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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

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RELEASED

SEP 25 1973

The Honorable Les Aspin
House of Representatives

Dear Mr. Aspin:

The enclosed unclassified information is in further response to your April 13, 1973, letter, concerning the Advanced Airborne Command Post (AABNCP) program.

AABNCP was reported for the first time on the Department of Defense Selected Acquisition Report as of March 31, 1973, and we have added AABNCP to the systems covered in our program for continuing review of Selected Acquisition Reports.

If we can be of further assistance to you in this matter, please advise me.

Sincerely yours,

Elmer B. Staats

Comptroller General
of the United States

Enclosure

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ADVANCED AIRBORNE COMMAND POST

The intended capabilities and expected cost of AABNCP when initially proposed

The Advanced Airborne Command Post (AABNCP) program as presented to the Congress in the fiscal year 1973 Department of Defense (DOD) budget was for purchasing, modifying, and outfitting seven Boeing 747 aircraft for $482 million. The procurement plan was for six aircraft to be purchased in fiscal year 1973 and the seventh to be purchased in fiscal year 1974. The first three aircraft purchased were to be outfitted with the equipment now installed on the EC-135 National Emergency Airborne Command Post (NEACP) aircraft stationed at Andrews Air Force Base. These would be the interim NEACP aircraft. The rationale for transferring existing equipment was that it would provide experience with the plane and would permit putting the larger command posts in operation early with an expanded staff to handle an increased volume of manually processed data.

The fourth aircraft was to be a test-bed aircraft used for research and development of (1) improved command, control, and communications equipment to be put on the ultimate AABNCP and (2) modifications to make the aircraft less vulnerable to radio communications interference called electromagnetic pulse (EMP) which is caused by a nuclear explosion.

The fifth, sixth, and seventh aircraft were to be equipped with the following equipment developed on the test-bed aircraft plus the EMP modifications:

--Super-high-frequency satellite communications terminal.

--Fleet satellite terminals.

--High-powered low-frequency and very low-frequency transmitter.

--Air and ground data links to the National Military Command Center, the Strategic Air Command, the North America Air Defense, and the Defense Support Program ground systems.

--Automated data processing (ADP).

The last three aircraft would replace the first three aircraft at Andrews Air Force Base, which then would be retrofitted with the improved systems and modifications and would be assigned to the Commander-in-Chief, Strategic Air Command, for use as command and control aircraft.

The intended improvements in aircraft physical capabilities to be gained by using the 747 aircraft included:

	Aircraft	Improvement
Floor space	EC-135	880 square feet
	747	3,500 square feet
Flight time endurance	EC-135	12 hours
	747	16+ hours
Payload	EC-135	40,000 pounds
	747	85,000 pounds

In addition, the ultimate system was to have airborne ADP to assist in providing nearly worldwide, instantaneous communications with our armed forces. ADP and command and control systems were to be interfaced with and be a part of the Worldwide Military Command and Control System.

What does the Air Force now plan?

The above described program was presented to the Congress in 1972. The only significant change since then has been the deletion of the ADP equipment by the Defense Systems Acquisition Review Council (DSARC) and extension of the proposed aircraft procurement schedule.

The Air Force says the total program at this time consists of only seven aircraft and the development of proposed equipment. The Air Force officials informed us that, with the exception of the ADP equipment, they know exactly what they want aboard these seven aircraft.

DSARC dropped the requirement for ADP equipment from the initial program because of an inability to define what was needed. The Air Force still has this requirement in mind and an Air Force official stated that ADP equipment would be

in the system at some future date. Until the new command and control equipment is defined, the 747s will possess as much capability as the EC-135s now in use.

The total program cost has increased about $66 million from the initial estimate of $482 million to the present estimate of $548 million. We have not made a detailed review of the following Air Force unclassified schedule which shows changes in costs by category.

	Initial estimate	Present estimate	Difference
	(000,000 omitted)		
RDT&E (note a):			
Basic aircraft	-	$ 27	$+27
Aircraft modifications	$ 27	39	+12
Command, control, and communications	29	24	- 5
Integration and assembly	-	6	+ 6
Support	9	8	- 1
Program management	14	13	- 1
Test	11	20	+ 9
Survivability and vulnerability	-	25	+25
	90	162	+72
Procurement:			
Basic aircraft	164	154	-10
Aircraft modifications	47	60	+13
Command, control, and communications	70	63	- 7
Integration and assembly	4	3	- 1
Engineering change orders	28	21	- 7
Support	41	15	-26
Program management	-	6	+ 6
Survivability and vulnerability	-	14	+14
Initial spares	30	21	- 9
	384	357	-27
Military construction	8	29	+21
	392	386	- 6
Total	$482	$548	$+66

[a]Research, development, test, and evaluation.

The above schedule shows the RDT&E program has increased $72 million. The three largest increased costs are

(1) $27 million in the basic aircraft which resulted from shifting the procurement cost of the fourth aircraft from procurement in the initial estimate to RDT&E in the present estimate,

(2) $12 million worth of modifications to the hydraulic system to accommodate certain military equipment and reassessment of electrical power requirements, air-conditioning, and super-high-frequency radomes, and

(3) $25 million for survivability and vulnerability not separately identified initially but amount represents requirements refinement to meet desired EMP protection.

The procurement program cost estimate decreased a net $27 million. Despite transferring this amount from procurement to RDT&E funding, basic aircraft procurement funding was reduced by only $10 million. The present estimate included $17 million for flight essential avionics and economic escalation attributable to stretchout in the aircraft procurement schedule.

The deletion of certain items, including the computer requirements, reduced RDT&E funding by $5 million and procurement funding by $7 million for the command, control, and communications items. Failure to gain more was attributed to increases in estimated costs resulting from reevaluation of initial estimates.

To achieve a more accurate estimate, the System Program Director reassessed and refined the original requirements and cost estimates thus showing cost fluctuations in the remaining categories, RDT&E and procurement.

The estimate for military construction has increased about $21 million because the Air Force reassessed its needs. The initial estimate was based on the assumption that existing facilities could be converted to accommodate the new Advanced Airborne Command Post. Further study revealed that facilities with larger capacities were needed. On the basis

of these studies, a new program for additional buildings and support requirements was established resulting in the increase in military construction.

What are Air Force AABNCP plans for the future?

The Air Force is using what it describes as a "block" approach for acquiring and developing AABNCP. The program as now presented is considered block I. This includes acquiring and modifying the seven aircraft and testing, acquiring, and installing the improved components.

According to DOD officials, other equipment requirements will be addressed after completing the block I program. They indicated that future blocks could (1) improve or modify the aircraft, (2) upgrade the command, control, and communications systems caused by the growth of such technology, and (3) develop, test, and acquire an ADP system for AABNCP. The money requested thus far covers only block I. When new equipment and modifications are determined and future blocks are formulated, the Air Force will present them to the Congress for approval and funding.

The March 31, 1971, SAR states:

> "If determination is made to include additional communications and on-board ADP capabilities this would increase the approved program (including modification and modification spares) to $621.0 million."

This would be a $73 million increase over the presently approved $548 million for block I. A program official told us that the ADP and communications equipment referred to was dropped from the block I requirements by the Deputy Secretary of Defense on January 19, 1973. Further, if these items were reintroduced, they would become block II items subject to normal review, funding, and approval procedures.