APPENDIX D

TO THE REPORT OF

THE DEFENSE SCIENCE BOARD TASK FORCE

ON

DEFENSE ACQUISITION REFORM (PHASE II)

JET ENGINE COMMERCIAL PRACTICES PANEL

FINAL REPORT

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Office of the Under Secretary of Defense for Acquisition and Technology

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Table of Contents

Executive Summary	1
Introduction	3
Defense Acquisition Reform	3
Panel Overview	4
The Jet Engine Industry	5
Jet Engine Economic and Industrial Base Issues	6
Commercial Practices in the Jet Engine Industry	7
Regulatory and Statutory Barriers	7
Setting Fair and Reasonable Prices	9
Commercial Application to Jet Engine Research and Development	10
Post Production Contractor Support	11
Socio-Economic Programs and Safeguards	12
Transition Issues	13
Conclusions, recommendations and a final thought	14
Attachment A: Air Force Recommended Pilot Program Waivers on Statutes and Regulations	A-1
Attachment B: DoD Process Action Team Blueprint for Change for Military Specifications and Standards	B-1
Attachment C: Draft Memorandum for Deputy Under Secretary of Defense (Acquisition Reform)	C-1

Defense Science Board
Acquisition Reform Task Force
(Phase II)

Jet Engine Commercial Practices Panel
Final Report

Executive Summary

After considerable discussion of issues surrounding the feasibility of procuring all military jet engines through commercial practices, the Jet Engine Commercial Practices Panel reached the following findings and recommendations. They are presented here in brief, with explanation provided in the report.

Tasking *-- To determine the feasibility of acquiring military jet engines using commercial practices.*

Findings *-- The Panel finds that:*

1. It is feasible and desirable to use commercial practices, industry wide, to procure and support mature military engine production and support programs; and,

2. It is not appropriate, at this time, to use purely commercial practices in the research and development phase of the acquisition cycle for large military engines. There are opportunities, however, in the development of smaller engines for target or reconnaissance vehicles.

Recommendations *-- The Panel recommends that:*

1. A detailed, comprehensive program be established to convert the military jet engine industry to commercial practices for procuring and supporting mature engine, production and support programs; and

2. The Administration, Congress, and Department of Defense provide the necessary waivers and exceptions to the various laws, regulations, standards and specifications that will allow pure commercial practices to be used to procure and support mature military engine production and support programs; and

3. A joint government and industry team, under the direction of the Deputy Under Secretary of Defense (Acquisition Reform), be established and funded to implement the program. The team will create a detailed, time-phased plan for commercial practices on current programs where practical; follow-on procurements of current in-production engines; and on future engines as they complete qualification and enter production. The team will also explore opportunities to implement commercial practices during jet engine development.

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Introduction

In April, 1993, the Under Secretary of Defense (Acquisition) asked the Defense Science Board (DSB) to undertake a study to define comprehensive modifications to the process the Department of Defense uses to acquire goods and services. Out of that initial tasking grew a number of complementary studies, each looking at a specific industry or technical capability with the intention of reducing costs and increasing acquisition efficiencies through the application of commercial practices.

In September, Robert J. Herman, Chairman of the DSB Task Force on Defense Acquisition Reform, asked General Bernard P. Randolph, USAF (Retired), to form a panel to study Jet Engines as a Pilot Industry. The purpose was to determine the feasibility of procuring all military jet engines using commercial practices.

Initially, a small panel was formed, consisting of the DSB members and representatives from General Electric Aircraft Engines, Pratt & Whitney Government Engines, and the Air Force. As the members looked more closely at the issues, it was agreed that the panel should be expanded to include representatives from the entire American military jet engine industry, all the military services, the Joint Chiefs staff, and the Center for Strategic & International Studies. Each representative brought extensive knowledge and experience to the table. The fully evolved panel is listed at the end of this report.

Defense Acquisition Reform

Department of Defense acquisition reform is not a new interest; studies have been conducted for decades. In fact, a Center for Strategic & International Studies publication, Road Map for Milspec Reform, lists over a dozen studies about military specifications and standards since 1986. Each one of them served a purpose and each had a portion of the recommendations enacted. For example, the 1989 Defense Management Review was able to eliminate more than 6,000 military and federal specifications, but it fell short of its goal of eliminating federal and military specifications and standards for commercial products and processes.

There are another half dozen current studies considering improvements in the military aircraft procurement process. These studies, including those by the Massachusetts Institute of Technology and the current Aeronautical Systems Center, look at streamlining the entire aircraft acquisition process. All of these studies enlisted participation of broad sections of the government and industry communities, and call for sweeping reform.

Acquiring commercial products and applying commercial practices is not a new concept. For years, the government has bought selected commercial products. There are even laws, and federal and defense regulations recommending such procurements and making them administratively possible. As the Panel confirmed, one of the largest continuing examples of commercial procurement is jet engines for military aircraft. These commercial procurements, however, have typically been for selected items to be used on certain systems.

The end of the Cold War suggested that a new approach was needed for military procurement; the old ways were no longer satisfactory. Smaller budgets, problems and inefficiencies in the current system, and a leadership determination to reduce costs of procurement and end products all indicated that a commercial procurement system is a better solution.

In November, 1993, the Department of Defense sent a number of proposed reforms to the

President for review and presentation to the Congress. Included in these proposals was a series of pilot commercial programs. One of these programs called for a specific commercially procured jet engine; others described various weapons systems and products. The common element was that all were to be procured through commercial means. These pilot procurements are program specific and do not possess the magnitude of opportunities that a total conversion of mature military programs would have on the jet engine industry.

This study is a logical extension of proposed pilot programs. The government and Department of Defense already buy parts and services using commercial practices. Procurement of commercial jet engines for certain military aircraft is an accepted and understood practice. Therefore, the next step is to consider procurement of all production qualified military jet engines through commercial methods.

