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MILITARY AIRLIFT

C-17 Settlement Is Not a Good Deal

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

The Honorable Ronald V. Dellums
Chairman, Committee on Armed
Services
House of Representatives

This report responds to the requirement in the fiscal year 1994 conference report on the Department of Defense's (DOD) authorization act. It deals with the status of the C-17 program, with emphasis on DOD's proposed settlement agreement with McDonnell Douglas, the prime contractor on the C-17 aircraft. It also discusses DOD's efforts to identify alternatives to the C-17 program.

Background

For several years our office and others have been expressing concern about cost overruns, schedule delays, and technical problems associated with the C-17. The Fiscal Years 1993 and 1994 Defense Authorization Acts required DOD to conduct a special Defense Acquisition Board (DAB) review and to report on the C-17's requirements, its cost and operational effectiveness, and its affordability. Additionally, the Under Secretary of Defense for Acquisition and Technology convened the Defense Science Board (DSB) to evaluate the C-17 program and to report to the DAB on what had to be done to put the program back on track. The DAB conducted its review between August and December 1993.

On December 15, 1993, the Secretary of Defense and the Under Secretary, noting the continuing problems with the C-17 program, announced their decision to stop the program at 40 aircraft unless the contractor made significant management and productivity improvements. They also outlined a proposal to settle C-17 issues between the government and the contractor that includes provisions for these improvements. On January 6, 1994, McDonnell Douglas agreed to DOD's proposed settlement.

Results in Brief

Rising program costs, less than anticipated performance, and lengthy delays in this concurrent acquisition program raise serious doubts about

the C-17's cost-effectiveness and undermine the program's credibility. In his announcement on December 15, 1993, the Secretary of Defense acknowledged that "the C-17 is late, it's over ceiling price, and it has serious operational deficiencies." The C-17 has had a long and troubled history that includes schedule delays, design problems, test failures, and cost growth. The current program cost estimate of $43 billion to acquire 120 aircraft now exceeds the last DOD estimate to acquire 210 aircraft by $1.3 billion. The cumulative effect of what appears to be a steady succession of problems has been to raise congressional concerns about the C-17 program's overall value and affordability in light of a shrinking defense budget.

Despite these problems, DOD has proposed a settlement with McDonnell Douglas that, in our opinion, is not in the best interest of the government. In an overriding effort to eliminate the contentious relationship between the government and the contractor, the government agreed to waive all of its potential claims against the contractor for the contractor's failure to meet the original contract specifications and delivery schedule, without establishing the value of those claims. The government also agreed to resolve filed and unfiled contractor claims by adding $237 million to the contract price. According to DSB and DOD officials, the claims were not subjected to a full legal or price analysis. Without any legitimate basis for establishing the realistic value of the claims of both parties, the true cost of the settlement is not known.

Although the true cost is not known, the settlement identifies the cost to the government and the contractor as $348 million and $454 million, respectively. About $175 million of the costs associated with the settlement are for the management and productivity improvements DOD believes are necessary for the program to continue beyond 40 aircraft. Our analysis of the identified costs leads us to conclude that the contractor's out-of-pocket cost to implement the settlement is only $46 million.

Congress has directed DOD to explore alternatives to meet airlift requirements. DOD has acknowledged that there are significantly cheaper wide-body alternatives to the planned full program of 120 C-17s. It has not, however, determined the minimum number of C-17s needed to provide specialized military airlift capability as part of the proper mix of aircraft. Under the proposed settlement, DOD would delay the decision on the number of C-17s to be procured until November 1995; it would also, in effect, delay the decision on the most cost-effective mix of aircraft for meeting its airlift requirements until that time. By that time, DOD will have

invested another $5 billion in the problem-plagued program, bringing the cost for 40 C-17s to about $21.3 billion, or about $534 million each. The $21.3 billion represents about 50 percent of the total program cost for only 40 of the 120 planned C-17s.

