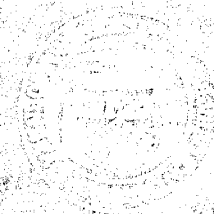


# ACQUISITION REPORT

## Military-Commercial Pilot Program Offers Benefits but Faces Challenges

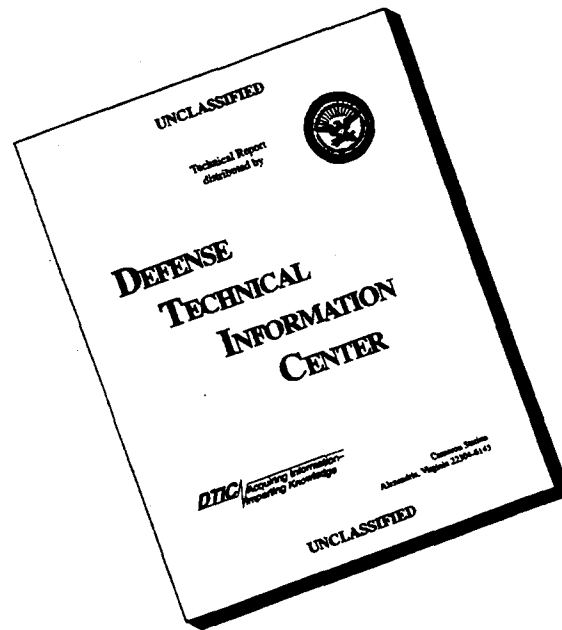


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National Security and  
International Affairs Division

B-271257

June 28, 1996

Congressional Committees

Faced with substantial funding reductions for defense procurement, the Secretary of Defense made acquisition reform a top priority of the Department of Defense (DOD). The challenge for DOD is to maintain technological superiority and ensure a strong national industrial base while concurrently reducing acquisition costs. The need for reforming the defense acquisition system is well recognized; however, acquisition reform has been an elusive goal for many years. DOD has initiated several major efforts to implement a commercial-style procurement system that takes advantage of commercial products and processes and, whenever possible, eliminates military-unique contracting, technical, and accounting requirements. The Secretary of Defense said that acquisition reform initiatives could cut costs 20 to 30 percent.

This report discusses a pilot program<sup>1</sup> entitled "Military Products from Commercial Lines," set up by the Air Force with one of its contractors to make reform a reality. We evaluated the pilot program to determine (1) its potential for producing the benefits sought through reform and (2) any barriers to achieving these benefits. We conducted our review under our basic legislative responsibilities. We are addressing this report to the committees involved in fostering acquisition reform because it identifies problems and calls for corrective action that the agency has indicated an unwillingness to take.

## Background

The pilot program was undertaken as part of the Air Force Materiel Command's Manufacturing 2005 strategy, which envisions a future where an integrated military-commercial industrial base will ensure the Air Force access to superior technologies at dramatically reduced costs. As part of the strategy, the Air Force analyzed key military sectors, including electronics. It noted that electronic components are pervasive throughout weapon systems, accounting for more than 40 percent of the cost of aircraft, 70 percent of air launched missiles, and 80 percent of spacecraft. Therefore, reducing the cost of manufacturing electronics components through integrated production would be a major factor in controlling the costs of all Air Force systems.

<sup>1</sup>This pilot is not part of the Defense Acquisition Pilot Program authorized by section 809 of the National Defense Authorization Act for Fiscal Year 1991.

*Acquisition Reform  
Military-Commercial  
Pilot Program offers  
Benefits but faces  
Challenges*

To move toward this vision, the Air Force's Wright Laboratory awarded a 4-year, \$21.5-million pilot research and development contract to TRW's Avionics Systems (military) Division in May 1994. The goals of the TRW pilot are to (1) demonstrate that a military-unique product can be technically redesigned for manufacture on a commercial production line at lower cost and have equal or better quality; (2) identify barriers currently in place that limit integrated military-commercial efforts; and (3) transfer lessons learned in part through a "model" contract for future collaborative electronics production efforts. The objective is to develop solutions that are not "contract-specific" or "one-time waivers" but, rather, have broad applicability to other DOD contracts.

TRW military is scheduled to produce the Communication, Navigation, and Identification (CNI) avionics components for the F-22 fighter aircraft. Similar components are used for the Comanche helicopter program. Under the pilot contract, TRW military has subcontracted a demonstration production effort for the manufacture of two CNI modules<sup>2</sup> to its sister division, TRW's Automotive Electronics Group (commercial division). While the TRW military division currently assembles electronic modules by hand, commercial production takes place on an automated assembly line. Under the pilot arrangement, the TRW military division will assume responsibility for some government requirements that could interfere with its commercial division's production practices. According to the Pilot Program Manager at Wright Laboratory, the savings achieved by the pilot will depend partly on the efforts to modify the subcontract between the two TRW divisions. Greater savings are expected if commercial practices are used in place of military practices.