The military jet engine industry is an ideal candidate for commercial practices procurement. Jet engine manufacturers have an extensive history of building similar products for both the commercial and military markets. It is not uncommon that engines, both commercial and military, are manufactured in the same facility, with the same people, processes, materials and suppliers. Some of the engines are even considered "dual use," differentiated only by minor military-required modifications -- if any at all. For example, since 1982, over 1,500 engines have been procured through limited commercial practices for the KC-135 tanker aircraft. Commercial jet engines also have been procured for other military aircraft including the newer KC-10 tanker aircraft, Air Force One, and the current C-17 airlift aircraft.

Panel Overview

After reviewing the situation described above, the DSB formed the Panel to determine the feasibility of commercially procuring jet engines on an industry-wide basis. It had been assumed that it was possible, but there was no agreement between the government and industry "sides" that an entire industry could be moved from a regulation-controlled procurement process into a commercial practices procurement.

The joint government and industry Panel agreed that it is possible; there are no insurmountable obstacles. Through the elimination of regulatory, process and traditional impediments, in combination with government and industry leadership, training, patience and understanding, the government could procure in-production jet engines using commercial practices. The result would be the same high quality military jet engines, but procured with a minimum of oversight, reporting, accounting -- before, during and after delivery of the engines.

Under commercial practice procurement, both government and industry would enjoy a reduction of overhead costs and a shortening of the manufacturing and qualification process. Although previous studies have estimated these potential savings to be as high forty percent, actual figures can not be established until the implementation team determines what specific changes will be made in the shift to commercial practice procurement.

There are two stipulations to the recommendation: that the transition be made for the entire engine production facility at each company; and that commercial practice procurement initially apply only to mature production engines. It would not be practical to reduce oversight, reporting or accounting for one military engine line within a manufacturing facility if others were left under regulatory control. Also, the nature of development programs makes it impractical to employ commercial practices during the development of new large military engines at this time. The development of engines for small, unmanned vehicles, however, may provide an opportunity commercial practice procurement.

The Panel's task then became one of determining the obstacles or issues impacting this procurement shift for an entire industry. In the past, regulations had been waived or agreements created for single engine procurements. The success of this proposal calls for across-the-board evaluation, and either waiver or elimination of a broad array of statutes, and federal and military regulations, specifications and standards. It was found that this aspect had been studied repeatedly, by both government and industry groups. Few of the recommendations, however, had been acted upon.

The Panel lastly explored the necessary ground work for such a procurement shift with the objective of understanding the process and issues for the adoption of commercial practices. The intent was not to build the program. That will require a wider, concentrated government and industry study. Instead, the intent was to lay a foundation on which to build a carefully mapped out implementation program. To be successful, the program must be practical, feasible and supported by all related government agencies and the jet engine industry. The Panel feels that the following comments and strategies answer many of the questions needed to create a commercial practice procurement program for the jet engine industry.

The Jet Engine Industry

The jet engine industry is one of the oldest established, large-scale aerospace manufacturing communities in the country. Engines have been built by many of the same companies since late in World War II. Originally creating engines for military aircraft, the industry long ago entered the commercial world in response to growing demands for civilian aircraft with higher speeds and longer flight duration. As the understanding of jet engines grew, so did product diversification. Today jet engine products include large systems for military and commercial aircraft applications, marine and industrial engines, and small transport and helicopter engines. Smaller engines are used in cruise missiles, as well as target and reconnaissance vehicles. Some of the smallest of these engines are used in auxiliary power units or APU's, which are common to both military and commercial customers.

In the United States, the industry is primarily served by seven manufacturers; two large (General Electric and Pratt & Whitney) and five smaller (Allied Signal Engines, Allison Engines, Williams International, Textron Lycoming, and Teledyne Ryan Aeronautical - CAE). All of these companies were represented on this Panel. The Panel also recognized that the jet engine industry includes a number of smaller firms which provide components, modules, and services supporting the seven original equipment manufacturers (OEM's). These companies form a subcontractor base which the Panel felt was adequately represented by the seven industry panelists.

The national economic impact of these companies is significant. While engine assembly is concentrated in the eastern half of the country, suppliers are located throughout the country. In fact, the actual assembly accounts for less than half of the total effort involved in jet engine manufacture. A network of hundreds of vendors, supplying the largest castings and forgings to the smallest fasteners, provide the parts necessary to create a jet engine. It is not unusual for the major manufacturers to use the same suppliers for common systems or parts.

The jet engine industry is not characterized by high product volumes, as is the automotive or electronics communities. Pratt & Whitney, for example, manufacturers less than a thousand large engines per year. Some of these engines, however, list over 1,700 part numbers. Each number, in turn, may represent up to hundreds of individual parts in the engine. The key is that each engine is made up of high technology and high reliability components, and assembled

under high quality control conditions.

Although the companies are widely dispersed and follow their own management philosophies, a number of additional common threads bind them together. First, jet engines are not the sole business of the companies. Although they do not account for the largest source of sales, they are a significant portion of total company income. The second similarity is that jet engine sales are declining, both military and commercial. Due to the declining defense budget, the greatest sales losses are on the military side. Engine sales at Pratt & Whitney, for example, have declined from $7.1B in 1991 to $5.1B in 1993, with the military side accounting for the majority of the decline.

The third common thread binding jet engine companies is that, except for one company, emphasis within the engine divisions has shifted from military to commercial sales. For example, 80 percent of 1960's General Electric engine sales used to go to the military. In 1993, that had declined to 40 percent -- and is continuing to drop. Pratt & Whitney is experiencing the same loss. Military business today accounts for about half the sales volume; it is expected soon to drop to a quarter. The sales shift is the same for the smaller manufacturers. Today, military business accounts for 60 percent of Williams International engine sales. It is predicted to drop to 10 percent in the near future. The government, represented primarily by the military services, has become the minority business partner. Today, General Electric has about 250 commercial engine customers, both American and off shore. In fact, 51 percent of General Electric's engine sales are to foreign customers, military and commercial.

This is a mature business with world wide capabilities for sale and total service of the product. It is a prime candidate for a "pilot" industry.

Jet Engine Economic and Industrial Base Issues

As mentioned earlier, both the government and jet engine industry are experiencing procurement problems, resulting in increases in engine costs and long procurement processes.

