

149645

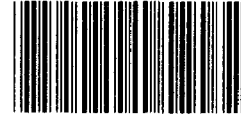


United States
General Accounting Office
Washington, D.C. 20548

National Security and
International Affairs Division
B-254200

July 23, 1993

The Honorable John F. Kerry
United States Senate



149645

Dear Senator Kerry:

In February 1993, you asked us to identify the net costs associated with procurement, support, and operation and maintenance of the last five B-2 bombers. Specifically, we determined

- the amount of funds that will have to be obligated to acquire and make initially operational the last five B-2s;
- the actual dollar amount of all termination costs the government will be required to pay to contractors and other costs the government will be required to pay if it decided not to acquire the additional five B-2s;
- the amount of funding required to provide ground and support facilities solely for these five bombers which will not be acquired or constructed if the five B-2s are not acquired; and,
- the best estimate of the annual marginal costs for operation and maintenance of the five B-2s if they are acquired and any other direct costs exclusively attributable to those five B-2s.

BACKGROUND

Through fiscal year 1993, the Congress authorized the Air Force to develop and procure 20 operational B-2 bombers at an estimated cost of \$45.3 billion, including military construction. The Air Force has awarded contracts to the Northrop Corporation to deliver 15 B-2s--5 to be reworked and refurbished from the test program and 10 production aircraft.

The Congress, for fiscal years 1990 and 1991, approved the beginning of work on additional aircraft, authorizing and appropriating advance procurement funding. The Congress authorized the acquisition of the 16th aircraft for fiscal year 1992 and the 17th through 20th aircraft

GAO/NSIAD-93-253R B-2 Costs

050713/149645

for fiscal year 1993, appropriating \$4,986 million to complete procurement of those five aircraft and provide necessary ground and support equipment and facilities.

The Congress has restricted the obligation of \$2,300 million of the funds appropriated for B-2 production for fiscal years 1992 and 1993 (\$500 million for fiscal year 1992 and \$1,800 million for fiscal year 1993) until (1) the Secretary of Defense certifies that the aircraft meet certain performance requirements and issues a report describing the total cost to develop and produce 20 operational aircraft and (2) the Congress approves a separate act to make the funds available for obligation.

In response to congressional inquiries, the Air Force estimated that \$1,800 million of the fiscal year 1992 and 1993 appropriations for B-2 production would be unobligated in December 1993 if the Congress were to decide in September 1993 to terminate the program at 15 aircraft. The Air Force also estimated it would have to pay \$1,200 million of costs to complete the 15 aircraft program. It believes obligation of the balance--\$600 million--could be avoided if the last five aircraft are not acquired.

RESULTS IN BRIEF

Our review indicates that buying 15 instead of 20 B-2s would save the government at least \$1,242 million. For example, about \$1.1 billion of appropriated funds associated with manufacturing could be avoided if a decision were to be made in September 1993 not to acquire the last five B-2 bombers. This includes consideration of all termination costs. In addition, procurement of about \$100 million of spare parts could also be avoided, as could military construction costs of about \$42 million.

Procurement of certain items of aircraft support may also be avoidable in future years because less support equipment is needed to maintain 15 B-2s than is required to maintain 20 B-2s. However, the Air Force's cost estimates were not sufficiently firm to determine what support costs may be avoidable. The Air Force estimates that operations and maintenance costs over the B-2's estimated 25 year life-cycle may also be reduced by as much as \$61.9 million per year, or a total of \$1.55 billion, if the last five B-2s were not to be acquired.

UNOBLIGATED BALANCES ASSOCIATED
WITH PROCUREMENT OF THE LAST
FIVE B-2S

Most of the costs associated with the last five B-2s are those for manufacturing the aircraft, or recurring flyaway costs¹. The Air Force designated \$4,516.5 million as recurring flyaway costs for the final five B-2 bombers authorized by the Congress for fiscal years 1992 and 1993. It estimates that \$1,465 million was necessary to manufacture the aircraft authorized for fiscal year 1992 and \$3,051.5 million was necessary to manufacture the four aircraft authorized for fiscal year 1993, for a total cost of \$4,516.5 million. It designated the balance of funds appropriated for B-2 production for fiscal years 1992 and 1993 to pay support costs. It has obligated \$1,701.8 million through June 1993 for long lead effort relating to recurring flyaway costs for the last five aircraft, leaving an unobligated balance of \$2,814.7 million at June 1993. These aircraft were 38 percent to 57 percent complete in June 1993, and final assembly activities were beginning on the aircraft.

TERMINATION AND OTHER COSTS
THE GOVERNMENT WILL PAY

The Air Force could be required to bear as much as \$1,709.4 million of additional costs beyond the \$1,701.8 million obligated through June 1993 even if the decision were made to terminate the program at 15 operational aircraft by September 30, 1993. These costs are listed in table 1, and are explained further in the paragraphs that follow.

