The original documents are located in Box 7, folder "Defense - B-1 Bomber" of the Ron Nessen Papers at the Gerald R. Ford Presidential Library.

NEWS RELEASE

OFFICE OF ASSISTANT SECRETARY OF DEFENSE (PUBLIC AFFAIRS)

WASHINGTON, D.C. - 20301

PLEASE NOTE DATE

EMBARGOED FOR End of News Conference
December 2, 1976

No. 560-76
OXford 73189(Copies)
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STATEMENT BY THE SECRETARY OF DEFENSE

In consultation with President Ford, Secretary of Defense Donald H. Rumsfeld today authorized the Air Force to execute the initial contracts for the B-1 bomber.

The decision followed an exhaustive review of the program's progress by the Secretary of the Air Force, Thomas C. Reed, and the Defense Department's Systems Acquisition Review Council, as well as by outside panels.

The Congress authorized and appropriated $1.53 billion for B-1 development and procurement during Fiscal Year 1977. Of that amount, $1.05 billion was for production tooling, procurement of the first three production B-1s, and the purchase of long lead materials for the second lot of eight aircraft.

"We have observed both the momentum of Soviet strategic modernization and their buildup of capability; we have studied the results of this aircraft's test program; we have concluded that proceeding with this contract approach is in the national interest," Rumsfeld said.

END

NEWS RELEASE

OFFICE OF ASSISTANT SECRETARY OF DEFENSE (PUBLIC AFFAIRS)

WASHINGTON, D.C. - 20301

PLEASE NOTE DATE

EMBARGOED FOR End of Press Conference

DECEMBER 2, 1976

No. 559-76
OXford 73189 (Copies)
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STATEMENT BY
HONORABLE THOMAS C. REED
SECRETARY OF THE AIR FORCE
B-1 PRESS CONFERENCE
WASHINGTON, D. C.

The Department of the Air Force today awarded contracts to Rockwell International, General Electric and the Boeing Company for initial production of the B-1 bomber.

All three contracts include clauses which limit the Government's obligation to a cumulative rate of $87M per month through February 1, 1977, in compliance with the Fiscal Year 1977 Defense Appropriations Act. The contracts are also structured to enable the Air Force to limit total government liability month-by-month through June 1977.

Rockwell received a contract for $562M. The cost-plus-incentive-fee effort covers fabrication, assembly, check out, inspection and delivery of the first three production B-1 aircraft, plus nonrecurring engineering and tooling. The contract includes additional options for further increments of production tooling and production engineering in Fiscal Years 1978 and 1979.

General Electric was awarded a fixed-price-incentive contract for $79.1M, all of which will be funded during Fiscal Year 1977. The contract runs for three years and provides for procurement of 12 engines and associated tooling to establish a production capability.

The Boeing Company received a contract for $63.8M. The three year cost-plus-incentive-fee contract will provide

offensive avionics for three aircraft, associated integration work, and nonrecurring engineering.

The Defense Systems Acquisition Review Committee (DSARC) completed its review of the program this morning and made its recommendations to the Secretary of Defense. The resulting memorandum from the Secretary of Defense is at Attachment A.

In preparing for this decision, I assembled an independent committee to review the technical aspects of the B-1 development program. They were to report directly to me on any technical risks they might foresee in entering production. The chairman of the committee was Professor Courtland Perkins, President of the National Academy of Engineering.

The Committee was unanimous in its view that a production decision could be made with real confidence from the point of view of technical status. They noted that there are no apparent technical problems that would preclude production as planned.

The report of the committee is at Attachment B.

At the same time, I asked three knowledgeable "outsiders" to review all reasonable alternatives to the B-1. In particular, I asked whether "forces which include some B-1's . . . impose the greatest target damage per dollar expended."

The members of the Panel were:

Honorable Edward E. David, Jr., Chairman of the National Security Council Ad Hoc Strategic Panel and former Science Advisor to the President;

Dr. Michael M. May, of the Lawrence Livermore Laboratory, formerly a SALT negotiator;

Honorable Paul H. Nitze, former Deputy Secretary of Defense and formerly a SALT negotiator.

The panel concluded "that the B-1 should be procured for inclusion in the force." Their report is at Attachment C.

I believe the decision to produce the B-1 is sound. The aircraft represents 15 years of study, design, development, fabrication and exhaustive ground and flight testing. Air Force development contracts were awarded in June 1970 to North American Rockwell (now Rockwell International) to build the B-1 airframe and to the General Electric Company for the plane's F101 augmented turbofan engines. The Boeing Aerospace Company was named the B-1 avionics subsystem interface contractor in April 1972. The AIL Division of Cutler-Hammer, Inc., was awarded a contract to develop the radio frequency surveillance/electronic countermeasures subsystem in January 1974.

Four aircraft are included in the B-1 development program, with three currently in flight testing at Edwards AFB, California. The first aircraft made its maiden flight on

December 23, 1974; to date, the three aircraft have successfully completed 78 flights for over 417 hours of flight testing. The fourth plane will include a defensive avionics subsystem and cost reduction design refinements planned for the production aircraft. It is expected to fly for the first time in early 1979.

During the flight test program, the B-1 has clearly demonstrated its ability to perform its design mission. The plane has achieved a top speed of 2.1 Mach (approximately 1,350 m.p.h.) and a top altitude of 50,000 feet. I have personally observed manual and automatic terrain-following flight at .85 Mach (approximately 650 m.p.h.) down to an altitude of 200 feet above ground.

The B-1 has completed initial flutter, flying qualities and airloads testing. It has released an inert Short Range Attack Missile (SRAM) and two inert MK-82 conventional 500-pound bombs while in flight. The three test aircraft have routinely completed full wing sweep and aerial refuelings with the KC-135 tanker on nearly every test mission. Our success with this program is summarized in the chart of accumulated flying hours shown at Attachment D.

Supporting the B-1 production decision was the most comprehensive design and ground testing program ever conducted in the development of a military aircraft. Over 23,000 hours of wind tunnel testing were completed, using 47 different models in 17 tunnels; more than 680 components

were structurally tested before installation on the aircraft; major sections of the airframe were subjected to both static and fatigue tests, the latter to at least two full lifetimes; a complete airframe underwent static proof load testing to design limit loads; and the plane's F101 engine successfully completed Product Verification testing and was formally qualified for production.

Given this background of successful testing and readiness to enter production, the question remains as to the expected production cost.

The Secretary of Defense, the Deputy Secretaries of Defense, and I have reviewed that question. We conclude that the System Program Office has a demonstrated record of management performance in the R&D program, and that the thorough early testing of the B-1 will pay off in the production phase. Therefore, we conclude that the B-1 program can and should be completed for a total program cost (RDT&E plus procurement) in then-year dollars of $22.8 billion.

Nonetheless, we did examine the sensitivity of force cost-effectiveness to changes in B-1 unit costs that could arise from different learning curves, program stretchouts, or reduced buys. As an example, at Attachment E is a comparison of the effectiveness of various forces if B-1 procurement costs should rise by as much as 25%. It seems

clear, and it was the DSARC's finding, that the B-1 remains the most cost-effective alternative for modernizing the strategic bomber force and that it should proceed to production.