Many problems are common to DoD procurement practices and are well known by both the government customer and the commercial contractor. Stiff controlling layers of regulations, detailed cost accounting requirements unique to DoD acquisitions, some duplicative or outmoded processes driven by military specifications, redundant socio-economic requirements, and continual oversight for all phases of manufacture add costs and time to the entire process. These are not new issues, nor have they been ignored in the past.

Their primary impact is that they increase the cost of an engine through greater overhead and lengthened manufacturing and qualification process. For example, one of the most pressing business issues is the government's cost accounting requirements. Since commercial industry normally doesn't record costs by contract, contractors must establish cost reporting systems for government business. The entire cost management and reporting system (SF 1411 and SF 1412) satisfies government statutes and regulations but does not add value or quality to the product. The result is extra burden, which is passed back to the government -- and, to some degree, to the commercial customer for the parallel commercial item. Similar arguments could be made for some military specifications and standards, as well as out-dated restrictive laws and regulations. Further, DoD engine contractors have difficulty in retaining some of their key suppliers who refuse to create the unique DoD compliance systems.

Higher engine costs, however, have created a related issue. For the jet engine company wanting to run as a single-system, integrated business, the result is that the declining military

portion of the jet engine manufacturing business influences the now increasing commercial segment. The cost of government compliance in a common facility with common products spills over on to the commercial line; raising the price of the commercial product. Consequently, the American commercial jet engine manufacturer is losing some of its world market competitive edge. Also, since overseas jet engine makers are often government supported, this cost disadvantage carries even heavier weight.

Panel discussions brought out a developing scenario within the jet engine industry. If the government continues these unique processes and standards, the industry may tend to segregate the government business from the commercial business in an effort to minimize non value-added costs. As the demand for military products declines through a shrinking defense budget, the costs of maintaining a separate capability will rise and the company will reevaluate the economic reality of doing business with the government. The potential would be a reduction in the military industrial base and a parallel reduction in the national surge capability. Adoption of commercial practice procurement could help preclude such a scenario.

Commercial Practices in the Jet Engine Industry

As stated earlier, the Panel agreed that a solution to cost and efficiency problems facing the government and the jet engine industry is the adoption of commercial practices for acquisition of qualified, in-production engines. Commercial practices, simply defined, are the use of the most practical method, i.e. competitive market driven, cost effective and without unnecessary oversight. However, it is understood that there must be an accepted definition and consistency in the implementation of commercial practices.

To achieve these practices, a number of standard and resilient issues must be addressed by both government and industry leadership. A maze of regulations, practices, processes, traditions -- even expectations -- have evolved through decades of constructing administrative safeguards and procedures. The purpose of each individual safeguard is to protect the public dollar, provide access for qualified bidders to federal procurement contracts, and guarantee the product ordered will be the product delivered. Unfortunately, taken as a body, the impact is counter-productive and expensive.

In the commercial engine business, the safeguards are built in. First, operational safety and satisfactory capability is assured through Federal Aviation Regulations (and counterparts in England, France, Japan, etc.), which must be complied with and demonstrated before formal certification is granted for that engine model. Even though certified, a low reliability product will lose its market share; a product priced too high will not be purchased; a product not using current technology will be ignored. These are basic commercial truths, accepted around the world and not maintained or enforced by a program of "how to" regulations or excessive oversight laws.

To establish commercial practices for jet engine procurement, the Panel examined a number of potential barriers. These included regulatory obstructions or impediments; determining a fair and reasonable price; research and development; socio-economic programs and safeguards; and government and industry issues of transitioning to a commercial practice facility. All of them can be solved. For many, solutions already exist.

Regulatory and Statutory Barriers

Like many other goods and services created for the government, jet engine manufacture is governed by numerous laws, military specifications, and regulations. Often these regulations are layered from federal to defense to the particular military service. As was pointed out earlier, for those companies not already participating in government contracting, these regulatory requirements are enough to discourage participation in the market.

These laws were intended to serve the best interests of the public. They attempted to guarantee fair and reasonable prices, equal access for all qualified bidders, and full support of social and economic goals. Military specifications were also intended to protect the public interest by ensuring a regimented quality and manufacturing process for military-unique products. While the objective of these actions must be continued, the result of the current broad regulatory control, unfortunately, has been an expensive and inefficient system incorporating many unique requirements, without achieving many of the desired effects.

For the jet engine industry, like many other industries, requirements have grown to be duplicative and burdensome. The Department of Defense adds reporting requirements on top of Federal directives. Many government-unique requirements impact hiring and employment, suppliers and sources of supply, and the pricing of products.

The commercial jet engine, usually built next to the military counterpart, is not under such restrictions. Production is governed by accepted industry-wide manufacture and quality practices, and general Federal or Federal Aviation Administration rules which, while similarly detailed and demanding, place most of the responsibility for compliance on the contractor for day-to-day operations. Generally Accepted Accounting Principles (GAAP), instead of detailed cost accounting and reporting procedures, are standard within the industry. This does not mean that the price of today's domestic jet engine is radically lower. It varies widely, depending on each customer's desire for the total package of engine, spare parts, and support. The result over the years, however, has been that the government oversight and reporting requirements have become institutionalized and impacted the commercial price.

It was not the Panel's goal to construct a list of objectionable laws, regulations, and milspecs. This has been done many times by government and industry teams far more staffed and supported than our small group. Instead, we examined existing lists to determine which could be best applied to the jet engine manufacturing process.

The Panel determined that the Air Force's draft list of recommended statute and regulation waivers, created to support the Department of Defense's Commercial Derivative Engine Pilot Program, best fits the needs of the jet engine industry. Although the list was built for the commercial practice procurement of a single engine model, its application is sweeping. The document lists 52 different statutes and hundreds of supporting federal and defense regulations. It covers manufacturing, accounting, socio-economic, and environmental requirements. The list of statutes and regulations, as well as the explanations and applications, are in Attachment A.