Most of the benefits of the contractor's management and productivity improvements called for in the settlement will not be realized until 1996 or beyond. Therefore, the benefits cannot be assessed with any certainty until then, and DOD will have little more information in November 1995 than it does now on the contractor's ability to cost-effectively produce the C-17. It appears to us that DOD would have agreed to pay for these improvements only if it had predetermined that it will buy more than 40 aircraft, regardless of the contractor's performance on the production of the first 40 or whether a significantly cheaper mix of aircraft would meet the requirement.

We are also concerned that DOD has not established specific cost, schedule, and performance criteria to evaluate McDonnell Douglas' performance and to decide whether to purchase more than 40 aircraft. For example, although the settlement states that McDonnell Douglas must produce C-17s at cost and on schedule, DOD has not defined these terms or how it will evaluate the contractor's cost and schedule performance.

C-17 Program Status

The C-17 program has been a troubled program almost since its inception and has fallen far short of original cost, schedule, and performance expectations. Total program costs continue to grow. For the fiscal year 1991 President's budget, DOD estimated that total program costs would be $41.8 billion to acquire 210 aircraft. The C-17 Program Director recently estimated that the total program cost would increase to $43 billion for 120 aircraft. In addition, the average target unit price the government negotiated with McDonnell Douglas to build the C-17 increased by $33 million per aircraft from production lots three to five. Delivery schedules have again slipped and production aircraft 7 through 10 were delivered with increasing amounts of unfinished work or known deficiencies that must be corrected after government acceptance.

C-17 reliability is significantly less than expected. The aircraft must achieve planned reliability and maintainability rates to demonstrate the life-cycle cost advantage that is key to its cost-effectiveness. Furthermore, the C-17 cannot meet current payload/range specifications. Finally, while the contractor is fixing technical problems involving the wing, flaps, and

slats, other technical problems continue. These problems include immature mission computer software, inadequate built-in test capability, and inability to adequately perform airdrop missions.

Proposed Settlement Is Not in the Best Interest of the Government

The proposed settlement recommends changes to ensure completion of a viable 120-aircraft program. It provides for

- a provisional 2-year program during which McDonnell Douglas must (1) introduce major management and manufacturing process changes; (2) demonstrate an ability to deliver aircraft on schedule and at cost; (3) successfully complete the flight test program; and (4) satisfy all other contract specifications, including reliability, maintainability, and availability requirements and
- resolution of all outstanding C-17 business and management issues between the government and McDonnell Douglas as of the date of the agreement.

The settlement also discusses a third element of change that is required for a successful strategic airlift program. It calls for DOD to consider a mix of commercial wide-body aircraft or new C-5B production to meet future military airlift requirements.

As discussed in the following sections, a detailed analysis reveals that the settlement is not in the best interest of the government.

Cost of Settlement to McDonnell Douglas Is Less Than Indicated

According to DOD, the estimated cost to implement the settlement is $348 million to the government and $454 million to the contractor. A breakout of proposed settlement costs is shown in table 1.

Table 1: Estimated Settlement Costs

Dollars in millions

Item	Government	McDonnell Douglas
Flight test extension	$61.5	$61.5
Redesign wing	0	32.0
Computer Aided Design/Computer Aided Manufacturing	20.0	20.0
Management Information System	15.0	15.0
Advanced Quality System	2.5	2.5
Product improvement projects	0	100.0
Other	12.0	52.0
Nonrecurring engineering	0	171.0
Claims	237.0	0
Total	$348.00	$454.00

Our review indicates that the out-of-pocket cost of the settlement to McDonnell Douglas is $46 million, not $454 million as the proposed settlement indicates. The stated cost to McDonnell Douglas should be offset by $237 million that the government would add to the target cost and ceiling price of the development contract to settle unspecified contractor claims. In addition, we believe that the $171 million for nonrecurring engineering should also be excluded from the $454 million estimate. The $171 million is not additional funding that the contractor will have to provide to implement the settlement, but rather, according to the DSB, full-scale engineering and development costs that the contractor had inappropriately allocated to current and future production contracts. These engineering costs either have been or will be incurred whether or not the settlement is implemented. The proper charging of the nonrecurring engineering costs to the development contract will increase the total cost of that contract. However, because the development contract is over ceiling, the contractor would not have been reimbursed for these costs anyway.