The pilot is now in the second of three phases and is scheduled to be completed in May 1998.<sup>3</sup> Generally, the pilot's tasks are to (1) compare and document military and commercial business practices as well as recommend and demonstrate best business practices that are acceptable to both government and commercial producers; (2) redesign the modules for commercial automated production, while meeting the needs of the F-22; and (3) demonstrate production of military modules on a commercial line along with commercial products. Thirty of each module will be produced in late 1996 to validate the design. Based on the results of the

<sup>2</sup>The CNI avionics consist of 38 modules. The pilot includes two types of modules—the front-end controller and the pulse narrowband processor.

<sup>3</sup>In phase I, business policies and practices were analyzed. Phase II tasks are to recommend changes to business practices, implement manufacturing infrastructure changes, and validate the component's design. In phase III, production of the component will be validated and results of the pilot transferred where appropriate.

test run, modifications will be made to the modules' design and the production line. An additional 60 of each module will then be manufactured and available for F-22 qualifications testing.

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## Results in Brief

Midway through the TRW pilot, it appears technically feasible to redesign military components for commercial production. Pilot officials are confident that if they are allowed to use commercial practices and policies, they will save an average of 40 percent over estimated military production costs while also demonstrating that each of the redesigned modules will meet F-22 requirements. Other potential benefits include quicker assembly and a lighter weight product. For the long term, pilot officials envision that lessons transferred from the pilot will help produce significant savings for future weapon programs that have large electronic procurements.

Although the pilot will not be completed until 1998, significant lessons have already been learned. Business practices and policies under government and commercial contracting procedures have major differences that must be reconciled to encourage commercial participation. The pilot has identified a number of government-unique requirements that may present barriers to the most efficient use of commercial production lines. Existing acquisition reform measures have not removed these government-unique requirements. Unless waivers or workarounds are granted for many of them, the pilot will be limited in demonstrating that military items can be produced at equal or better quality on commercial production lines at substantially lower prices.

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## TRW Pilot Has Potential to Demonstrate Integration Benefits

At the end of phase I, the pilot had successfully completed the conceptual redesign of the modules to allow integrated production. Integrated production is now possible through recent manufacturing advances. The low volume of military electronics purchases does not provide sufficient economic incentives for commercial manufacturers. Recent advances such as flexible manufacturing allow integrated production of small lots of military products with other production lots, thus maintaining a high utilization rate for the line.

The redesign of the components should comply with the more stringent requirements for automated production rather than the manual manufacturing process used by the military. In redesigning the modules, one of the most significant changes is the use of plastic parts instead of the

ceramic parts commonly used by the military. According to pilot officials, cumulative commercial experience with plastic electronic components has proven them to be reliable in nonmilitary applications. The transition to plastic is consistent with the need to design for manufacturing and incorporates more cost-effective materials used by commercial producers. Further, the redesigned components are expected to be assembled more quickly and to weigh 15 percent less than their military versions. The next step is to produce a sample of the modules to validate the redesign.

The pilot modules will be tested to meet F-22 and Comanche requirements, such as durability requirements of 20 plus years. Pilot officials claim the redesigned modules can meet all the same functional requirements as the original design with the possible exception of one condition—a temperature requirement. However, they believe that additional analyses and tests will show that this condition can be successfully resolved. If the pilot program produces avionics modules on the commercial production line when planned, the F-22 schedule allows for testing and integrating the modules. According to an F-22 Program Office official, if the modules pass all ground test requirements, the office can instruct Lockheed Martin to substitute the pilot components for those produced by TRW military and actually perform validation and verification of the pilot modules on an F-22 experimental aircraft.

## Potential Benefits Include Cost Savings

One of the primary benefits of encouraging commercial producers to manufacture military products is that lower costs result from spreading overhead over greater quantities and taking advantage of other economies that come with large-scale manufacturing operations. For example, large volume discounts can be obtained when purchasing some materials. Pilot officials currently estimate that producing the modules commercially will save about 40 percent compared to the F-22 program cost estimates.

About one-third of the estimated savings stems from reduced labor costs. TRW's commercial division assembles over 15,000 electronics components per day, versus the few hundred per year that are manually produced by the military group. About 20 percent of the savings are expected from using less expensive materials.<sup>4</sup> Another 20 percent of the pilot savings are expected to come from reduced administrative costs associated with statutory and regulatory compliance. Savings from eliminating military specifications and standards, such as for testing and screening and other

<sup>4</sup>For example, the pilot estimated that material cost for one part of the components dropped from \$755 according to F-22 estimates to \$340 if commercially produced.

material compliance requirements, make up the bulk of the remaining estimated savings. The pilot manager emphasized that the projected savings assumes the contract is modified to remove certain government requirements, and the estimate may change if requirements are not removed, or if material costs or the F-22 estimates change.