Isolating candidate military standards and specifications that adversely impact the jet engine manufacturing process was an equally easy task. The list was provided by the Department of Defense Process Action Team's November, 1993, draft report on Military Specifications and Standards. The Team's vision was well explained in the opening paragraph:

> "Standardization reform is an integral part of the acquisition reform vision, a vision intended to revolutionize the way the government does business. At the root of the standardization problem are 31,000 military specifications and standards. Over the past 20 years or so, it has been an uphill, and not always successful, struggle to keep these documents up-to-date in a world of continuous and planned obsolescence. As DoD's

budgetary and manpower resources are reduced, however, there is little hope that military documents can be kept either technically current or on track with commercial practices, products, and processes. *And the greater the divergence between the commercial and military sectors, the less the likelihood that military products and systems can be purchased from or produced in commercial operations.*" (Italics added)

This list (Attachment B) details over sixty military standards and specifications which may adversely impact the manufacture of jet engines. Note that it was compiled by a joint government and industry team from Defense Instructions and Manuals; previous recommendations from the Defense Management Review Working Group Nine; industry association reports; and July, 1992, testimony before the House Armed Services Committee. All specifications and standards identified by the Process Action Team may not apply to the jet engine industry. We believe, however, this list is an excellent place to begin an assessment to remove the restrictive "how to" parameters. It should also be noted, that since military specifications and standards are not created by statute, they may be changed by the department or agency responsible for their promulgation.

Some of these laws, regulations and standards must be eliminated, some waived, and some modified. Identifying needed changes and implementing them is a very difficult process. It will require full participation and acceptance of Congress, staffers, DoD and industry leaders. However, these problem areas are well known by both the government customer and the industry contractor, and extremely well documented. It is a matter of action.

Setting Fair and Reasonable Prices

The Panel felt that this was one of the most sensitive issues for both the DoD and Congress. For decades, regulations and legislation have been written in an effort to assure that the public received the best product or service for the tax dollar. The image of commercial practices procurement, without the guardian cost controls and reporting, is foreign or at least uncomfortable to many in the government. Although setting the "fair and reasonable" price for a commercially procured jet engine will not be difficult, it will require the government to understand and practice commercial market pricing analysis. This will mean a cultural and administrative change from the previous traditional cost analysis as the price basis.

Jet engines have a pricing history stretching back over 40 years. The tools available to both the government and industry include flat market pricing using previous procurements of the same engine; recent buys of other military engine models from the same or competitive contractors; prior engine prices with escalation based on consumer price index; and yearly catalogues for engines, spares and support. These are the same tools and methods used by the jet engine industry to set commercial prices, as well as the same tools used by the purchaser to verify the prices.

Engine alterations or additions, which make them military-unique, may also be determined through individual market pricing of subsystems or assemblies, and standardized industry labor rates. Typically, one or more of these prices are verifiable as matters of record or catalogue.

The prices of after-delivery support and warrantees are also matters of record. The jet engine industry has a history of providing maintenance, both at their facilities and in the field. Such services can be tailored to fit the requirements and location, in the United States or at overseas bases.

The administrative issue arising out of the adoption of market pricing is that such concepts are not generally practiced by the government. Systemic vehicles, such as processes and forms, do

not commonly exist. They must be developed, approved, disseminated, taught -- and accepted. Similarly, there are few contracting personnel familiar with market pricing research or methods. Again, a cadre of market pricing qualified personnel must be trained.

Commercial Application to Jet Engine Research and Development

Jet engines, like any other product, must pass through the research and development phase before entering operational production. Our joint government and industry Panel spent many hours trying to fit military jet engines into the commercial development practice model, but was unsuccessful for the majority of developmental applications. Our recommendation is that system development of new military aeronautical engines, or major modifications of current engines -- for the present time -- retain the current regulatory control approach. We discovered both technical and business obstacles to commercial practices for military research and development.

On the technical side, the military customer and contractor team determines the requirements and specifications for the entire system, including the engine. This is a highly integrated effort between the military customer, airframer, engine manufacturer, and system integrator. The airframe and engine interfaces must be carefully defined and specified. In recent years, this integration has been streamlined somewhat through the introduction Integrated Product Development teams, a reduction in proposal paperwork, and a new level of communications and coordination between the government customer and the aerospace contractor. Successful new programs, including the F-22 fighter aircraft, demonstrate the ongoing efforts at research and development improvement.

To make aircraft integration work, the developing components must be created under the same system. It would be unmanageable for the airframer, engine manufacturer and weapon system integrator to employ different approaches -- i.e., airframer use military specifications and standards, and the engine contractor use commercial practices. The result would be incompatible technical interfaces, data requirements, and funding profiles and amounts.

On the business side, contracts for research and development are normally priced to recognize the risk inherent in these types of acquisitions. The use of a cost type contract provides the necessary flexibility for the government to react to threat and requirement changes. To expect the jet engine industry to assume all the risk during this acquisition stage would not be prudent business practice and would result in increased costs to the government. A parallel business concern is that the military service, over the development period, will change their priorities for program support. As currently practiced, the combined impact of funding, funding profiles and priority changes do not support commercial practice development.

These technical and business factors make military acquisition a higher risk than typical commercial system development. Since the jet engine industry team would not control the risk factors as they would in a commercial development, the current risk becomes unacceptable.

Once the engine is developed, qualified for production, and introduced into the field with a first production quantity, commercial practices could then be applied to the acquisition of all subsequent engines. This would take advantage of the engine companies' common facilities, people, processes, and suppliers for both military and commercial production.

There are a number of situations or methods, however, where commercial practices may be immediately introduced into aircraft jet engine research and development. For example, commercial practices may be applied for engine acquisition of closely related models needing

only limited research and developmental modifications. If it is only a matter of a modified gearbox and accessories integrated into another system, commercial practices could be applied. Commercial practices are also applicable where commercial engines fit the military requirements, with little or no adaptation. Well known examples include the engines for the C-17 and KC-135 aircraft.