Throughout the past year, I have repeatedly set forth the reasons why we need a B-1. Let me summarize.

The manned bomber is an integral component of the strategic Triad. The Triad poses an insoluble targeting problem for the Soviets, dilutes their defenses, and provides a hedge against technological advances which might negate a single system. Of the Triad forces, only the manned bomber has been tested in combat, and only the bomber provides a reasoned, controlled capability throughout the entire spectrum of conflict.

All of our recent combat experience demonstrates, and our analyses indicate, that manned bombers can penetrate sophisticated defenses. But the Soviet defenses are improving all the time, and the B-52 force is aging. By 1982, when the B-1 is operational, the average age of our B-52s will be about 25 years.

The B-1 will be able to overcome threats which would degrade the B-52 capability in the 1980s and beyond. It will take off faster to escape a surprise attack. It will be hardened against blast and electromagnetic pulse. Its smaller radar cross-section, high speed, and low flight

profile will aid its penetration of air defenses. It will have extremely effective electromagnetic countermeasures. That combination of characteristics is the key to survival in the 1980s.

Although we are convinced of the need for the B-1, we are not unmindful of the Congressional limits on government obligations until February 1977. Furthermore, we appreciate the fact that the new administration will want to preserve several options as it assesses the overall strategic picture. As a result, we have structured a contractual program which will impose a limit on government obligations of a cumulative $87M per month not only until February 1, but through the end of June. We have arranged for future tooling costs to be covered by options rather than the basic contract. The contractual program is summarized by the chart at Attachment F.

The result of all this is to provide the President-elect with a great deal of flexibility.

Let me return to the basic reason for the B-1. The Soviet Union has undertaken a broad and deep effort in the expansion of their strategic forces. To the Congressional Budget Office, this buildup raised "questions concerning the ultimate intentions of the present regime." To me, there is every indication that the Soviets are driving for strategic superiority by the early 1980s. The B-1 is the strategic initiative that can redress that imbalance by the early 80s. It would be irresponsible not to initiate B-1 production at this time. We are, therefore, doing so.

ATTACHMENTS

A. Secretary of Defense Memorandum

B. Perkins Committee Report, excluding classified Appendix B

C. Alternatives Review Panel Report

D. Chart of Cumulative Flying Hours vs. Time

E. Chart, Weapons Delivery Costs, Various Forces

F. Chart of FY 77 $ vs. Month

THE SECRETARY OF DEFENSE
WASHINGTON

3 DEC 1976

MEMORANDUM FOR The Secretary of the Air Force

SUBJECT: B-1 Program

I have reviewed the results of the B-1 DSARC process concluded on 2 December 1976. The DSARC's findings were that the development, test, and production planning prerequisite to B-1 production have been satisfactorily accomplished. Their recommendation is that the B-1 is ready to move into production. Accordingly, the Air Force is authorized to proceed with production of the B-1.

The Air Force procurement cost estimate, reviewed by the DSARC, is the approved procurement funding plan for the B-1.

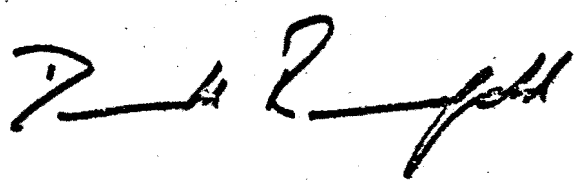
While all preproduction test objectives were successfully achieved, several additional test requirements have been generated which must be included in follow-on development and operational testing. First, B-1 nuclear hardness will be verified using near threat level EMP simulators for the ground alert aircraft configuration. This should be followed by threat level EMP simulator tests for inflight conditions. Second, continued evaluation of B-1 detection range under operational penetration conditions using various methods of detection is considered essential. Third, qualification and retest of the modifications and improvements in alert response time and design mission range should be conducted under operationally representative conditions. Finally, the Air Force will submit a Test and Evaluation Master Plan (TEMP) which addresses all future B-1 testing to DD(T&E) by 1 April 1977 for review and OSD coordination. The TEMP will also include a description of test methods along with the specific reliability and maintainability thresholds that are required to insure an orderly progress toward the established mature systems goals now specified in the DCP.

In addition, the Air Force should:

- Limit obligation of appropriated B-1 funding to a cumulative rate not to exceed $87.0M per month at least until 1 February 1977.

- Further investigate the advantages of transitioning from the planned near term production buildup to a constant work force approach to B-1 production in the outyears.

- Plan for a DSARC review prior to initiating defensive avionics production.



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON, D.C. 20330

7 October 1976

The Honorable Thomas C. Reed
Secretary of the Air Force
Washington, DC 20330

Dear Mr. Secretary

In response to your request, I have convened an ad hoc Technical Assessment Committee to review the technical status of the B-1 weapon system.

The Committee has completed its assignment and enclosed is its report to you. We hope that our efforts will help with your evaluation of this important program.

If we can be of any further use to you in this regard, please do not hesitate to ask.

Sincerely

C. D. Perkins

COURTLAND D. PERKINS
Chairman
Technical Assessment Committee
on the B-1

B

REPORT OF

USAF SCIENTIFIC ADVISORY BOARD

AD HOC TECHNICAL ASSESSMENT COMMITTEE

ON THE B-1

Professor Courtland D. Perkins, Chairman

7 October 1976

BACKGROUND

At the request of the Secretary of the Air Force, an ad hoc Technical Assessment Committee on the B-1 airplane was organized with the support of the USAF Scientific Advisory Board. This Committee was asked to make an independent review of the technical status of the B-1 weapon system to assist the Secretary in his evaluation of the program in anticipation of an imminent DSARC review. Although the time available to the Committee was very short, the members were chosen to include those who either had previous experience with this program or who had considerable contact with other programs of this complexity and thus were able to perform a review within this time scale.

The charge of the Committee and its members is given in Appendix A. The Committee met twice. The first meeting was held in the Pentagon on September 28 and 29 to receive inputs from the Assistant Secretary of the Air Force for R&D, the Air Staff, and the B-1 System Program Office. The second was held at the prime contractor's plant in Los Angeles on October 4, 5, and 6 and included inputs from Rockwell; Boeing, the avionics integrator; and General Electric, the engine company. The Committee also visited Edwards Air Force Base to examine the three B-1 airplanes now flying and to receive a report from the Air Force Test and Evaluation Center team.

INTRODUCTION

An independent technical review of the B-1 program was made three years ago by a committee under Dr. Raymond Bisplinghoff. His committee made comments on the B-1 technical status based entirely on data developed before the first flight. This present committee had the great advantage of real data obtained from the test flights of three airplanes. There was also a large amount of data from structural and fatigue tests, real weight data, and the results of engine tests. All of this made it possible to extrapolate with high confidence to the production configuration.