Claims Resolution and Specification Reductions Were Key to Settlement

In an overriding effort to eliminate the contentious relationship between the government and the contractor and to continue the C-17 program to 120 aircraft, the government agreed to resolve claims disputes without establishing the realistic value of potential claims both parties may have against each other. The government also agreed to reduce contract specifications to levels the C-17 can probably achieve, retroactively revise aircraft delivery schedules for aircraft that were delivered late, and waive

all claims against the contractor for failure to meet original contract specifications and delivery dates. According to the DSB, unsettled claims, inability to meet range/payload specifications, and late delivery of aircraft were major hindrances to continuation of the C-17 program.

Validity of Claims Was Not Determined

Prior to the settlement agreement, McDonnell Douglas had filed 12 claims against the government, totaling $472 million. When the settlement agreement was signed, none of the filed claims had been resolved; they were either under consideration by the contracting officer or in litigation at the Armed Services Board of Contract Appeals.

McDonnell Douglas has stated that it also planned to file an additional $1.25 billion in claims for delay and disruption to the C-17 program by the government. However, the $1.25 billion in potential claims were never filed or reviewed by any government entity. According to DSB documents, a DSB task force reviewed McDonnell Douglas' potential list of claims, but no detailed analysis was done to determine the validity of the claims. In testimony before the House Committee on Appropriations, Subcommittee on Defense, in March 1993, the Air Force Principal Deputy Assistant Secretary for Contracting said that he knew of no basis for the potential claims. We tried to obtain information on the claims from officials from the DSB, the Office of the Secretary of Defense, the DOD Office of General Counsel, the C-17 System Program Office, and the Defense Plant Representative Office. We were told that, because the claims were not submitted, no information was available.

In the DSB's opinion, the government was liable for $237 million of the $472 million in claims filed by the contractor. The $237 million represents three claims. The largest claim, for $234 million, was based on McDonnell Douglas' assertion that the government required the company to subcontract a package of wing components. According to the DSB, the contractor believes that this requirement led to major cost increases to the program and created a multitude of other problems. A DSB working group recommended to senior DSB officials that the government audit the claim before paying anything to the contractor. This action was not taken, and in lieu of such analysis, the chair of the working group expressed the opinion that the government and the contractor were probably both liable to some extent. The DSB, however, concluded that the government should pay 100 percent of this claim. We question the DSB's conclusion that the government should pay the full value of the claim in the absence of any legal or price analysis.

The settlement provides that DOD will make this payment through contract modifications, increasing the target cost and ceiling price of the full-scale development contract. In return for the $237 million, reduced specifications, and revised delivery schedule, McDonnell Douglas agreed to release the government from all C-17 claims it may have had as of January 6, 1994, the date of the settlement, whether filed or not.

As part of the proposed settlement, the government would also relax the contract specifications and the delivery schedule for the first six production aircraft and prior test aircraft. It would also waive all claims against the contractor for failure to meet the original contract specifications and delivery schedule. The government reserved its rights to file claims for contractor noncompliance on subsequent aircraft. The consideration due the government for the contractor's failures is difficult to estimate. Members of a DSB team developed estimates that ranged from $750 million to $3 billion; however, the assumptions they used were not documented, and they never reached consensus on the amount of consideration due the government. No further effort was made to establish the magnitude of specific potential government claims against the contractor. DOD officials told us that avoiding protracted litigation with the contractor was a primary factor in the claims settlement.