A third potential area is for smaller, limited purpose, unmanned aerial vehicles such as target or reconnaissance vehicles. Since these aircraft often have simpler, integrated flight systems and are required to perform profile activities -- which can be precisely described by performance specifications -- their development lends itself to total commercial procurement. A potential example of this is the current TIER II+ unmanned, high altitude, long endurance reconnaissance vehicle.

A final possibility is an alteration of the "standard" contracting method for research and development. The use of a value added approach with a not-to-exceed number for research and development, in some cases, may be a more efficient process than a cost plus fixed fee contract with all the oversight requirements. Payments would then be based on milestone achievements. This would give the contractor incentive while the government retained ultimate control.

While the first step in commercial practice jet engine procurement will be taken with mature production engines, research and development will follow as the commercial practices move beyond the "pilot" stage. It is a matter of time, initial acceptance and program expansion.

Post Production Contractor Support

The complete transition to commercial practice procurement would include post production support. Depending on the needs of the government customer, this may mean a variety of services such as configuration control, logistics management, spares acquisition and distribution, cataloguing, user conferences, technical publications, support equipment, and actual repair and maintenance services. Although both commercial and military aircraft require such support, the commercial air carrier and the military services differ in their approaches. The government customer typically controls the configuration, technical publications and relies on an internal program of organic logistic support and repair depots. Commercial customers rely on the engine manufacturer for configuration control, technical publications and, depending on their size and internal capabilities, full or augmenting OEM field support.

There are more differences. The government has endorsed a deep inventory system of spare parts and components, which can be drawn upon into the future. The commercial practice system, used by commercial carriers, calls for just-in-time delivery of required parts for maintenance and repairs. Although the government system insures surge availability of the original part at a previously agreed upon price, it does not have the same ability to react to technology advances or requirement changes as does the commercial practice system. The commercial practice system allows for these considerations and maintains smaller inventories appropriate for today's lean industry.

As with the original manufacture, commercial spares quality and reliability are upheld by industry standards and Federal Aviation Regulations requirements, as well as the requirements of other customers countries.

Post production aircraft support has already become a political and economic issue. Today's organic logistics support depot system has strong backing within the government; including that of local and state delegations, and small business. The adoption of commercial practice

procurement would seemingly threaten this long established system. However, as an initial step, commercial practices in inventory, process and quality control could be employed at the depots, in combination with wider field support, for a substantial increase in efficiency and decrease in costs. While some geographic realignment might occur, the total business for sub-tier suppliers would remain the same. This is due to the way engine manufacturers run their business and their dependence on suppliers for sixty to seventy percent of their hardware.

Socio-Economic Programs and Safeguards

Over a period of many years, Congress has created a careful system of safeguards protecting the social and economic rights of the American public. Originally, they guaranteed work rights and labor standards. They expanded, however, to cover a variety of areas including supply and supplier preferences; small business; equal opportunity and affirmative action; contractor responsibility; and contractor integrity. While they may provide guarantees, they also created a burden of expensive oversight and reporting which is reflected in higher costs and longer production schedules. Many of the reporting and oversight requirements have been levied by additional federal and DoD regulations and contract clauses.

During the same period, the jet engine industry developed and adopted a set of commercial procurement ethics, often paralleling or exceeding federal regulations. Each company enforces these rules through standard codes of ethics applying to every employee and all of the company's contracting and production processes. They were created and are enforced today, not because of obedience to government regulations, but because of simple good business sense within a competitive worldwide marketplace. While the Air Force lists the specific laws to be reevaluated in the pilot program study (Attachment A), the descriptions below outline the positions of the jet engine industry.

- Supply and supplier preference. The jet engine industry is a global enterprise and has well established world-wide supply channels for both commercial and military products. Retroactive compliance with clauses forcing alterations in this existing network would not be economically practical or feasible. Also, securing waivers or exemptions would add to the procurement cost, defeating the lower price intent.

- Small and small disadvantaged business. There remains a continuing need to set aside some federal procurement dollars from full and open competition, assuring small business and small disadvantaged businesses a better chance to succeed. However, many statutes require companies to develop special subcontracting plans, and in some cases, impose similar requirements on subcontractors. Again, this is a burden on commercial business. Where the item has already been manufactured, it is impossible to alter the supplier selection after the fact. Also, for the jet engine industry, not only are supplier networks well established, but the industry is already strongly supportive of small and small disadvantaged business. From a survey of jet engine companies on the Panel, the percentage of small and small disadvantaged subcontractors is similar between the military and commercial sides -- with some actually higher on the commercial side, where no regulatory requirement exists. In fact, the DoD requirement for cost-based accounting results in many small and small disadvantaged businesses refusing to participate as sub-tier suppliers.

- Affirmative action and equal opportunity. These programs are mandated by law. The additional regulatory and administrative compliance imposed by DoD and the military services imposed through contract requirements achieve marginal social benefit at a significant cost in paperwork. The jet engine industry already complies with these laws through adherence to other, over-arching federal laws, i.e., 29 USC 793, the American Disabilities Act; standard

competitive commercial practice; and common business sense. There appears to be no need for redundant requirements written into DoD contracts.

- **Contractor responsibility.** In 1936, the Walsh-Healy Act was enacted to guarantee minimum wage standards. Two years later, the act was superseded by the Fair Labor Standards Act. It's limitation on the award of contracts for commercial items to "manufacturers or regular dealers" is also obsolete today. The recent Office of Federal Procurement Policy Act stated that government product or service needs may be met by "reasonable sources." The jet engine industry, using commercial practices, meets the criteria of a reasonable source without the need for extensive reporting requirements.

- **Contractor integrity.** While there is an indisputable need to maintain high standards of contractor integrity in government procurement, the enforcement mechanisms established by laws force contractors to collect data supporting their certification that they are not guilty of unethical or illegal behavior. These certification requirements are inconsistent with the goal of commercial procurement and integration of commercial and military jet engine production lines. Each jet engine company has a standard code of ethics which is consistent with commercial procurement practices.

Transition Issues

Under the best of circumstances, transitioning from a regulatory and military standardized acquisition system to a commercial practice system will be challenging. There will be issues prior, during and following the change. The impact will be felt by both government and industry personnel. As mentioned throughout the report, the primary ingredient will be strong knowledgeable leadership from the government and the jet engine industry. This must be followed by training, patience and acceptance. These strengths can solve any problem. Through discussion and survey, the panel determined the following primary transition issues.