### Expected Benefits Extend Beyond Pilot

The most important benefit foreseen from the pilot is not from lower costs for the specific pilot components, but from future electronics procurement. Even by saving 40 percent of the cost, the projected savings will not match the \$21-million cost of the pilot, nor was this the pilot's intention. The payoff will result from applying the lessons learned from this pilot to future Air Force electronics procurement. According to the pilot manager, TRW has estimated \$126 million in savings by applying pilot concepts to all F-22 CNI modules. After working through the multitude of requirements with a profitable commercial company, pilot officials plan to develop recommendations and a model subcontract that will serve DOD purposes yet not impede commercial operations. In turn, wider participation by commercial entities in military production may reduce military-unique production costs.

In addition, pilot officials see other benefits from demonstrating and promoting broader integration. DOD may be better able to take advantage of technological advances developed by commercial firms. For example, one pilot official noted that although military contractors could also adopt advanced automated manufacturing techniques, it might not be cost-effective, given the typically small size of military orders. However, since the investment in commercial production is spread over a large quantity of products, it makes good business sense for commercial companies to continuously incorporate state-of-the-art manufacturing processes. Other benefits that may occur with integrated production include more timely production of defense components, greater competition for defense business from a larger base of commercial manufacturers, and a greater surge capacity for defense items in the event of future conflict.

### Many Challenges to Success Remain

Despite the climate of acquisition reform, this pilot program must overcome many hurdles. These hurdles have primarily resulted from reconciling major differences in business practices and procedures between the way the government operates and the way commercial businesses operate. Acquisition reform initiatives have not allowed this

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pilot to capitalize on technological advances that allow a small number of military items to be integrated with production at a commercial manufacturing facility.

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### Wide Gap Between Commercial and Military Practices

The pilot has identified large differences between the contracting and operating procedures of TRW's commercial and military divisions. The pilot program offers a good opportunity for making such comparisons. Because the two divisions have the same corporate parent, they could share business-sensitive and proprietary information and, therefore, avoid some of the difficulties other companies might experience in sharing information. Based on their findings, the pilot program aims to highlight areas in the defense procurement system that can be streamlined to facilitate future collaboration with commercial companies.

Pilot teams, including both TRW divisions, reviewed two sets of requirements that the commercial group found objectionable. One set of requirements includes Federal Acquisition Regulation (FAR) and Defense FAR supplement clauses, and the other set contains technical military specifications and standards for producing the items. For contractual requirements, the teams initially identified 55 clauses. (See app. I.) Many of the requirements targeted by the pilot, such as cost or pricing information, data rights, and quality standards are the same ones that have been identified in several major acquisition reform studies and that commercial firms claim deter them from competing for government projects.

After the pilot teams analyze the origin and purpose of the requirements, they will then determine whether action should be taken to alleviate the defense-unique requirements they impose. This effort is projected to be completed at the end of 1996. This analysis is also a critical component of the pilot since a key objective is to develop a contract that allows TRW's commercial division to maintain its normal business practices as much as possible. TRW's commercial division does not want this pilot to adversely affect its highly successful commercial business. Unless waivers or workarounds are granted for many of these government-unique requirements, the pilot will be limited in demonstrating the benefits of commercial practices, including the savings associated with high-volume material purchases.

The difference between commercial and military practices, according to a pilot report, is often not in the actual compliance with a requirement, but



in the level of documentation required. For example, TRW's commercial division agreed to the FAR clause on affirmative action for Vietnam veterans because the clause is consistent with standard commercial practices. However, FAR clause 52.222-37, "Employment Reports on Special Disabled Veterans and Veterans of the Vietnam Era," is not consistent with those practices. This clause requires an annual report on the number of disabled and Vietnam veterans currently employed—by job category and location and of the number of new hires by category. TRW said that several contract clauses repeat requirements imposed by other public laws, although there is a wide gap between the detailed proof of compliance the government requires and commercial enterprises' requirements.

While analyzing the differences in requirements, pilot officials found that barriers to commercial production are not created by the Air Force alone. In examining the Lockheed Martin F-22 subcontract with TRW's military division, officials noted that the Air Force originated 49 of the 204 contract requirements and Lockheed Martin added the remainder. For example, Lockheed Martin added part of Military Specification 2000a regarding documentation of soldering. To meet the specification conditions, TRW is required to add a reporting step for defects under the F-22 subcontract that it believes is unnecessary and incompatible with commercial operations. DOD officials said they recognize contractors adding detailed requirements can be a problem, but told us they can do little about it. One of the lessons of this pilot is that prime contractors need to consider removing some of their requirements.