Contract Specifications Were Relaxed

In March 1993, we testified[1] that the C-17 could not meet its payload and range specifications, primarily because of growth in aircraft weight, increase in aircraft drag, and failure of engines to meet expected specific fuel consumption rates. Since then, DOD has proposed relaxing the C-17 specifications to levels that the C-17 can probably achieve. The C-17's payload/range specifications have been lowered since the original contract was signed. The settlement proposes lowering them once again. We are concerned that DOD is revising contract specifications to reflect the C-17's demonstrated performance and therefore will not have the airlift capability originally planned for. Table 2 shows the original, current, and proposed contract specifications for the C-17's payload/range missions.

[1]Military Airlift: Status of the C-17 Development Program (GAO/T-NSIAD-93-6, Mar. 10, 1993).

Table 2: Comparison of Original, Current, and Proposed Payload/Range Specifications (pounds/nautical miles)

	Contract specifications		
Mission	**Original**	**Current**	**Proposed**
Maximum payload	172,000/2,400	160,000/2,400	157,000/2,400
Heavy logistics[a]	134,562/3,200	130,000/3,200	120,000/3,200
Medium logistics[a]	124,039/2,800	120,000/2,800	114,000/2,800
Ferry range	0/5,000	0/4,600	0/4,300

[a]Specifications for the heavy logistics and medium logistics missions were not included in the original 1982 contract. The values in the table for these missions reflect the specifications from the 1985 contract.

DOD acquisition policy now requires program managers to establish objectives for all missions. Objectives are operationally significant improvements in capability above that which is minimally acceptable. The relaxed specifications proposed in the settlement do not meet the Air Mobility Command's (AMC) objectives for the C-17's payload/range missions. AMC has asserted that the C-17's reduced specifications will not significantly degrade aircraft performance and mission capability. Table 3 shows AMC's objectives and the proposed contract specifications.

Table 3: Objective Requirements Compared With Proposed Specifications (pounds/nautical miles).

Mission	**Objective requirement**	**Proposed specification**
Maximum payload	160,000/2,400	157,000/2,400
Heavy logistics	130,000/3,200	120,000/3,200
Medium logistics	120,000/2,800	114,000/2,800
Ferry range	0/4,600	0/4,300

DOD acquisition policy also requires program managers to establish thresholds for key performance parameters. A threshold is the minimum acceptable level at which a system is required to perform, below which the utility of the system becomes questionable. Failure to meet a threshold is cause for the system to be reassessed or terminated. DOD defines the C-17's key performance mission as the 3,200-nautical mile (heavy logistics) mission. AMC has established a threshold of 110,000 pounds for this mission. According to the DSB, the C-17's current performance on the heavy logistics mission is only 93,345 pounds, using the methodology on which the contract specifications were originally based.

The DSB recommended that, to improve the C-17's payload/range performance, the contractor implement several initiatives, and that DOD change the methodology for calculating C-17's payload/range performance.

As indicated in the settlement, the initiatives include (1) reducing aircraft weight by 1,500 pounds; (2) reducing total aircraft drag by 1 percent; (3) increasing maximum takeoff gross weight by 5,000 pounds, to 585,000 pounds, to allow for additional fuel; and (4) using the Pratt & Whitney 94 commercial engine that includes commercial improvements to increase specific fuel consumption by 0.4 percent. With these initiatives in place, the DSB estimated that the C-17 could carry 101,796 pounds 3,200 nautical miles—still below the threshold requirement.

The DSB also recommended that the methodology for calculating the C-17's payload/range performance be changed to reflect differing assumptions pertaining to fuel consumption rates. While the proposed methodology shows how the C-17 is expected to actually perform, it eliminates any margins for weight growth or reduced engine performance that are included in the more stringent current methodology.[2] Using this proposed methodology, the C-17 would deliver a 123,330-pound payload a distance of 3,200 nautical miles. In other words, it would achieve AMC's threshold requirement, but it would still fall short of the current contract specification of 130,000 pounds. Therefore, the settlement proposes reducing the specification to 120,000 pounds and measuring performance based on the proposed methodology.