- **Laws and regulations.** The Panel agreed that the most important issue will be the elimination or waiver of commercial practice blocking laws and regulations. The elimination of these restraints will be the most difficult for the government to accept, as they would often be replaced only by common commercial industry practice or company codes. Public interest is protected by the competitive world market in jet engines. The elimination of certain laws and regulations would also impact the industry. For example, the industry safeguarding standard protest process would also be on the table for elimination as a non-commercial practice.

- **Current contracts.** Under the assumption that the laws, regulations and milspecs issue has been settled, current jet engine contracts must be renegotiated to commercial market pricing standards. The process will be made easier, in many cases, by engine systems which are common or nearly common in military and commercial aircraft.

- **Performance-based specifications.** Under the current DoD acquisition system, engines are ordered using detailed, often voluminous, lists of specifications and standards. Commercial practices, however, focus on fundamental performance-based engine specifications. Changes to performance-based specifications and the attendant acquisition approach that follows will require acceptance and training of operational analysts, contract writers, logistics support specialists and the entire government procurement team. Although there has been a recent move within DoD to incorporate performance-based specifications and an attendant reduction of detailed "how to" specifications, the adoption of this approach as the standard will require sweeping change in the total procurement system. The DoD Process Action Team on Military Specifications and Standards strongly endorsed this approach and

noted the required changes within the whole system.

- Personnel adjustments. Both the government and industry will have to make numerous and gradual in-plant changes to adjust to commercial standards. Although defense oversight will decline significantly, it is not without precedence and safeguards. The Federal Aviation Administration normally keeps a small contingent of representatives at jet engine plants for inspection and acceptance. The DoD, however, locates large numbers of DPRO and DCAA personnel at engine producers. For example, there are 296 defense oversight personnel at General Electric's two manufacturing sites; 221 at Pratt & Whitney's; 35 at Allison and 30 at Allied Signal Engines. FAA augments their minimum number of onsite personnel by certifying contractor in-plant personnel as FAA designated inspectors, both for engineering and manufacturing disciplines. Also, instead of continual oversight, FAA conducts broad in-plant inspection visits, typically every two to three years. There will have to be a plan for the orderly draw down of "outside" government personnel and training and certification of "inside" jet engine plant personnel.

- Military standards, specifications and regulation replacement. This is another primary issue and related to the personnel draw down. As the military specification and standards, or "how to's," are withdrawn, they will be replaced by commercial standards or equivalents. For many manufacturing and quality processes, replacements will come from industry-accepted ASTM, SAE, AIA, ANSI and ASQC standards, as well as ISO 9000. As military specifications, standards and regulations are controlled by the department or agency, the replacement process will be a negotiation item.

- Security. Many DoD engines in production contain classified performance or technical characteristics. Commercial practices, of course, do not provide for classification accountability or reporting systems. Both DoD and industry Panel participants, however, agree that this issue can be resolved through negotiation and common sense.

- Culture change. DoD leadership is committed to acquisition reform. This reform will occur in a number of ways; commercial practices among them. Panel members discussed at length, however, that many government jet engine acquisition team members are not familiar with commercial practices. They may be directed to use commercial practices, but they will not know or understand the methods or alternatives. This will require senior level support and regulatory changes, and a training program for the entire procurement team. Additionally, commercial practice information will have to flow up the Congressional chain, so that the traditional reporting methods or cost tests may be dropped and replaced by industry standards. The need for culture change will also apply to traditional funding periods. Congress and DoD will have to routinely accept commercial program funding practices to gain the advantage of flexibility and the ability to adjust to real market changes.

- Jet engine development in smaller facilities. Earlier in this report, the Panel suggested that development should remain largely on a military specification and regulatory basis at this time. For Pratt & Whitney and General Electric, large producers with separate facilities for development and production, this is an appropriate solution. For smaller producers, such as Williams and Teledyne, this raises problems. At their facilities, development and production are done at the same facility -- and on the same floor. There is concern that the inspection and audit oversight of the development program will inevitably pass back over to the production engine line, defeating the commercial practice model. Avoiding this will require training, understanding and experience of both the DoD and company personnel.

Conclusions, recommendations and a final thought

As stated at the beginning of this paper, the initial objective of the Panel was to determine if it

was possible for an entire industry -- in this case the jet engine industry -- to apply well established and successful commercial practices to reduce DoD procurement costs and raise efficiency. We feel it is not only possible, but practical as the DoD has already procured commercial jet engines for a variety of aircraft. The products are similar, if not identical, in many cases, especially at the component part level -- and they are produced in the same facilities, by the same people, using the same or similar processes.

We then turned our attention to what must be accomplished to achieve universal commercial practices for in-production jet engine procurement. The Panel again agreed that with the impediments of law, culture, tradition and process, commercial practices adoption will not be an easy task. However, it is one which can be achieved through leadership, dedication and extensive training. As stated at the beginning of the report, there are no insurmountable obstacles to the adoption of commercial practice acquisition for the jet engine industry.

The Panel is pleased to present these findings and observations, but we realize that our limited resources did not allow extensive investigation or prepare us to make detailed recommendations. We raised many issues and indicated the solutions, but we did not create a step-by-step implementation program. That must be accomplished by a more representational (government and industry) and full time implementation team under the direction of the Deputy Under Secretary of Defense (Acquisition Reform) (see Attachment C). Representation must come not only from industry and DoD procurement, but from the military operations, Congressional committee staffs and supporting budget offices.

This team will create a detailed, time-phased plan for commercial practice procurement on programs where practical; for follow-on procurements of current in-production engines; and for future engines as they complete qualification and enter production. The team will also explore opportunities to implement commercial practice procurement during the engine development phase.

We feel that while the full time team will be able to create an action plan in six months or less, it will take a concentrated follow-on effort to inaugurate across-the-board commercial practice procurement of mature jet engines.