### Integrated Production Pilot Has Not Benefited From Acquisition Reform

Although DOD has actively proposed and implemented acquisition reform measures, key reform efforts have not helped move the pilot forward. For example, the revised commercial item definition, intended to streamline government requirements, does not apply to the pilot components. DOD has reduced the use of military standards and allows DOD contractors to use uniform government requirements across a facility, but neither action benefits the pilot. The Defense Acquisition Pilot Program could provide some of the statutory relief needed to demonstrate that military products can be manufactured on commercial lines, but the pilot is not part of the program.

After identifying an initial list of requirements not typically found in commercial contracts, pilot officials studied removing some of those requirements. Rather than approaching each requirement individually,

pilot officials hoped that if the components could be considered commercial items as defined by the Office of Federal Procurement Policy Act as amended by the Federal Acquisition Streamlining Act of 1994, a number of government-unique requirements could be waived. Pilot officials reasoned in part that since the avionics components are being designed, developed, and produced on a commercial assembly line, the components could be considered "commercial items."

The Air Force concluded, and we agree, that the components do not qualify as commercial items because the commercial item definition does not apply to military-unique items. Thus, integrated production efforts such as the pilot do not benefit from the act's definition.

Over the course of this pilot, several other reforms have been instituted that may support integrated production in the long run, but do not further the pilot's demonstration of integrated production benefits. For example, in June 1994, the Secretary of Defense directed that commercial performance standards be used in place of military specifications. However, this directive does not cover all government-unique requirements and focuses on new contracts. Many contracts for major weapons systems, such as the F-22, were awarded before the directive became effective. In December 1995, the Secretary moved to streamline existing requirements with the Single Process Initiative. This initiative allows a "block change" approach to modify contracts so that management and manufacturing processes can be consolidated across all contracts at a single facility. It does not provide relief for the pilot because it is directed toward defense contractor facilities.

Congress enacted provisions under the National Defense Authorization Acts of 1991 and 1996 to allow DOD to conduct pilots to test ways to increase the efficiency and effectiveness of the acquisition process. The 1996 provisions allow DOD to designate two entire defense facilities that would operate under the rules that apply to commercial items. Specific facilities have not yet been authorized. The 1991 provisions permit pilot programs to be conducted in accordance with standard commercial, industrial practices, and provides some waiver authority, with the specific programs to be designated by law. Five pilots were authorized in 1994 under the 1991 provisions. The TRW pilot could show benefits of military-commercial production under the 1991 DOD Acquisition Pilot provisions, but it is not part of the program established under the provisions.

## No Leeway in Requirements for Pilot

Although the TRW pilot was developed as a result of the Air Force Manufacturing 2005 initiative, the initiative provided no authority to waive requirements. From the beginning, the pilot has had to undergo a lengthy and complex process just to get the contract negotiated for the TRW divisions to work together. Because of all the defense-unique requirements that had to be addressed, pilot program officials spent 3 months trying to negotiate contractual terms and conditions acceptable to the commercial division. To finally get the subcontract negotiated, the military division agreed to accept responsibility for complying with government requirements related to purchasing materials.

To fully demonstrate the benefits of producing military items on commercial lines, the pilot subcontract must be modified. Under the existing agreement, the military group purchases materials to reduce the number of the military requirements passed on to the commercial group. Yet to take full advantage of the price and quality benefits from large volume discounts and long-standing supplier relationships, the commercial division must purchase the materials. The pilot must use standard procedures to request deviations or waivers from the military requirements in order to modify the subcontract so that the commercial division can purchase materials. The standard waiver process requires a detailed analysis of the original intent for a clause and a justification for the waiver. Similarly, the new rules for purchasing commercial items do not apply. According to a Judge Advocate General official, no policy exists that allows the pilot to be considered anything but an ordinary procurement.

To move the pilot forward with a streamlined subcontract, pilot officials also have to contend with an acquisition culture that is resistant to change. The TRW pilot was initiated by working-level engineers and others at Wright Laboratory who saw opportunities to actually demonstrate the advantages of working with the commercial sector. While the Secretary of Defense's demonstration initiatives have top down support and congressional waivers, the TRW pilot is a "grassroots" effort. Starting from the lower tiers, regulatory relief is obtained only by asking successively higher tiers to take responsibility for waivers to rules or for approving alternatives to accepted ways of operating. This is a time-consuming process and involves some risk, yet provides little incentive for approving deviations to traditional defense business procedures without specific directions from the highest levels.

## Recommendations

This pilot represents a low-risk effort to demonstrate the potential benefits of designing and producing a military component on a commercial line. Accordingly, we recommend that the Air Force, in consultation with TRW, identify those government-unique requirements that prevent the pilot from demonstrating that military items can be produced at equal or better quality on commercial production lines at substantially lower prices and then seek Secretary of Defense waivers. We recommend that the Secretary of Defense move quickly to waive those requirements within his authority that pilot officials believe impede the successful completion of the pilot. Further, we recommend that, where necessary, the Secretary seek legislative relief from those impediments he cannot waive. For example, the Secretary could request approval for the TRW pilot to proceed as part of the DOD Defense Acquisition Pilot Program.