The Committee was impressed by the fact that the Air Force had learned a great deal from the problems encountered on previous development programs. This was clearly recognized in the areas of structure and power plants. It could also be seen in the timing of the whole development, that permitted sophisticated scheduling of tests; the concept of "fly before you buy;" and early recognition of problems. The moderate pace of the program has permitted an orderly program of design

changes optimizing overall system performance. Changes that are projected for the production configuration are small and reasonably well defined. There are a few nagging problems such as those involved with the wing-root fairing and the horizontal stabilizer hinge-moment limitation. In these cases several changes are being explored and practical solutions are reasonably certain. The time available to develop these solutions before the first production airplane, A/C #5, is adequate.

At this time the B-1 program is a mature technical development and probably better off than any other such system in the experience of the Committee with respect to problems and the date for the first production airplane. The Committee is unanimous in its view that a production decision could be made with real confidence from the point of view of technical status. The airplane flies well, its performance capability is now well known, and there is plenty of time to resolve the few problems that remain. The production decison can concentrate on other factors with respect to this weapon system.

The Committee's reaction to different technical areas of the B-1 development is included in Appendix B. (Classified - removed)

CONCLUSIONS

The Committee concludes that:

1. Many of the subsystems of the B-1, such as the engine and offensive avionics, can be viewed with confidence unusual for a weapon system of this complexity and at this stage of development.

2. There are no apparent technical problems that would prohibit the achievement of a successful production airplane on the proposed time scale.

3. This is a fine airplane of intrinsic versatility which can be exploited for many varied missions currently unidentified.

4. From a technical point of view, the Defense Department can make a production decision on the B-1 with confidence. The final decisions must then deal with other factors.

APPENDIX A

USAF SCIENTIFIC ADVISORY BOARD
AD HOC TECHNICAL ASSESSMENT COMMITTEE

MEMBERS

Prof. Courtland D. Perkins (Chmn)
Mr. Warren E. Anderson
Dr. Alexander H. Flax
Dr. Allen E. Puckett
Brig Gen Emil H. Block
Brig Gen James Dalton

SAB SECRETARIAT

Col James L. Thompson, Jr.
Maj Thaddeus H. Sandford

CONSULTANT

Prof. John F. McCarthy, Jr. (Chmn, ASD Division Advisory Group)

TASK STATEMENT

SUBJECT: Technical assessment of the B-1 program.

BACKGROUND: The Assistant Secretary of the Air Force for Research and Development has requested that a technical review of the B-1 program be conducted under the auspices of the Air Force Scientific Advisory Board (SAB). The purpose is to assess the ability of the B-1 to meet its performance objectives and to assess its technical readiness for a production commitment. In the interest of timeliness, the assessment will be conducted independent of normal SAB review and reporting format.

This review follows previous SAB studies on the B-1 program as listed:

SAB Ad Hoc Committee on the B-1 Program, report dated 4 October 1973.

SAB Ad Hoc Committee on B-1 Structures, letter reports as required during period November 1972 to May 1976.

SAB Ad Hoc Committee on B-1 Aerodynamics, letter reports dated January 1974 and November 1974.

OBJECTIVE: The Technical Assessment Committee will review and evaluate, to the extent possible in the allotted time, the technical aspects of the B-1 development program. Specifically, the Committee will assess the ability of the aircraft to achieve stated performance goals, adequacy of the test program, and adequacy of proposed solutions to problems encountered during testing. Finally the Committee will attempt to assess the technical risk associated with entry into production at this time.

GENERAL OFFICER PARTICIPANT: Brigadier General Emil N. Block, Special Assistant to DCS/R&D for B-1 Matters, HQ USAF.

STEERING COMMITTEE APPROVAL: 21 September 1976

1500 Wilson Boulevard
Suite 1500
Arlington, Virginia 22209

October 8, 1976

The Honorable
Thomas C. Reed
The Secretary of the Air Force
The Pentagon
Washington, D. C.

Dear Mr. Secretary:

You have asked for our views on the need for a modernized strategic bomber force and whether it should include a B-1 component. In this connection, you have asked us to re-examine the alternatives which were earlier examined in the Joint Strategic Bomber Study dated September 1, 1974. In conducting this review, we have examined the documents made available to us by the Air Force, addressed the specific questions concerning the JSBS in your letter of August 30, 1976, and consulted with a number of outside sources whom we consider to be knowledgeable.

It is our opinion that aircraft which, together with their armaments, have an assured capability to penetrate Soviet defenses are an essential element of an adequate U.S. strategic nuclear deterrent. Furthermore, it is our view the United States should have strategic forces sufficiently survivable, that even after an initial Soviet strike, surviving U.S. forces would not be inferior in effective capability to the remaining Soviet forces.

Given the size of the Soviet offensive and defensive forces, and, in particular, given the ability of the Soviets to respond to any U.S. deployment decisions, we have come to the conclusion that the B-1 should be procured for inclusion in the force. We have further concluded that the force should include both B-1's and B-52's and that a variety of armaments should be developed for them so as to maintain penetration capability regardless of Soviet decisions as to their air defenses. Among these armaments, long-range cruise missiles (up to at least 1600 n.m. for the B-52's) and shorter-range missiles sufficiently accurate to destroy hard-point targets should be included.

It takes many years to develop and put into operation a new long-range offensive aircraft system; thereafter it must remain in service for many years. It is not possible precisely to predict the future threats which the other side may pose to the survivability and penetration of such systems. In particular, the other side can react to our deployment decisions by