DOD Has Not Established Cost or Schedule Criteria

The proposed settlement states that McDonnell Douglas must demonstrate an ability to deliver aircraft on schedule and at cost, as well as successfully complete the flight test program and all other contract specifications, including reliability, maintainability, and availability requirements. However, DOD has not established any specific cost or schedule criteria it intends to use to decide whether to continue the program. For example, the DSB had recommended that specific target unit costs be established for C-17 production lots, but the proposed settlement does not define targets or goals for delivering aircraft "at cost."

The proposed settlement states that the delivery schedule under contract for aircraft beginning with the seventh production aircraft shall remain the same. However, to meet the delivery schedule, the Air Force has accepted several aircraft with unfinished work or uncorrected deficiencies. In addition, the next six aircraft—P11 through P16—could be delivered up to 1 month late. DOD officials told us that consideration was being given to slipping the delivery schedule several months due to changes in the

[2]According to a DOD official, a DSB working group found that contract specifications for all military aircraft produced since World War II were based on the original methodology used to develop the C-17's specifications. None were based on the proposed methodology.

production rate. Thus, even before the proposed settlement can be implemented, the delivery schedule may be revised.

The Fiscal Year 1994 Defense Authorization Act prohibits DOD from obligating funds for more than four C-17s in any given fiscal year subsequent to the act, unless all aircraft scheduled for delivery in the prior 6 months are delivered within 1 month of the contract delivery date. DOD officials told us that they believe DOD can obligate funds for more than four C-17s if it changes the schedule and the contractor is able to meet the revised schedule.

During our review, DOD officials told us a decision on whether the C-17 program proceeds beyond 40 aircraft would not be based upon any single set of criteria or key parameters. They said it would be a judgment based on an evaluation of all pertinent data. The DSB had earlier reported that to create a new program environment there was a need for accountability. However, without specific criteria, accountability is undermined because DOD would have the latitude to continue buying more C-17 aircraft regardless of program performance. In commenting on a draft of this report, DOD officials told us that they agree with the need for specific criteria and that they are preparing to submit criteria to Congress. At this time, the timing on when the criteria would be submitted to Congress is uncertain.

Anticipated Benefits From Productivity Improvements Will Not Occur Before Decision Point on Further Production

According to the DSB, McDonnell Douglas' corporate infrastructure is antiquated and lacks an effective quality system that limits the efficiency of the C-17 production program. The DSB recommended that McDonnell Douglas implement Computer Aided Design/Computer Aided Manufacturing (CAD/CAM), a Management Information System, and an Advanced Quality System along with other unspecified productivity improvements to modernize business practices and to improve C-17 program efficiency. The estimated cost of these improvements is $175 million.

DOD officials contend that some of the planned contractor improvements may be in place by early 1995. However, our review indicated that it could take several years before anticipated benefits resulting from productivity improvements and management process changes are realized. The first installment of specific product improvement projects proposed by McDonnell Douglas is not scheduled to be completed until December 31, 1995, and the second package will not be completed until a year later.

Given these time frames, little, if any, benefit from these programs will occur before November 1995 when DOD intends to decide whether to proceed with production beyond a 40-aircraft program.

Similarly, actions intended to modernize McDonnell Douglas' manufacturing and management structure will have only limited impact during the first 2 years. The CAD/CAM system for engineering changes may be fully functional by 1996, but full system implementation is not proposed to start until 1997. Finally, the Advanced Quality System will be a phased change in quality control that will take several years to implement.

Legislative Action to Implement Settlement

The proposed settlement says it is contingent on enactment of authorizing legislation and appropriations. DOD has not yet submitted legislation, but it recently furnished us with a copy of the draft statutory language it may propose. The proposed language would enable the Secretary of the Air Force to modify the C-17 contracts "without regard to requirements of law relating to the making, performance or modification of contracts" as necessary to implement the terms of the C-17 settlement agreement. This proposed legislation is working its way through the executive branch with the view that it will be submitted when ready. Congressional decisions on the settlement will have to take into account the executive branch's final formulation of the proposed legislation.