## Agency Comments and Our Evaluation

In commenting on a draft of this report, DOD indicated that it did not concur with our recommendations, stating the pilot has not identified any specific roadblock that the Secretary of Defense needs to remove or that requires a waiver. DOD indicated that (1) providing a waiver for the pilot would not necessarily accomplish the project's objective of demonstrating the feasibility of building military products on commercial lines in the future and (2) designating this pilot as a DOD acquisition pilot would be contrary to one of the TRW pilot's objectives, which is to identify barriers and then develop and demonstrate business practices to nullify those barriers.

We disagree that the pilot has not identified specific roadblocks that need to be removed or that require a waiver. The pilot team, including both TRW divisions, has identified numerous government unique requirements that TRW's commercial division found objectionable. Many of the requirements, such as cost or pricing information, data rights, and quality standards, are the same ones that have been identified in several major acquisition reform studies and that commercial firms claim deter them from competing for government projects. Unless the pilot can get beyond these requirements, the pilot will be limited in demonstrating the benefits of commercial production, including the savings that the Air Force recognizes are needed in order to control the costs of future weapons systems.

The intent behind our recommendations is to allow the pilot to move beyond these well recognized and thoroughly studied barriers so that it

can demonstrate a better and cheaper way to procure electronic components for the F-22 aircraft program.

We believe the bottom-up approach taken by the pilot is an important step in changing the prevailing culture found in defense acquisition. We believe implementation of our recommendation will enhance the pilot's chances for successfully demonstrating that a military item can be redesigned and produced on a commercial line at significant cost savings—a theme that underlies the Secretary of Defense's "Mandate for Change" and the Air Force Manufacturing 2005 study.

DOD's comments in their entirety are reprinted in appendix II along with our specific evaluation of them.

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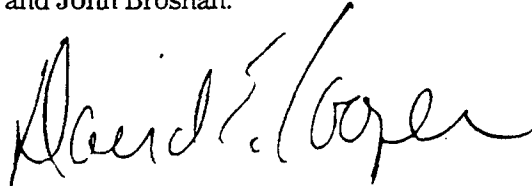
## Scope and Methodology

We interviewed and obtained information from pilot project officials at TRW, the Wright Patterson Pilot Program Manager, the TRW Program Manager, Wright Patterson contracting officials, the Judge Advocate General representative, an F-22 Program Office official, and the Air Force Office of the Assistant Secretary for Acquisition. We also reviewed documents such as the pilot contract and phase I contract reports and early recommendations, the Federal Acquisition Streamlining Act, implementing regulations, the Defense Authorization Acts from 1991 and 1996, and studies and reports related to acquisition reform. We observed manufacturing procedures at TRW's military division.

We conducted our review from September 1995 to January 1996 in accordance with generally accepted government auditing standards. We did not independently verify pilot estimates of savings from using commercial practices, nor did we verify that the clauses initially targeted by the pilot for possible waiver are impediments.

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 congressional committees. Copies will also be available to others on request.

Please contact me at (202) 512-4587 if you or your staff have any questions concerning this report. The contributors to this report were Katherine Schinasi, Monica Kelly, Marguerite Mulhall, Gordon Lusby, William Woods, and John Brosnan.

A handwritten signature in black ink, reading "David E. Cooper". The signature is written in a cursive style with a large, stylized "D" and "C".

David E. Cooper  
Associate Director  
Defense Acquisitions Issues

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List of Congressional Committees

The Honorable Ted Stevens  
Chairman  
The Honorable John Glenn  
Ranking Minority Member  
Committee on Governmental Affairs  
United States Senate

The Honorable Strom Thurmond  
Chairman  
The Honorable Sam Nunn  
Ranking Minority Member  
Committee on Armed Services  
United States Senate

The Honorable Christopher S. Bond  
Chairman  
The Honorable Dale Bumpers  
Ranking Minority Member  
Committee on Small Business  
United States Senate

The Honorable William F. Clinger  
Chairman  
The Honorable Cardiss Collins  
Ranking Minority Member  
Committee on Government Reform and Oversight  
House of Representatives

The Honorable Floyd Spence  
Chairman  
The Honorable Ronald Dellums  
Ranking Minority Member  
Committee on National Security  
House of Representatives

The Honorable Jan Meyers  
Chairwoman  
The Honorable John J. LaFalce  
Ranking Minority Member  
Committee on Small Business  
House of Representatives