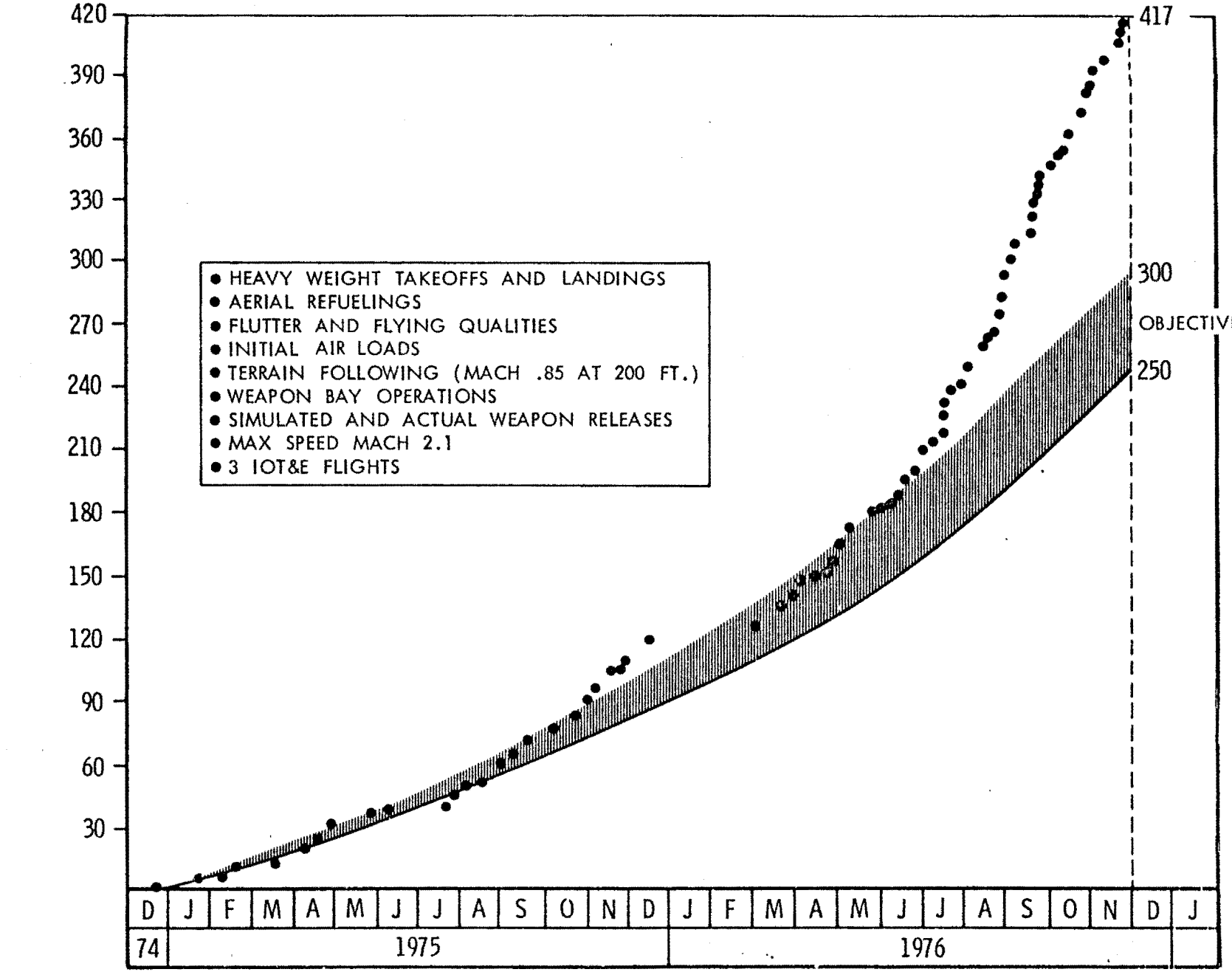
designing its forces in such a way as to take advantage of whatever weaknesses are inherent in the forces we deploy. The effect of this unpredictability is reduced by a degree of diversity in our strategic forces and by high performance in at least one of its components. We believe that the speed at low altitude, ECM potential, low radar cross-section and hardness of the B-1 provide better assurance of flexibly meeting the range of possible threats than do any of the forces which do not include the B-1. Furthermore, we believe the B-1 can give us these superior capabilities at comparable cost and at an earlier date than any of the other systems suggested.

We remain available for discussion of our more detailed and technical comments at your convenience.