Alternatives to the C-17

Although DOD considers the full C-17 program to be the preferred airlift option, it has acknowledged that there are alternatives that are less expensive and that meet airlift requirements, but that may not meet all military-unique requirements specified for the C-17. Nevertheless, it has decided to execute a settlement with the contractor and to launch a new cost-effectiveness study to determine the optimum strategy for a mixed force of C-17s and nondevelopmental aircraft. By doing so, DOD will effectively delay until November 1995 making a decision on the most cost-effective mix of aircraft for meeting its airlift requirement. By that time, DOD will have invested another $5 billion in the C-17 program with little more additional information on the contractor's ability to cost-effectively produce the C-17. Additionally, DOD will have obligated about $21.3 billion, including the settlement costs, or about 50 percent of the total program costs for only 40 of the 120 planned C-17s. Thus, the average unit cost for each C-17 under a 40-aircraft program would be about $534 million.

In line with a provision in the Fiscal Year 1993 Defense Authorization Act, DOD directed that a cost- and operational effectiveness analysis be conducted to determine alternatives to the C-17. As the Secretary of Defense announced in December 1993, the analysis showed that a combination of C-17s and C-5Bs, or C-17s and commercial wide-body aircraft, when added to the existing airlift fleet, could meet military airlift requirements. According to the analysis, if the C-17 program were stopped at 40 aircraft and 64 commercial wide-body aircraft were added to the existing airlift fleet, life-cycle cost savings would be about $6 billion less than a fleet of 120 C-17s.

Because the C-17 program has experienced continuous cost, schedule, and performance problems, Congress has become increasingly concerned about the program's overall value. While recognizing the need for airlift, Congress has directed DOD to explore alternatives to the full C-17 program. The Fiscal Year 1994 Defense Authorization Act made available to DOD up to $100 million to initiate procurement of nondevelopmental military or commercial wide-body aircraft as a complement to the C-17. The act also made available an additional $300 million that could be used to procure either wide-body nondevelopmental aircraft or additional C-17s. DOD has decided that the procurement of additional C-17 aircraft in fiscal year 1994 would contribute more to intertheater lift than the procurement of complementary wide-body aircraft. DOD officials told us that DOD plans to notify the congressional defense committees of its intent to transfer up to $300 million to the C-17 program.

The Air Force has developed a preliminary acquisition strategy to procure a nondevelopmental military or commercial wide-body aircraft. A determination of the number of nondevelopmental airlift aircraft will depend on the outcome of the November 1995 decision. However, according to DOD officials, an initial procurement could be made before November.

In the interim, DOD plans to assess the operational utility and cost-effectiveness of wide-body aircraft in moving oversize cargo. An Air Force official estimated that these efforts would cost around $20 million, far less than the $100 million available. DOD plans to compete the C-17 against nondevelopmental military and/or commercial wide-body aircraft in November 1995.

In 1987, we reported that the C-17 would be the most cost-effective alternative to meet military airlift requirements if the program came close

to meeting its cost and performance objectives. The changed world environment and the rising costs, less than anticipated performance, and lengthy delays in this concurrent acquisition program have seriously eroded the C-17's cost-effectiveness.

Recommendations

We recommend that the Secretary of Defense (1) determine immediately the minimum number of C-17s needed to provide specialized military airlift capabilities and (2) establish specific cost, schedule, and performance criteria to evaluate improvements in the contractor's performance in order to make an informed decision on whether to continue the program.

Matters for Congressional Consideration

Because DOD will have little, if any, additional information in November 1995 on the contractor's ability to cost-effectively produce the C-17 and because there are less costly alternatives to the planned C-17 program, we believe this proposed settlement is not in the best interest of the government. Moreover, we believe Congress should not endorse any settlement until DOD has provided information on the minimum number of C-17s needed to meet its specialized airlift requirement and the criteria DOD intends to use to evaluate contractor performance under the settlement.