# List of Contractual Clauses Targeted by Pilot for Review

| Clause by category             | Description                                                                                                             |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| FAR 52.215-1                   | Examination of Records by Comptroller General                                                                           |
| FAR 52.215-2                   | Audit - Negotiation                                                                                                     |
| <b>Cost or pricing</b>         |                                                                                                                         |
| FAR 52.215-22                  | Price Reduction for Defective Cost or Pricing Data                                                                      |
| FAR 52.215-24                  | Subcontractor Cost or Pricing Data                                                                                      |
| FAR 52.215-27                  | Termination of Defined Benefit Pension Plans                                                                            |
| FAR 52.215-39                  | Revision or Adjustment of Plans for Postretirement Benefits Other Than Pensions                                         |
| FAR 52.230-2                   | Cost Accounting Standards                                                                                               |
| FAR 52.230-5                   | Administration of Cost Accounting Standards                                                                             |
| DFARS 252.215.7000             | Pricing Adjustments                                                                                                     |
| DFARS 252.231.7000             | Supplemental Cost Principles                                                                                            |
| DFARS 252.231.7001             | Penalties for Unallowable Costs                                                                                         |
| DFARS 252.233.7000             | Certification of Claims and Requests for Adjustment or Relief                                                           |
| DFARS 252.242.7001             | Certification of Indirect Costs                                                                                         |
| <b>Delivery and inspection</b> |                                                                                                                         |
| FAR 52.246-9                   | Inspection of Research and Development                                                                                  |
| DFARS 252.225-7009             | Duty Free Entry - Qualifying Country End Products and Supplies                                                          |
| DFARS 252.247-7023             | Transportation of Supplies by Sea                                                                                       |
| <b>Ethics</b>                  |                                                                                                                         |
| FAR 52.203-1                   | Officials Not to Benefit                                                                                                |
| FAR 52.203-5                   | Covenant Against Contingent Fees                                                                                        |
| FAR 52.203-6                   | Restrictions on Subcontractor Sales to the Government                                                                   |
| FAR 52.203-7                   | Anti-Kickback Procedures                                                                                                |
| FAR 52.203-9                   | Requirement for Certificate of Procurement Integrity - Modification                                                     |
| FAR 52.203-12                  | Limitation on Payments to Influence Certain Federal Transactions                                                        |
| FAR 52.209-6                   | Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended or Proposed for Debarment |
| DFARS 252.209-7000             | Acquisition From Subcontractors Subject to On-site Inspection Under the Intermediate Range Nuclear Forces Treaty        |
| <b>Patent/data rights</b>      |                                                                                                                         |
| FAR 52.227-1                   | Authorization and Consent                                                                                               |
| FAR 52.227-2                   | Notice and Assistance Regarding Patent and Copyright Infringement                                                       |
| DFARS 252.227-7013             | Rights in Technical Data and Computer Software                                                                          |

(continued)



**Appendix I**  
**List of Contractual Clauses Targeted by**  
**Pilot for Review**

| <b>Clause by category</b>      | <b>Description</b>                                                               |
|--------------------------------|----------------------------------------------------------------------------------|
| DFARS 252.227-7018             | Restrictive Markings on Technical Data                                           |
| DFARS 252.227-7029             | Identification of Technical Data                                                 |
| DFARS 252.227-7037             | Validation of Restrictive Markings on Technical Data                             |
| <b>Purchasing restrictions</b> |                                                                                  |
| DFARS 252.225-7014             | Preference for Domestic Specialty Metals                                         |
| DFARS 252.225-7023             | Restriction on Acquisition of Carbon/Iron Powders                                |
| DFARS 252.225-7025             | Foreign Source Restrictions                                                      |
| DFARS 252.225-7026             | Reporting of Contracting Performance Outside the United States                   |
| DFARS 252.225-7030             | Restriction on Acquisition of Carbon, Alloy and Armor Steel Plate                |
| <b>Socioeconomic</b>           |                                                                                  |
| FAR 52.219-8                   | Utilization of Small Business Concerns and Small Disadvantaged Business Concerns |
| FAR 52.219-9                   | Small Business and Small Disadvantaged Business Subcontracting Plan              |
| FAR 52.220-3                   | Utilization of Labor Surplus Area Concerns                                       |
| FAR 52.220-4                   | Labor Surplus Area Subcontracting Program                                        |
| FAR 52.222-1                   | Notice to the Government of Labor Disputes                                       |
| FAR 52.222-20                  | Walsh-Healey Public Contracts Act                                                |
| FAR 52.222-26                  | Equal Opportunity                                                                |
| FAR 52.222-35                  | Affirmative Action for Special Disabled and Vietnam Era Veterans                 |
| FAR 52.222-36                  | Affirmative Action for Handicapped Workers                                       |
| FAR 52.222-37                  | Employment Reports on Special Disabled Veterans and Veterans of the Vietnam Era  |
| FAR 52.223-2                   | Clean Air and Water                                                              |
| FAR 52.225-11                  | Restrictions on Certain Foreign Purchases                                        |
| DFARS 252.203-7001             | Special Prohibition on Employment                                                |
| <b>Warranty</b>                |                                                                                  |
| FAR 52.246-23                  | Limitation of Liability                                                          |
| <b>Miscellaneous</b>           |                                                                                  |
| FAR 52.212-8                   | Defense Priority and Allocation Requirements                                     |
| FAR 52.212-13                  | Stop-Work Order                                                                  |
| FAR 52.252-2                   | Clauses Incorporated by Reference                                                |
| DFARS 252.204-7000             | Disclosure of Information                                                        |
| DFARS 252.249-7001             | Notification of Substantial Impact on Employment                                 |
| DFARS 252.249-7002             | Notification of Proposed Program Termination Reduction                           |

