORAD mission requirements, coupled with fragmented and ineffective implementation management, undermined NORAD's development effort. In addition, the system is subject to power failure as an uninterruptible power source has not been provided.

After seven years of effort, the Air Force, in 1977, recognized that the NORAD project was in trouble. The Air Force, acknowledging

that the system could not reach its intended operational capability, redefined the criteria for acceptance. The new criteria called for acceptance when the system matched the capability of the obsolete systems being replaced. This meant reduced operational performance stemming directly from the use of standard JCS systems.

GAO alerted the Department of Defense, in September 1978, to the serious problems associated with the NORAD development program and recommended;

- (1) that NORAD be exempted from using future standard JCS computers,
- (2) that a redesign effort to replace the major systems with state-of-the-art equipment be launched, and
- (3) that the faulty power system be upgraded to protect critical computers.

Effective action on our recommendations was not taken and the Air Force accepted the deficient system in September 1979. The first significant missile warning system failure occurred in November 1979. In that incident, the NORAD computer system, failing to recognize test data being used for software development, generated inappropriate warning of a massive Soviet missile attack. To prevent recurrence of this type of failure, NORAD had to establish a separate software development facility at a cost of \$16 million.

Concern over NORAD's ability to adequately perform its missile warning and space surveillance missions prompted the House Committee on Appropriations, in January 1979, to request that GAO follow up on its 1978 report. In this regard, GAO reported (C-LCD-80-3) that no effective actions had been taken to implement our 1978 recommendations.

In June 1980, NORAD again experienced significant missile warning system failures that resulted from poor design of communications software. The software has been modified to correct these problems.

Despite continued warnings, the Department of Defense, the Joint Chiefs of Staff, and the Air Force have repeatedly failed to take effective action to implement our recommendations. Because of the concern generated by the missile warning system failures, the Air Force Inspector General conducted a comprehensive review of the world-wide missile warning system and confirmed GAO's previously reported findings. He classified the NORAD computer improvement program as a failure due to mismanagement and the inability of the JCS standard system to meet NORAD requirements. Further, he indicated that there was no relationship between NORAD's missile warning failures and the ADP acquisition process.

In our most recent review, we found;

- that problems plaguing the NORAD computer system are not in any way related to the policies, directives or procedures implementing the Brooks Act requirements applicable to the procurement of computers, and
- that in establishing a centralized ADP management structure and with missile warning and space surveillance system architectures being developed, NORAD appears to be following the reasoned and logical approach we have advocated since 1978. Nevertheless, serious problems still exist because of inherent weaknesses in the NORAD computer system, and they will remain until positive management action is taken at the highest levels of the Defense Department.

A recent Senate report suggested that a blanket Delegation of Procurement Authority would expedite NORAD's computer replacement program. We could find no evidence to support such a delegation or that the absence of a blanket delegation has been a hindrance. The off-site software development facility and a recent Delegation of Procurement Authority for interim upgrade of communications processing capability have substantially removed any element of time criticality. Moreover, the architecture plans needed to specify equipments to be purchased will not be completed for at least two years. NORAD agrees that even if given a blanket Delegation of Procurement Authority today, it could not be put to use at this time.

The problems experienced by NORAD in its computer development program are primarily attributable to poor planning and management, and the attempt to force-fit user requirements to a particular type of equipment. Unfortunately, this has become the rule rather than the exception with most Department of Defense Automatic Data Processing procurements. We have abundantly documented, in over 100 reports since 1965, that the Department, the Joint Chiefs of Staff, and the Military Services have historically;

- failed to effectively plan for Automatic Data Processing procurement and implementation,

- failed to adequately identify user requirements,

- failed to develop functional specifications,

- failed to provide centralized acquisition management,

- failed to make effective use of the competitive process,

and

--failed to establish adequate accountability.

In summary, the history and current state of Department of Defense Automatic Data Processing acquisition makes the issuance of a blanket Delegation of Procurement Authority for NORAD, or any other command in the World Wide Military Command and Control System, inappropriate at this time.

Mr. Chairman, this concludes my prepared statement. We will be pleased to respond to any questions.