Views of DOD Officials and Our Evaluation

As agreed, we did not obtain written agency comments on this report. However, we discussed a draft of this report with officials from the Office of the Secretary of Defense, DOD General Counsel's office, and the Air Force. These officials believe that the settlement is a good deal for the government because it allows the C-17 program to continue resolving claims and disputes that hamper contractor performance. They also said that it is preferable to the alternatives of either canceling the program or continuing with the fractious, gridlocked situation that exists between the government and the contractor. They stated that there is no guarantee that DOD's 40-aircraft program would be achieved without the settlement.

According to these officials, some of the 40 aircraft will benefit from some of the provisions in the settlement, such as flight test extension and productivity and management improvements because they will not be produced until substantially after the investments take effect. They acknowledged, however, that little information on the effectiveness of the

productivity improvements will be available by November 1995 when the decision is to be made.

DOD officials also told us that it is necessary to wait until November 1995 to make a decision on procuring a nondevelopmental airlift aircraft. According to these officials, a decision made now would lack information from (1) an updated mobility study based on the results of DOD's recent Bottom-up Review, (2) a new airlift requirements study, (3) a determination of needed modifications to commercial aircraft for carrying oversize cargo, (4) the results of the flight test program, and (5) an assessment of the contractor's performance after the 2-year probationary period.

While the officials did not substantially challenge the facts underlying our conclusions, they outlined their reasons for wanting to proceed with the settlement. We continue to believe that (1) the government is paying more for an aircraft that provides less capability than DOD contracted for; (2) DOD is delaying its decision on the minimum number of C-17s required to carry out military-unique missions; (3) DOD needs to establish criteria it intends to use to evaluate contractor performance under the settlement; and (4) Congress is being asked to approve a settlement based on faith in McDonnell Douglas' ability to improve cost, schedule, and performance while fundamental questions remain unanswered regarding the contractor's ability to produce the aircraft efficiently.

We cannot anticipate what the contractor will do with or without the settlement. We have seen no evidence, however, to support DOD's assertion that its 40-aircraft program would not be produced under the current relationship between the contractor and the government. Moreover, we are concerned that Congress is being asked to fund further C-17 production efforts when DOD already has information that identifies other cost-effective alternatives to the full program. Delaying the decisions on the minimum number of C-17s needed to carry out military-unique missions and the alternative nondevelopmental aircraft could allow the C-17 program to continue beyond what is really required.

Scope and Methodology

In our continuing work at McDonnell Douglas's Long Beach, California, plant, we are monitoring cost, schedule, and performance issues related to the C-17 program. We are also monitoring developmental and operational testing of the C-17 by the Air Force at Edwards Air Force Base, California. Our discussion of the C-17 program's status is based on this body of work.

To examine the proposed settlement between DOD and McDonnell Douglas, we analyzed the DSB task force report, its findings, and recommendations. The proposed settlement, in part, was based on the results of the DSB report. To determine the implications of the proposed settlement, we reviewed supporting documentation developed by the DSB and other pertinent documentation. We discussed various programmatic and technical issues with responsible officials from the DSB task force.

To assess alternatives to the C-17 aircraft, we examined the C-17 cost- and operational effectiveness analysis. Because it was not finalized, we were not provided a copy of the analysis to perform a detailed evaluation. However, we discussed the results of the analysis with officials from the Institute for Defense Analyses and the Office of the Director, Strategic and Space Systems, Office of the Secretary of Defense. We also discussed proposed alternatives to the C-17 with officials from the Boeing and Lockheed corporations.

We conducted our review between January and March 1994 in accordance with generally accepted government auditing standards.

We are sending copies of this report to the Secretaries of Defense and the Air Force; the Director, Office of Management and Budget; and other interested parties. Copies will also be made available to others on request.

This report was prepared under the direction of Louis J. Rodrigues, Director, Systems Development and Production Issues, who can be reached on (202) 512-4841 if you or your staff have any questions concerning this report. Other contributors to this report are listed in appendix I.

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