¹Recurring flyaway costs include all costs associated with manufacturing the aircraft such as airframe, engine, subsystems, and sustaining labor cost. According to Department of Defense policy, these costs are to be fully funded in the fiscal year in which aircraft are authorized by the Congress.

Table 1: Estimated Government Costs If The Program Were Terminated At 15 Operational Aircraft at September 30, 1993

Dollars in millions

Explanation of cost	Amount
Obligation to cover government liability for cost incurred by the contractor from June to September 1993	\$187.4
Estimated additional costs to be incurred during period of terminating effort (September to December 1993)	200.0
Costs associated with idle facilities and business base clauses in production contracts	512.0
Sustaining labor costs to maintain capability to retrofit aircraft	500.0
Overhead costs to provide capability to complete program activities through retrofit	110.0
Cost to dispose of aircraft and pay for additional idle facilities	200.0
Total	\$1,709.4

June-September 1993 Obligations

The Air Force has followed the practice of obligating funds on a quarterly basis to cover the cost of continuing long lead effort on the five aircraft. The practice is to obligate sufficient funds in advance to cover the incurred costs of the contractor's efforts on the aircraft during the upcoming quarter, as well as the government's liability for the costs of noncancelable commitments made by the contractor in the course of continuing the long lead effort. The Air Force, in calculating an anticipated unobligated balance of \$1,800 million by December 1993, estimated that \$236 million would have been required for the period of July through

September 1993. Since that estimate was prepared, the Air Force has obligated \$187.4 million for long lead activities on the five aircraft for that period.

Additional Costs During Termination Period

Air Force officials estimate that time would elapse from an announcement in September 1993 to terminate procurement, until contractual actions and notifications could be taken and become effective to terminate the effort involving the last five aircraft. They believe that a termination decision in September 1993 would necessarily require the contractor to notify employees of their pending termination under the provisions of the Worker Adjustment and Retraining Notification Act (29 U.S.C. 2101) and that final actions to terminate the effort would not take place until December 1993. On the basis of the contractor's forecasts, we estimate that the Air Force will require \$200 million during this time to cover contractor expenditures. Funds have already been obligated to cover termination costs for the long lead effort as estimated by the contractor through September 1993.

Reimbursement for Idle Facilities

The Air Force estimates that \$512 million will be required to pay costs associated with certain clauses in the B-2 production contract that require the Air Force to reimburse the contractor for idle facilities and business base changes resulting from prior reductions in quantities to 20 aircraft. When the B-2 program was reduced from 75 to 20 aircraft, these clauses included in the existing contracts made the Air Force liable for paying certain costs that the contractor could not recover because of the curtailment of production. The Air Force has not obligated funds to cover its liability under the clauses.

Sustaining Labor Costs

The Air Force stated that \$500 million of unobligated funds will be required to keep a contractor sustaining labor force in place until the retrofit program is completed, even if the last five aircraft are not completed. It estimates that \$600 million is required to provide sustaining labor to complete the current 20

aircraft program. Air Force officials assume that \$100 million could be saved if the last five aircraft were not completed because the overall B-2 program schedule, including retrofit, would be reduced by 3 months. The Air Force stated that the retrofit schedule cannot be accelerated because of concurrency with the flight test program. The retrofit program is currently scheduled to begin in 1996, approximately one year before the end of the test program. Air Force officials stated that to begin retrofitting aircraft any earlier would risk unplanned changes resulting from ongoing flight tests. Because funds have not been obligated to cover the estimated \$500 million of sustaining labor costs, the Air Force has included that amount as a cost of continuing B-2 program activities.

Overhead Costs

The Air Force included \$500 million for future overhead costs in its estimate for 15 aircraft based on information provided by the contractor. Because the Air Force could not explain the methodology used to arrive at this estimate, we visited the contractor. On the basis of our discussions with the contractor, we believe that about \$110 million of the \$500 million of overhead costs identified by the contractor, and used by the Air Force in its estimate, are likely to be incurred.

Contractor officials advised us that they provided data to the Air Force that indicated future overhead costs would be \$500 million whether 15 or 20 aircraft were procured. However, they advised us that many of those overhead costs vary with the direct labor used to produce the aircraft. Because direct labor is the most significant category of cost that would be reduced if the last five aircraft were not to be acquired, contractor officials advised us that the variable overhead associated with that labor would probably also not be incurred.

Contractor officials advised us that direct labor costs that will not be incurred if the last five aircraft are not acquired would be about \$600 million. Variable overhead items such as direct labor fringe benefits, indirect labor, and overtime wages components are priced at about 65 percent of direct labor dollars. Therefore, we concluded that about \$390 million of the overhead

costs in the contractor's estimate would not be incurred if the last five aircraft are not acquired.