As a final thought, the Panel feels that the program must be implemented in its entirety, across the jet engine industry, for all in-production engines. Partial implementation of a few engine models, facilities or companies will not generate the government or industry commitment needed for success. It would become, instead, another expensive experiment with a detailed after-action report.

We, the members of the Defense Science Board's Jet Engine Panel, would be priviledged to participate in that implementation effort.

General Bernard P. Randolph, USAF (Retired), DSB Member and Panel Chairman
Robert A. Fuhrman, DSB Acquisition Reform Task Force Member
Dr. Jacques S. Gansler, DSB Acquisition Reform Task Force Member
A. J. Beauregard, Lockheed Aeronautical Company
Dr. Thomas E. Cooper, General Electric Company
James R. Nelson, General Electric Aircraft Engines
Robert F. Bescher, Pratt & Whitney Government Engines
Michael Summers, Pratt & Whitney, United Technologies
Joel W. Marsh, United Technologies
Dr. Robert C. Gunness, Allied Signal Aerospace
S. Michael Hudson, Allison Engine Company

Brig. General Raymond Preston, USAF (Retired), Williams International
Paul Jodon, Textron Lycoming
Michael D. Rudy, Teledyne Ryan Aeronautical - CAE
Colonel Dan L. Abbott, USA, Office of the Under Secretary of the Army (RDA)
Captain Charles Thompson, USN, Naval Air Systems Command
Colonel (Select) Stephen Busch, USAF, Air Force Materiel Command
Lt. Colonel Dennis Kirlin, USAF, The Joint Staff
Debra van Opstal, Center for Strategic & International Studies
John R. Booth, SAIC
Edward Burke, SAIC

Attachment A

Air Force

Recommended

Pilot Program Waivers

on

Statutes and Regulations

Draft

STATUTES (AND CLAUSES) REQUESTED FOR WAIVER

STATUTE(S) REQUESTED FOR WAIVER	APPLICABLE FAR CLAUSES	APPLICABLE DFARS CLAUSES
Truth in Negotiations Act; Price Reduction for Defective Cost and Pricing Data; Contract Modifications; Audit of Cost and Pricing Data 10 USC § 2306a; 10 USC § 2306(f)(3); 41 USC § 254(d)(1) Waiver/Exemption: *Agency head may waive in "exceptional areas". Statutory exceptions where: (1) adequate price competition; (2) established catalog or market prices; or (3) law or regulation.*	Subpart 15.802, Policy Subpart 15.803, General Subpart 15.804, Cost or pricing data 52.214-26, Audit--Sealed Bidding 52.214-27, Price reduction for defective cost or pricing 52.214-28, Subcontractor cost or pricing data 52.215-2, Audit--negotiation 52.215-22, Price reduction for defective cost or pricing data 52.215-23, Price reduction for defective cost or pricing data--modifications 52.215-24 Subcontractor cost or pricing data 52.215-25, Subcontractor cost or pricing data--modifications	Subpart 215.804, Cost or pricing data Subpart 239.7406, Cost or pricing data 252.211-7009, Submission of cost or pricing data 252.211-7010, Price reduction for defective cost or pricing 252.211-7011, Audit of contract modifications--commercial 252.215-7000, Aggregate price adjustment
Contingent Fees 10 USC § 2306(b); 41 USC § 254(a) Waiver/Exemption: *A limited number of exceptions are provided to the representation requirement, but not to the covenant requirement.*	Subpart 3.4, Contingent fees Subpart 22.607, Agents Subpart 31.205-38(f), Selling costs 52.203-4, Contingent fee representation and agreement 52.203-5, Covenant against contingent fees	Subpart 203.409, Misrepresentations or violations of the covenant against contingent fees Subpart 225.7303-4, Sales commissions, and contingent fees
15 % Statutory Limit on CPFF Contracts 10 USC § 2306(d) 10 USC § 254(b) Waiver/Exemption: *None.*	Subpart 15.903(d)(1), Contracting officer responsibilities Subpart 16.102, Policies	
Marking of Supplies; National Stock Number 10 USC § 2384(b) Waiver/Exemption: *Exempts commercial items sold in substantial quantities to the general public where (1) sold at catalog or market prices; or (2) awarded through use of competitive procedures.*		Subpart 217.73, Identification of sources of supply 252.217-7026, Identification of sources of supply

STATUTES (AND CLAUSES) REQUESTED FOR WAIVER

STATUTE(S) REQUESTED FOR WAIVER	APPLICABLE FAR CLAUSES	APPLICABLE DFARS CLAUSES
Prohibits Limitation on Subcontractor Selling Directly to the USG 10 USC § 2402 41 USC § 253(g) Waiver/Exemption: *None.*	Subpart 3.503, Unreasonable restrictions on subcontractor sales 52.203-6, Restrictions on subcontractor sales to the Government	
Protests to the GAO and the GSBCA 31 USC § 3553(c) & (d); 40 USC § 759(h)(2) & (3) Waiver/Exemption: *None.*	Subpart 7.307, Appeals Subpart 22.608-3, Protests against eligibility Subpart 22.608-6, Post-award Part 33, Protests, disputes, and appeals 52.233-2, Service of protest 52.233-3, Protest after award	Subpart 233.104, Protests to GAO
Examination of Records by DoD and GAO 10 USC § 2313; 41 USC § 254 (b) & (c) Waiver/Exemption: *Agency head may waive in "exceptional cases" the "audit and price reduction" clauses. Exemptions for contracts under sealed bid and with foreign prime and subcontractors.*	Subpart 15.106-1, Examination of records clause 52.215-1, Examination of records by comptroller general Waiver/Exemption: *Exempts contracts: (1) for small purchases; (2) for certain utilities services; and (3) with certain foreign contractors.*	
Allowable Costs Under Defense Contracts 10 USC § 2324 Waiver/Exemption: *None.*		Subpart 231.70, Penalties for unallowable costs 252.231-7001, Penalties for unallowable costs
Warranty of Data on Major Systems 10 USC § 2403		Subpart 246.770, Warranties in weapon systems acquisitions 252.246-7001, Warranty of data Waiver/Exemption: *Waiver permitted if in the interests of national defense or warranty would not be cost effective. Class waivers may be granted upon notification to Congress.*
Cert. of Claims and Adjustments 10 USC § 2410 Waiver/Exemption: *None.*		Subpart 233.70, Certification of claims and requests for adjustment or relief 252.233-7000, Certification of claims and requests for adjustment or relief