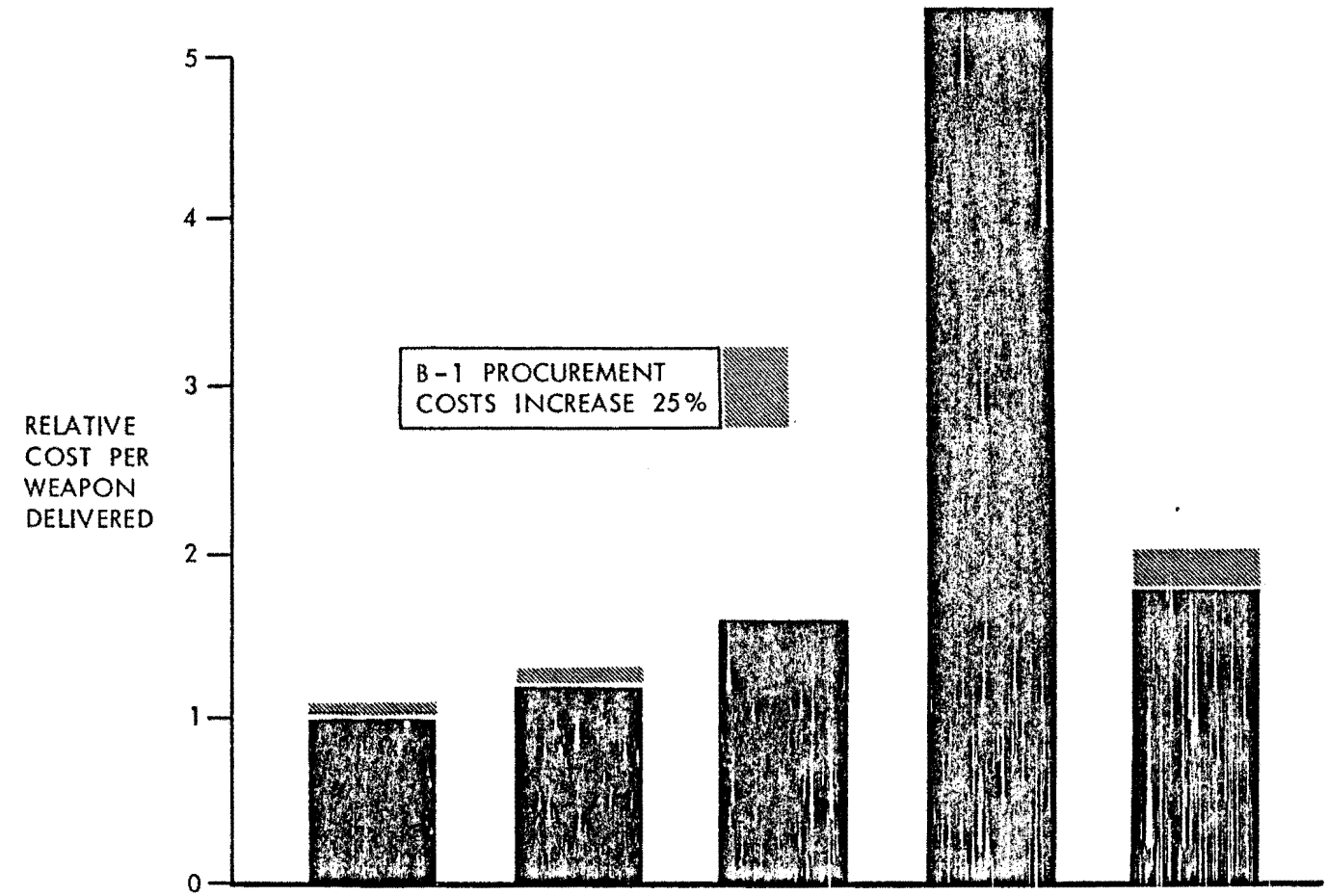
Sincerely yours,

Edward E. David, Jr. | Michael M. May | Paul H. Nitze

B-1 FLIGHT TEST PROGRAM

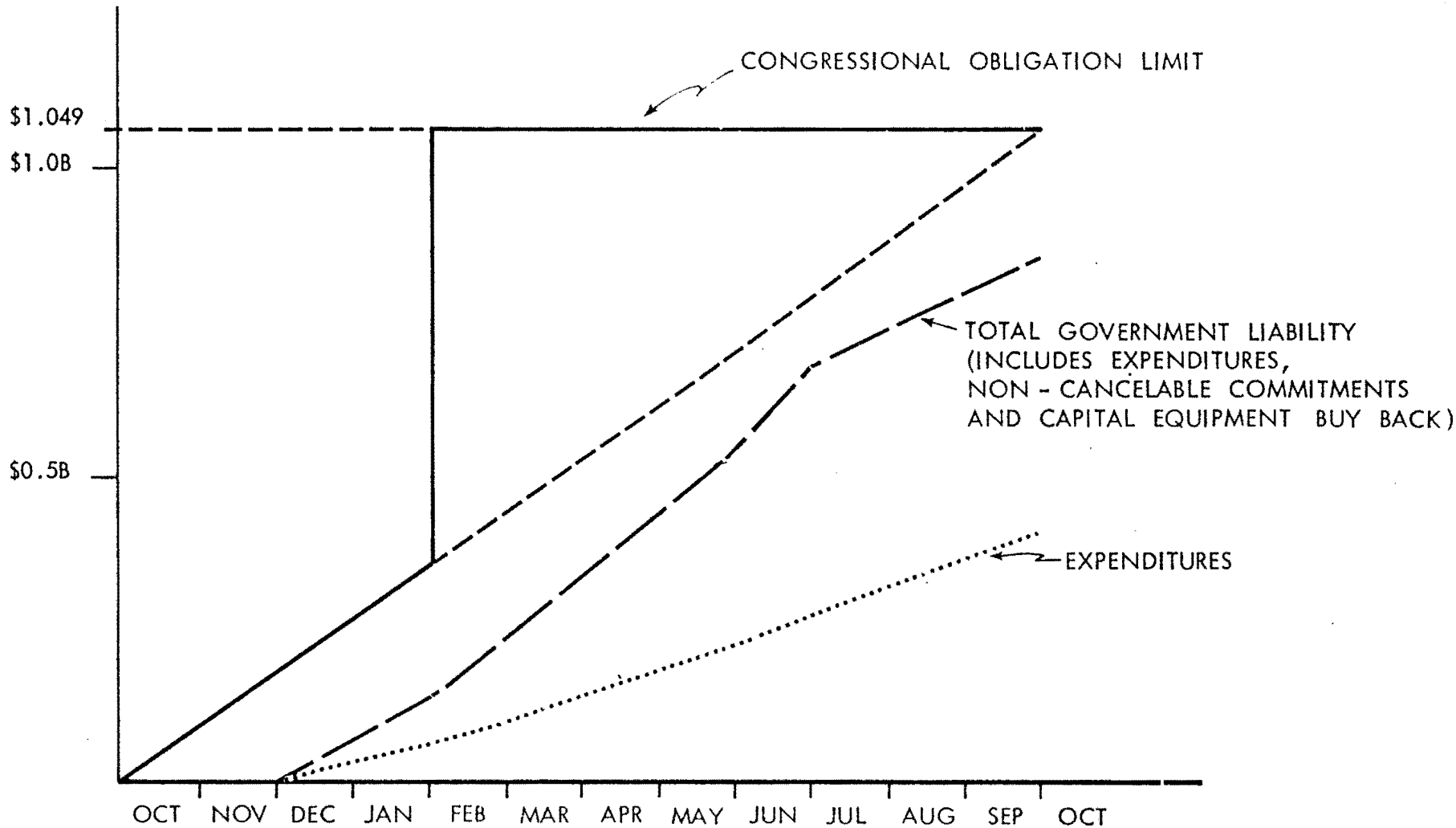


COMPARISON OF DELIVERY COSTS
(UPDATED JSBS FORCE COSTS - FY 77$)



FORCE COMPOSITION	FORCE II	FORCE IV	FORCE V	FORCE VI	FORCE VII
	B - 1	B - 1	CMC - 747	B - 52 H	B - 1
	B - 52 H	B - 52 I (MODIFIED)	B - 52 H	FB - 111 G (STRETCHED)	B - 52 G/H
	KC - 135	KC - 135		KC - 135	KC - 135

FY 77 B-1 PROCUREMENT



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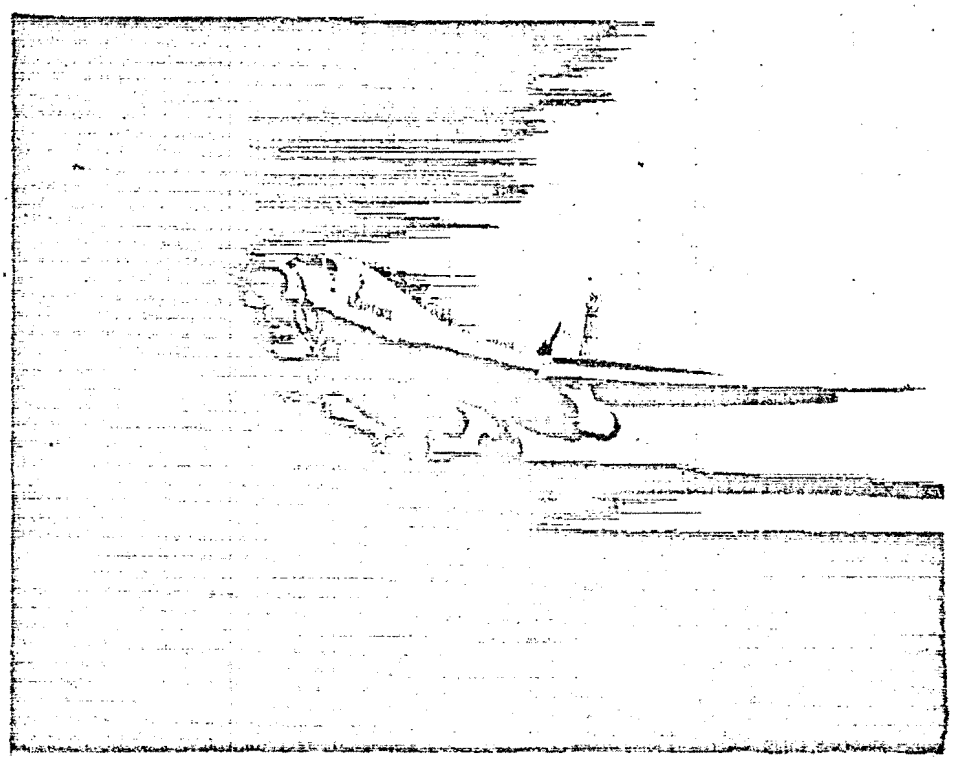
FACT SHEET

UNITED STATES AIR FORCE

of Information, Air Force Systems Command, Andrews AFB, Md., 20334, Tel. (301) 981-4137/8

B-1
STRATEGIC BOMBER



System Description

The B-1 strategic bomber is being developed by the Air Force to modernize its strategic bomber force. As a key element of the nation's strategic Triad of manned bombers, land-based and sea-launched missiles, the new bomber will be able to serve the United States' nuclear deterrence objective through the ability to deliver heavy payloads over long ranges and through a hostile environment.