# Comments From the Department of Defense

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



ACQUISITION AND  
TECHNOLOGY

## OFFICE OF THE UNDER SECRETARY OF DEFENSE

3000 DEFENSE PENTAGON  
WASHINGTON DC 20301-3000



April 10, 1996

Mr. David E. Cooper  
Associate Director, Defense Acquisitions Issues  
National Security and International Affairs Division  
U.S. General Accounting Office  
Washington, DC 20548

Dear Mr. Cooper:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report, "ACQUISITION REFORM: Air Force Commercial Integration Pilot Offers Benefits, But Many Challenges Remain," dated March 14, 1996 (GAO Code 705119/OSD Case 1111). DoD does not concur with the GAO recommendations (see Enclosure 1). However, with the exception of the comments at Enclosure 2, DoD agrees with the technical accuracy of the report.

DoD agrees that, although the pilot will not be completed until 1998, significant lessons have already been learned from the project. However, DoD does not agree that there is a need for the Secretary of Defense to waive requirements which are impediments to the Air Force/TRW pilot nor is there a need to request that Congress give the Secretary of Defense authority to designate the Air Force/TRW pilot as a participant in the Defense Acquisition Pilot Program (DAPP). The pilot team has not identified any specific roadblocks which the Secretary of Defense needs to remove or for which a waiver is the only way out. In fact, to obtain a waiver for the Air Force/TRW pilot would not necessarily accomplish the project's objective of demonstrating the feasibility of building military products on commercial lines in the future. Further, to designate this project a DAPP would actually be contrary to one of the project's objectives, which is to identify barriers and then develop/demonstrate business practices to nullify those barriers.

Specific DoD comments on the GAO recommendations are provided at Enclosure 1. DoD appreciates the opportunity to comment on the GAO draft report.

Sincerely,

Colleen A. Preston  
Deputy Under Secretary of Defense  
(Acquisition Reform)

Enclosures:  
As Stated



**Appendix II**  
**Comments From the Department of Defense**

GAO DRAFT REPORT DATED MARCH 14, 1996  
(GAO Code 705119, OSD Case 1111)

"ACQUISITION REFORM: Air Force Commercial Integration Pilot Offers Benefits, But Many Challenges Remain"

**DEPARTMENT OF DEFENSE COMMENTS ON THE GAO RECOMMENDATIONS**

RECOMMENDATION 1: The GAO recommended that the Secretary of Defense move quickly to waive requirements within his authority that he concurs with pilot officials as being impediments. (p. 9/GAO Draft Report)

DOD RESPONSE: Nonconcur. The pilot team has found no specific roadblocks yet which they need the Secretary of Defense to remove. In fact, the pilot team does not wish that waivers be granted to this program unless there is a clear, repeatable process put in place to facilitate future programs with commercial suppliers to build military products on commercial production lines. To obtain a waiver for the Air Force/TRW pilot would not necessarily accomplish the pilot's objective of demonstrating the feasibility of building military products on commercial lines in the future. The pilot team has taken the following approach: either the team finds a way for DoD prime contractors to subcontract with commercial suppliers using existing laws and regulations or the team requests changes to laws and regulations. To date the team has not come up against any impediments for which a waiver is the only way out. The team is attempting to remove most of the barriers that the clauses sighted in appendix 1 of the GAO draft report through the application of the new definition of commercial items. No waivers have yet been needed for these clauses.

RECOMMENDATION 2: The GAO recommended that the Secretary of Defense seek legislative relief from statutory impediments, including authority to designate the pilot as a participant in the Defense Acquisition Pilot Program (DAPP). (p. 9/GAO Draft Report)

DOD RESPONSE: Nonconcur. The pilot team has not requested, nor does it advocate, DAPP participation. Receiving authority to designate the program as a participant in DAPP is a long, time consuming process. It is not clear that such authority could be enacted before the FY98 Defense Authorization Act. By then, the pilot will be close to completion. Further, as stated above, the pilot team will identify any statutory impediments to success. So far, none have been identified.

Now on p. 10

Enclosure 1

Appendix II  
Comments From the Department of Defense

GAO DRAFT REPORT DATED MARCH 14, 1996  
(GAO Code 705119, OSD Case 1111)

"ACQUISITION REFORM: Air Force Commercial Integration Pilot Offers Benefits, But Many Challenges Remain"

DEPARTMENT OF DEFENSE COMMENTS ON SELECTED ISSUES

See comment 1.