Air Force officials disagreed with our analysis, indicating that the overhead reduction was intended to be included in the \$600 million reduction of direct labor costs. Since the Air Force could provide no further information on its analysis, we relied on our discussions with the contractor to determine our estimate of the costs that would likely be incurred.

Disposal

The Air Force estimates that \$200 million will be required to dispose of incomplete aircraft and to reimburse the contractor for idle facilities costs associated with termination of the effort on the last five aircraft. The Air Force stated that this was a preliminary estimate. It is based on anticipated costs for disposal of all pieces and parts associated with the final five aircraft and anticipated claims by the contractor that could result in added payments for idle facilities based on unused factory space. The Air Force stated that more time would be needed to develop a more refined estimate of these costs.

POTENTIAL SAVINGS IN SUPPORT AND MILITARY CONSTRUCTION

The Air Force estimated that \$142 million of initial spares and military construction costs could be avoided if the last five aircraft were not acquired. It estimates that initial spares costing about \$100 million would not be needed. Further, the Air Force is planning to construct four shelters at Whiteman Air Force Base, Missouri, and modify an existing facility at Tinker Air Force Base, Oklahoma, in fiscal years 1995 and 1996 at a cost of \$42 million. This \$42 million cost is specifically related to the last five aircraft.

Overall, the Air Force estimated support costs for 20 operational B-2 bombers at \$4,696.4 million. Of this amount, \$2,794.4 million, or almost 60 percent, is requested in fiscal years 1994 and beyond. This estimate includes the cost for peculiar support equipment, the development of technical orders to maintain the aircraft, training devices, spares, interim contractor support, software support, and other government cost.

Because the number of B-2s that DOD plans to acquire has changed significantly, the Air Force has not yet provided a support concept that clearly identifies the requirement for this funding. Therefore, except for the \$100 million in initial spares identified by the Air Force, we cannot determine a specific amount of funding associated with the last five aircraft; however, we believe that the government should realize some savings in funding for peculiar support equipment because the equipment needed to support 15 aircraft should be less than required to support 20 aircraft.

POTENTIAL OPERATIONS AND
MAINTENANCE SAVINGS

The Air Force currently estimates that the cost to operate and maintain each B-2 in a 20 bomber program will be \$34.79 million a year. It estimates that each B-2 in a 15 aircraft program will cost \$44.98 million a year. Thus, operation and maintenance of 20 aircraft would cost \$556.64 million per year (16 assigned aircraft), while costs for 15 aircraft would be \$494.78 million per year (11 assigned aircraft), a difference of \$61.86 million. Over a 25 year life-cycle, 20 aircraft are estimated to cost \$1.55 billion more to operate and maintain than 15 aircraft.

OBSERVATION

According to our analysis, the Air Force does not have sufficient unrestricted and unobligated funds to acquire the 15 operational aircraft if the Congress were to decide in September 1993 that procurement of the last five aircraft should be terminated. Of \$4,516.5 million available from fiscal years 1992 and 1993 for manufacturing aircraft, \$3,411.2 million has been obligated or would need to be obligated even if the last five aircraft are not acquired. As a result, the Air Force may need to obligate approximately \$1,195 million of the \$2,300 million currently restricted from obligation by statute until certain conditions are satisfied even if the last five aircraft are not completed. According to the Air Force estimate, this figure would be greater.

SCOPE AND METHODOLOGY

To compute the unobligated balances available to acquire and make initially operational the last five aircraft, we reviewed B-2 program financial documents and discussed funding plans with program officials. Our analysis of funding for ground and support facilities was accomplished by reviewing the Air Force's fiscal year 1994 budget submission for procurement, construction, and operations and maintenance costs and discussing these figures with appropriate B-2 program officials. We examined production contract clauses and modifications to determine termination costs on the program.

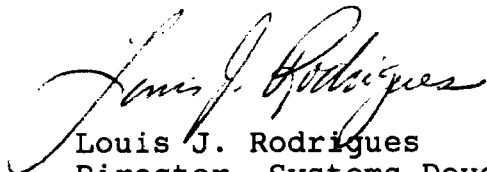
We reviewed program data and records and interviewed officials at the B-2 System Program Office at Wright-Patterson Air Force Base, Ohio; the Northrop B-2 Division, Pico Rivera, California; Tinker Air Force Base, Oklahoma; and the Office of the Secretary of Defense and Air Force Headquarters, Washington, D.C. We performed our review from February to June 1993 in accordance with generally accepted government auditing standards.

We discussed a draft of this report with officials of the B-2 System Program Office who prepared the Air Force's estimate of the savings available if the last five aircraft were not to be acquired. Their comments were incorporated in this report as appropriate.

- - - - -

Please contact me on (202) 512-4841 if you or your staff have any questions concerning this information.

Sincerely yours,



Louis J. Rodrigues
Director, Systems Development
and Production Issues

(707011)