(more)

BICENTENNIAL 1776-1976 AMERICA

Current as of September 1975

23 MAR 1976

SECRET

PRIME CONTRACTORS: System - Rockwell International Corporation, B-1 Division, Los Angeles, California; Engine - General Electric, Cincinnati, Ohio; Avionics - The Boeing Company, Seattle, Wash; Radio Frequency Surveillance/Electronic Countermeasures Subsystem - Cutler-Hammer, Inc., AIL Division, Deer Park, New York

USING COMMAND: Strategic Air Command

POWER PLANT: Four General Electric turbo fan engines (30,000 lb. thrust class)

COSTS (31 Dec 75 SAR)

- Total Program - $21.4 Billion
- Procurement Unit $72.8 Million
- Program Unit $87.8 Million

MILESTONES:

- Rollout first aircraft - October 26, 1974
- Rollout of aircraft number 3 - January 16, 1976
- First flight - December 23, 1974
- Most recent Flight - March 3, 1976
- Production Decision - November 1976
- First aircraft in inventory - late 1979
- IOC - May 1982

FY 77 BUDGET REQUEST

- Procurement - $1,049.5 Million (3 aircraft)
- RDT&E - $482.7 Million

- CREW ESCAPE MODULE
  - Will be used on first three R&D aircraft. Will not be on AV #4 and production aircraft.
  - Replaced by four ejection seats for primary crew; bottom bail-out for two instructors.
  - Module test program will continue at minimum level necessary to support the RDT&E aircraft.
- FLIGHT TEST PROGRAM
  - Total time flown as of 17 March 1976 - 126 hours, 26 minutes (26 flights) (Includes four hours and 38 minutes at supersonic speeds.)

A medium gross weight bomber powered by four 30,000-pound-thrust-class ugmented turbofan engines, the B-1's three large weapons bays will provide t the flexibility to carry nuclear air-to-surface missiles, nuclear or onventional gravity bombs, mines, other weapons or fuel as required by arying mission requirements. It will carry a crew of four.

While only two-thirds the size of the B-52, the B-1 is designed to arry nearly twice the payload. Its variable geometry, or "swing," wing ill enable it to fly efficiently at supersonic speeds at high altitudes nd at high subsonic speeds at treetop altitudes. This swing-wing feature ill permit faster takeoff from much shorter runways. The aircraft will ave greater hardness to the effect of a nuclear blast, far faster penetration peed, lower penetration altitude and a greatly reduced radar cross section ompared to the B-52.

The B-1 will also:

Through a combination of rapid acceleration, short runway require- ent, subsystem design and improved hardness to nuclear effects, reach a afe escape distance from its launch base much faster than the B-52. This ignificantly improves its survivability should an enemy attempt a surprise CBM or SLBM attack.

Takeoff in a much shorter distance and will thereby be able to use bout 150 more existing runways than are available to the B-52. This rmits greater dispersal and faster reaction by the Strategic Air Command SAC) alert-bomber force.

Have a greater capability to penetrate an enemy's defenses. This tems from higher speeds at lower altitudes as well as advance electonic ountermeasures and a small radar cross section.

evelopmental Progress

Today's B-1 is the product of over 14 years of studies, design, develop- nt, fabrication and exhaustive testing. Air Force developmental contracts re awarded in June 1970; North American Rockwell (now Rockwell International rp.) was selected to build the B-1 airframe and General Electric the F101 urbofan engines. Four aircraft currently are included in the developmental rogram.

Construction of the first aircraft was completed in Rockwell's final- ssembly facility at Air Force Plant 42, Palmdale, California, and was olled out there on October 26, 1974. First flight of the B-1 was success- ully completed on December 23, 1974, with a 1 hour and 18 minute test flight rom Palmdale to nearby Edwards AFB.

(more)

Work on the second B-1 aircraft is proceeding on schedule with fabrication, assembly and mating complete on most of its major structural sections. The aircraft completed eight months of structural proof loads testing at Lockheed Aircraft Corporation's Palmdale facility in late June, and is currently undergoing system installation. It will serve primarily as the structural flight test aircraft, with first flight currently scheduled for mid-1976.

The third B-1 aircraft has completed assembly and the mate of its structural sections at Palmdale, and is undergoing final subsystem installation and checkout. It will be used for integration and flight testing of the B-1 avionics system, and is expected to fly in early 1976.

Development of the fourth B-1 commenced on August 15, 1975, with the award of an Air Force contract amendment to Rockwell International. The aircraft will include cost reducing design refinements to the forward fuselage (ejection seats instead of the current crew escape capsule) and engine nacelles, and redesign of the forward fuselage and aft avionics bay to accommodate defensive avionics equipment. It will be used for flight test of the B-1 defensive avionics and is currently expected to fly for the first time in early 1979.

General Electric's F101 turbofan engine successfully completed its Preliminary Flight Rating Test (PFRT) on April 16, 1974. It is currently undergoing Product Verification (PV) testing and is expected to be tested sufficiently to verify readiness for initial production and service by the fall of 1976.

If a production go-ahead is given in late 1976, the first production B-1s could enter the Air Force inventory in mid-1979. Initial operational capability with SAC would then occur in late 1981.

Flight Test Program

First flight of the B-1 marked the beginning of several years of flight testing, which will later include the other B-1 test aircraft. This flight test program, in keeping with the Department of Defense "try-before-buy" policy, will be one of the most comprehensive ever developed for a military aircraft. It will include nearly two years of extensive test data to support a production decision currently scheduled for November 1976.

Test flights from Edwards AFB are being scheduled up to three times per month. This allows time for Air Force and Rockwell engineers to assimilate the extensive test data gathered on each flight.

Flights during the early portion of the program were built one upon the other to clear the B-1 for initial operation and performance of its primary penetration mission. This will require the aircraft to fly at terrain-following altitudes at nearly the speed of sound.

(more)

The B-1 has accumulated over 60 hours of flight testing, including nearly 2 hours at supersonic speeds. Flight test accomplishments to date include full wing sweep, aerial refuelings, a top speed of 1.23 Mach (approximately 873 mph) at 25,000 feet, maximum weight takeoff, assisted and unassisted engine airstarts, initial weapons bay door operation, maximum speed landing gear operation, and flutter and flying qualities evaluations.

Environmental Impact

Development of the B-1, from the program's inception, has been in consonance with all Federal environmental laws, executive orders, regulations and with criteria and standards published by the Environmental Protection Agency. Every effort is being made to minimize the effects of the aircraft on the environment.

The B-1's engines incorporate new technology that makes them among the cleanest and most efficient ever built. Tests indicate that the F101 engine has a combustion efficiency of 99.5 percent and is virtually smokeless. Engine emissions are lower than other aircraft and much lower than other operational bombers.