ISSUE 1: Acquisition reform initiatives have not furthered the pilot effort, despite the fact that one of the central tenets of acquisition reform is to incorporate more commercial practices into the defense procurement system. Statutory waivers provided to pilots under the DoD Acquisition Pilot Program could be helpful, but the TRW effort is not part of the program. (p. 3/GAO Draft Report)

DOD COMMENT: The use of specific statutory waivers and acquisition reform initiatives such as the Defense Reinvention Laboratory, which are not available to all programs operating in a commercial facility, would interfere with the team's ability to meet its express goals of identifying current regulatory or statutory barriers to military-commercial integration and of developing a model contract for use in future contracts.

Now on p. 6.  
See comment 2

ISSUE 2: Despite the climate of acquisition reform there are many hurdles the pilot must overcome. These hurdles are primarily due to reconciling major differences in business practices and procedures between the way the government operates and the way commercial businesses operate. Acquisition reform initiatives have not allowed this pilot to capitalize on technological advances that allow a small number of military items to be integrated with production at a commercial manufacturing facility. (p. 5-6/GAO Draft Report)

DOD COMMENT: Acquisition reform was never intended to eliminate all procedural protections. Some measure of administrative process oversight is considered essential to ensure product reliability and price reasonableness, even in the commercial sector. This is particularly true in the research and development/cost reimbursement environment where the Air Force-TRW experiment program resides.

Now on p. 7  
See comment 3

ISSUE 3: For example, TRW's commercial division agreed to the FAR clause on affirmative for Vietnam veterans because the clause is consistent with standard commercial practices. However, FAR clause 52.222-37, Employment Reports on Veterans of the Vietnam War, is not consistent with those practices. This clause requires reporting annually on the number of veterans hired and number currently employed veterans -- by job category and location. (p. 6-7/GAO Draft Report)

DOD COMMENT: The Federal Acquisition Streamlining Act (FASA) of 1994 eliminated contract by contract reporting under FAR clause 52.222-37, Employment Reports on Veterans of the Vietnam War.

Enclosure 2

**Appendix II**  
**Comments From the Department of Defense**

Now on p. 8.  
See comment 4.

ISSUE 4: The commercial item definition, intended to streamline government requirements, does not apply to the pilot components. (p. 7/GAO Draft Report)

DOD COMMENT: The commercial item definition does not apply to the military-unique components as the Air Force/TRW experiment program is presently structured. It is possible, even likely, that had FASA been in place before the Air Force/TRW experiment program was initiated, the contract could have been configured differently to take advantage of the significant streamlining features available under the commercial item procurement process.

See comment 5.

ISSUE 5: Because the commercial item definition does not apply to military-unique items, integrated production efforts such as the pilot did not benefit from the OFPP Act definition. (p. 8/GAO Draft Report)

DOD COMMENT: "Military-unique items" can fall within the commercial item definition if minor modifications are required to adapt commercially-available products to government requirements. See paragraph (12) (C)(ii) of 41 U.S.C. sec 403.

See comment 6.

ISSUE 6: This [single process initiative] does not provide relief for the pilot because it is directed toward defense contractor facilities. (p. 8/GAO Draft Report)

DOD COMMENT: The commercial facility that the pilot program is dealing with already has a single process. There are not multiple DoD processes at the facility from which to generate a single process.

The following are GAO's comments on the Department of Defense's (DOD) letter dated April 10, 1996.

## GAO Comments

1. Numerous studies document current regulatory and statutory barriers to military-commercial integration. In fact, DOD is pursuing a variety of initiatives, such as the single process initiative and reinvention laboratories, based on the results of those studies. As it gains experience from its acquisition reform efforts, DOD has learned that there is likely to be no one solution to overcoming barriers. However, we are not aware of any other initiatives that address what we believe is unique about the TRW pilot program, which is the production of a military-unique component in a commercial facility. We believe that pursuing the objective of identifying barriers in the TRW pilot at the risk of missing the schedule of producing and testing the F-22 module would represent a lost opportunity.
2. DOD's comment does not address any information in the report.
3. According to pilot officials and program documents, the pilot is identifying all possible barriers that were in place when the contract was signed, regardless of their current status. This is also true, for example, for the military quality standard—MIL-Q-9858A—which has been abrogated by the Secretary of Defense.
4. We agree, and state in the report, that the commercial item definition does not apply to military-unique components such as those being produced in the TRW pilot.
5. This comment deals with minor modifications to a commercial item for military use. It is not relevant to the TRW pilot, which is attempting to produce a military-unique item in a commercial facility.
6. We agree. DOD's comment supports our point that other DOD acquisition reform initiatives do not provide relief for this pilot.