While specific fuel consumption is classified, the B-1 will use about 25 percent less fuel than the B-52 for the same mission. And by spending more time on alert and less time in the air, the B-1 force will consume less than one-quarter of the fuel used by today's force of B-52s. Fuel savings are expected to be close to a half-billion gallons a year.

Noise levels of the B-1, when its afterburners are not in use, are considerably lower than those of other military aircraft; they compare favorably with the newest commercial aircraft. Afterburners noise levels are comparable with other aircraft.

The B-1 is capable of flying at supersonic speeds, and therefore can cause sonic boom. Such impacts are expected to be minimal, however, since only a very small percentage of the B-1's flight time will be at supersonic speeds. Supersonic flights will be limited to established corridors which will minimize disturbance to population centers and national park areas.

The aircraft is not expected to have an impact on the stratospheric environment because of its low emission levels and the small amount of time flown at those altitudes.

Funding

Fiscal Year 1974 and Prior Years:	$1.582 billion
Fiscal Year 1975:	$445 million

(more)

Cost Data

In the absence of inflation, B-1 costs have changed very little since the program went on contract in 1970. The initial estimate of $9.9 billion is now $11.0 billion--a 12 percent increase or about 2 1/2 percent a year. Inflation through calendar year 1974 has added $4.5 billion to the total program costs making it $15.5 billion in 1975 dollars. If inflation is forecasted through program completion in the mid-1980s, total program cost is estimated to reach $20.6 billion in "then-year" dollars.

The following tables show current program cost estimates in "no-inflation" 1970 dollars, and in forecasted "then-year" dollars. (Procurement unit cost is the average cost to produce an aircraft [airframe, engines, avionics and other government-furnished equipment], the peculiar cost to deploy one aircraft [ground support equipment, training equipment, etc.] and the cost of initial spares. Program unit cost includes the development cost amortized over the total number of aircraft to be built.)

Program Cost Estimates	$70	$75	$Then Year
R&D	2.79B	3.62B	3.86B
Production	8.23B	11.90B	16.74B
Total	11.02B	15.52B	20.60B

Unit Cost Estimates	$70	$75	$Then Year
Procurement Unit	34.3M	49.6M	69.8M
Program Unit	45.2M	63.6M	84.4M

The bulk of increases to the Air Force B-1 cost estimate (some 88 percent) has been due to the effects of economic inflation. Forty-seven percent of the total program cost estimate is inflation.

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B-1 Dimensions/Performance

Maximum Speed:	Supersonic speed at high altitudes; high subsonic at treetop altitudes
Range:	Intercontinental (unrefueled)
Tanker Support:	Existing KC-135 tankers
Crew:	Four: pilot, copilot and two systems operators (provisions for two instructors)
Maximum Gross Takeoff Weight:	350,000-400,000 pounds
Weapons Payload:	Approximately twice that of the B-52 24 SRAM Internally or 75,000 pounds of bombs Internally
Length:	151 feet
Height:	34 feet
Wing Span	
Forward:	137 feet
Swept:	78 feet

ntractors

System:

Rockwell International Corporation, B-1 Division, Los Angeles, California

Engine:

General Electric Company, Aircraft Engine Group, Cincinnati, Ohio

Avionics Subsystem Interface:

The Boeing Company, Aerospace Company, Seattle, Washington

Radio Frequency Surveillance/Electronic Countermeasures Subsystem:

Cutler-Hammer, Inc., AIL Division, Deer Park, New York

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Program Management

Air Force Systems Command's (AFSC) Aeronautical Systems Division, Wright-Patterson AFB, Ohio, is responsible for overall B-1 system development. Major General Abner B. Martin is the B-1 Program Director.

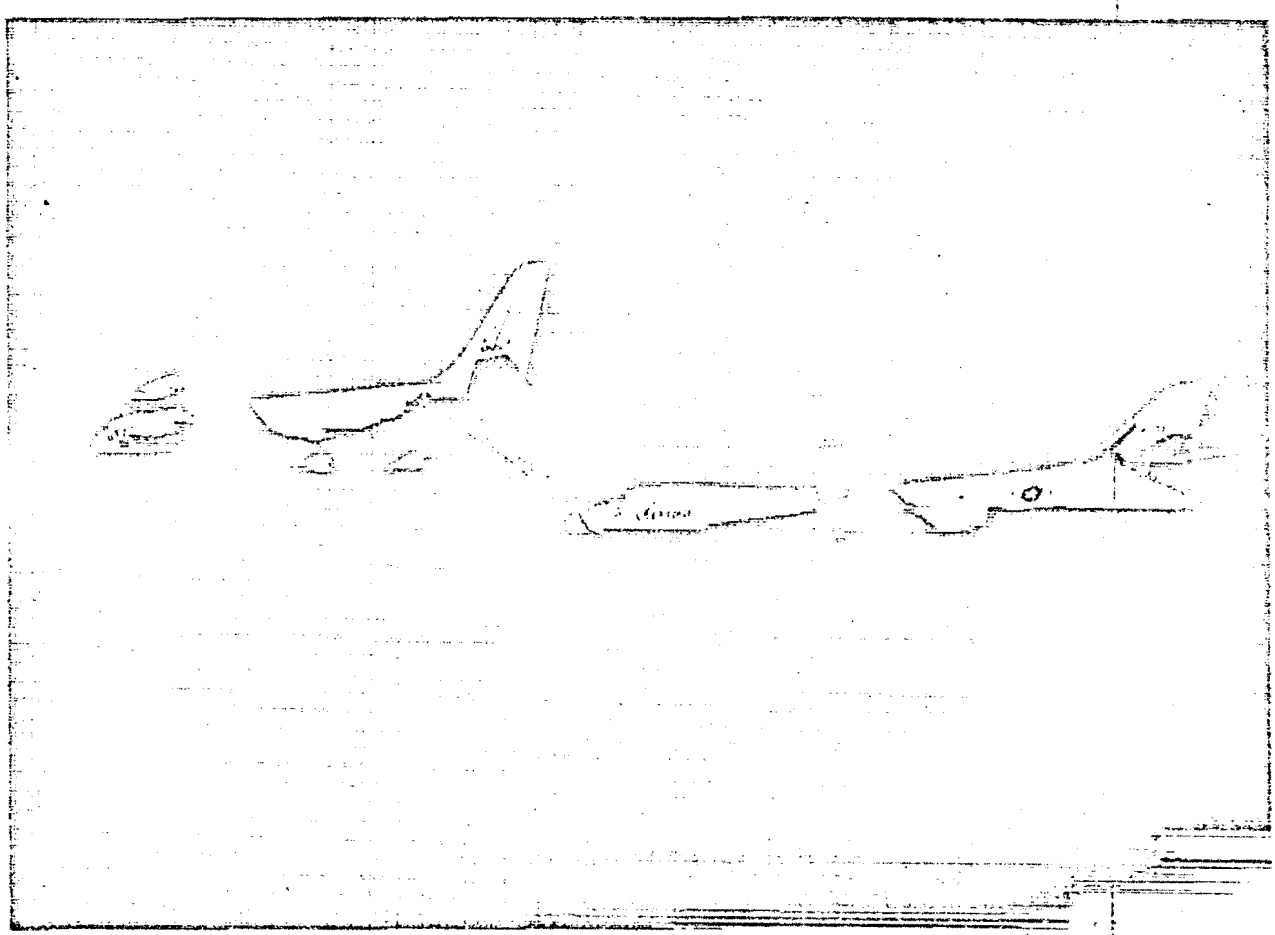
On-site management of B-1 contracts is provided by Air Force Plant Representatives under the direction of AFSC's Air Force Contract Management Division, Kirtland AFB, New Mexico.

FACT SHEET

UNITED STATES AIR FORCE

of Information, Air Force Systems Command, Andrews AFB, Md., 20334, Tel. (301) 981-4137/8

THE B-1 BOMBER: MYTH AND FACT



Current as of August 1975

THE B-1 BOMBER: MYTH AND FACT

Although many of the arguments against the B-1 bomber are old, they benefit from a recurrent theme and could unduly influence those who do not have the facts. Some of those arguments are rather far fetched, such as the impact of the B-1 on the ozone layer (the B-1 would not normally fly that high; it is primarily a low-altitude bomber). Others show a lack of understanding in the important areas of what makes deterrence work, why we need the B-1 and why its cost is reasonable. The following information should eliminate some of the confusion:

Myth: Program is poorly managed as evidenced by cost overruns.

Fact: Management of the B-1 is one of the best in major weapon system development. The projected total program cost increase in 4 1/2 years, exclusive of inflation, has been about 12 percent. Inflation, much of it estimated into the mid-80s, accounts for 88 percent of the increase in cost.

Myth: B-1 is most expensive strategic program to date.

Fact: In comparable dollars, the cost of the B-52 force which had a greater number of aircraft was half again as much as the cost of B-1 force which will have greater overall capability.

Myth: Bombers are obsolete in the missile age.

Fact: The combination of missiles and bombers precludes a disarming surprise attack. The US bomber force balances the SALT numerical disparities in missiles and missile throwweight. Soviets recognize effectiveness of US bombers and expend the equivalent of approximately $5 billion a year to defend against bombers.

Myth: An alternative could do the job cheaper, i.e., a stand-off air launched cruise missile; a re-engined B-52; or a stretched FB-111.

Fact: The OSD Joint Strategic Bomber Study and supplemental analysis concluded that the B-1 is the most cost-effective bomber--by a wide margin--for the 1980s and beyond. The GAO review of the study stated its "results now provide the basis for more informed consideration of the strategic bomber question by the Congress." Futhermore, the B-1 takes advantage of US bomber technology and bomber force management.

Myth: The B-1 does not represent a significant advance in aircraft technology.

Fact: The B-1 combines the best features of earlier bombers, i.e., the

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B-47, B-52, B-58, RS/B-70, and FB-111, with new technology. The design is based on millions of flying hours and more than 18 years of operational experience in jet bombers. That experience provided the foundation for designing the most suitable and cost-effective bomber for the strategic mission.

The new technology provides significant advantages, such as:

a. The first large aircraft designed specifically to operate with high survivability in a nuclear environment. Quick reaction, rapid acceleration and structural hardness permit the B-1 to fly out and survive a surprise attack.

b. It is big enough to carry large numbers of nuclear weapons on intercontinental missions, yet it has a small radar return which minimizes detection and maximizes the effectiveness of electronic countermeasures.

c. It is being equipped with advanced technology electronic countermeasures which can be quickly reprogrammed to counter new radars and the weapons they guide.

d. It is the first large aircraft specifically designed with the dual capability to penetrate either at near sonic speed at very low altitude, or at supersonic speed at high altitude. This advanced technology forces an adversary to develop and deploy systems against a wide range of penetration tactics.

e. It is designed to maintain high alert rates. The technology of on-board test systems provides on-the-spot trouble shooting and timely maintenance analysis for quick aircraft turn-arounds, high sortie rates, and less costly but more efficient aircraft maintenance. High alert rates significantly reduce the cost of keeping deterrent weapons on alert.

Myth: The B-1 would be obsolete when deployed, and another new bomber would be needed.

Fact: The B-52 illustrates how a well designed strategic bomber can maintain effectiveness over a long life. In comparison with the strategic missile force, the life of the B-52 has spanned the Atlas D, E, and F; the Titan I and II; Minuteman I, II and III, and now advanced research on the MX. During this same period of time, the Polaris with the A-1, A-2 and A-3 missiles; the Poseidon; and now the Trident and its missiles are also in development. In contrast, the B-52, plus a small number of B-58s and FB-111s as well as some air-to-surface systems such as the Hound Dog and SRAM, has continued to provide a very substantial part of our strategic force. With a life span in excess of 30 years, the investment in the B-1 bomber can be amortized over many, many years of effective use as a deterrent to nuclear attack. Today, the B-1 represents the most cost-effective design

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of a strategic bomber. It incorporates those advanced technologies which assure its effectiveness. Equally important, the B-1 has growth potential designed into it, as did the B-52, to accommodate the uncertainties of future enemy developments.

Myth: The resources being claimed for strategic forces are increasing.

Fact: Since the early 1960s, when the United States started publishing its Five Year Defense Program, there has been a clearly projected constraining trend in U.S. strategic forces. In the last decade, as the DOD budget has taken less and less of the Federal budget, the strategic forces have received less of the DOD budget and less of the Air Force budget. In FY 76, seven cents of each DOD dollar (or 16 cents of each Air Force dollar) goes to strategic forces.

Succeeding Five Year Defense Programs have shown decreases in major planned deployments. Initial plans called for 2,000 Minuteman missiles, then 1,600, and finally 1,000. Initial plans called for more than the 41 nuclear subs currently deployed. The United States stopped at 54 Titan IIs, clearly signaling a shift to small throwweight missiles--and this was before MIRVing. The B-70 and Skybolt were cancelled. Ironically, the Soviets--who had little hope of achieving strategic parity in the 1960s--could calculate achievable requirements for parity (or superiority) from our self-restrained Five Year Defense Plans. Soviet capabilities are now essentially equivalent to those of the United States.

Myth: SALT agreements obviate the need for the B-1.

Fact: The Interim Agreement from SALT I established lower numerical limits for U.S. missile forces than for the Soviets. This asymmetry was in part compensated for by the larger U.S. bomber force. The SALT II agreement to be formulated based on the Vladivostok accord will place a ceiling on the total number of strategic delivery systems. The inclusion of bombers in SALT II limits has an additional impact on cost-quantity tradeoffs and increases the importance of obtaining higher performance from each unit deployed--particularly in light of U.S. objectives to reduce the ceiling. Within the numerical constraints, quality should be emphasized for U.S. forces. Hence, the B-1, with its high unit performance, can be viewed both as the means of maintaining parity within the ceiling and as the means of facilitating reduced ceilings on strategic forces. The fact that heavy bombers represent a significant portion of the U.S. strategic delivery systems makes it important that heavy bombers be optimized for maximum effectiveness.