STATUTES (AND CLAUSES) REQUESTED FOR WAIVER

STATUTE(S) REQUESTED FOR WAIVER	APPLICABLE FAR CLAUSES	APPLICABLE DFARS CLAUSES
Regulation of Contractor Inventory Systems by SECDEF 10 USC § 2410b Waiver/Exemption: *None.*		Subpart 242.72, Contractor material management and accounting system 252.242-7004, Material management and accounting system
Prompt Payment Act 31 USC § 3901(a)(1) and (a)(3)	Subpart 32.9, Prompt payment 52.232-25, Prompt payment 52.232-26, Prompt payment for fixed-price architect-engineering contracts 52.232-27, Prompt payment for construction contracts Waiver/Exemption: *Clause does not apply where: (1) purchases are to foreign vendors outside the U.S.; and (2) payment terms and late payment penalties have been established by other authorities.*	Subpart 232.9, Prompt payment
Cost Accounting Standards; CAS Board 41 USC § 422	Part 30, Cost accounting standards administration 52.230-1, Cost accounting standards notices and certification (national defense) 52.230-2, Cost accounting standards 52.230-3, Disclosure and consistency of cost accounting practices 52.230-4, Consistency in cost accounting practices 52.230-5, Administration of cost accounting standards Waiver/Exemption: *Waived for: (1) sealed bid; (2) negotiated contracts and subcontracts below $100K; (3) small businesses; (4) foreign governments; (5)catalog or market prices; (6) educational institutions; set-aside, labor-surplus area contracts; (7) U.K. contractors; (8) NATO PHM ship program; (9) contracts outside U.S.; (10) fixed price contracts; and (11) where contractor refuses and is only available source.*	

STATUTES (AND CLAUSES) REQUESTED FOR WAIVER

STATUTE(S) REQUESTED FOR WAIVER	APPLICABLE FAR CLAUSES	APPLICABLE DFARS CLAUSES
Major Systems and Munitions Programs; Survivability and Lethality Testing required before Full-Scale Testing **10 USC § 2366** Waiver/Exemption: *SECDEF may waive where "unreasonably expensive and impractical".*		
Operational Test and Evaluation of Defense Acquisition Programs **10 USC § 2399** Waiver/Exemption: *None.*		
Director of Operational Test and Evaluation **10 USC § 138(e)** Waiver/Exemption: *None.*		
Selected Acquisition Reports & Unit Cost Reports **10 USC § 2432 and § 2433** Waiver/Exemption: *None for §2433. SECDEF may waive §2432 if: (a) the program has not entered FSD or EMD; (b) a reasonable cost estimate has not been established; and (c) the system configuration is not well defined.*		
Independent Cost Estimates; Operational Manpower Requirements; Requirement for Approval **10 USC § 2434(a)** Waiver/Exemption: *None.*		

STATUTES (AND CLAUSES) REQUESTED FOR WAIVER

STATUTE(S) REQUESTED FOR WAIVER	APPLICABLE FAR CLAUSES	APPLICABLE DFARS CLAUSES
Enhanced Program Stability & Baseline Description Requirement Program Deviation Reports 10 USC § 2435 Waiver/Exemption: *None.*		
Policies Relating to Defense Industrial Base; Definitions; 10 USC § 2440 Waiver/Exemption: *None.*		Subpart 208.72, Industrial preparedness production planning
Research & Development Cooperative Projects; Allied Countries 10 USC § 2350 a(e) Waiver/Exemption: *None.*		Subpart 225.871, NATO 245.603-71, Disposal of contractor inventory for NATO
Appropriations Act Limitation on Obligation Authority PL 102-396 Waiver/Exemption: *None.*	UNCODIFIED TO DATE (A TBD Section of Part 25)	UNCODIFIED TO DATE
Limitations on Fixed Price Research PL 101-165, § 9048 Waiver/Exemption: *None.*	Subpart 35.006, Contracting methods and contract type	Subpart 235.006, Contracting methods and contract type

STATUTES (AND CLAUSES) REQUESTED FOR WAIVER

STATUTE(S) REQUESTED FOR WAIVER	APPLICABLE FAR CLAUSES	APPLICABLE DFARS CLAUSES
Small and Small Disadvantaged Businesses Subcontracting Plan 15 USC § 637(d) Waiver/Exemption: *Exempts contracts: (1) under $10K; (2) to be performed outside the U.S.; and (3) for personal services.*	Subpart 19.7, Subcontracting with small and small disadvantaged business concerns 52.219-9, Small business and small disadvantaged business subcontracting plan 52.219-10, Incentive subcontracting program for small business 52.219-16, Liquidated damages--small business subcontracting plan. Waiver/Exemption: *Also not required for contract modifications where no 52.219-8 contract clause.*	Subpart 219.7 Subcontracting with small business 252.219-7003, Small business and small disadvantaged business subcontracting plan (DoD contracts) 252.219-7004, Small business and small disadvantaged business subcontracting plan 252.219-7005, Incentive for subcontracting with small business
Small Business; Small Purchase Set-Aside 15 USC § 644(a) & (j) Waiver/Exemption: *None.*	Subpart 13.105, Small business-small purchase set-asides Subpart 19.202-1, Encouraging small business participation Subpart 19.501, Set asides for small business--general	Subpart 219.201, General policy Subpart 219.501, General
Preference for Labor Surplus Area 15 USC § 644(d), (e), and (f)	Subpart 6.203, Set asides for small business and labor surplus areas Subpart 19.504, Set-aside program order of precedence Part 20, Labor surplus area concerns 52.219-5, Notice of total small business and labor surplus area set asides 52.220-1, Preference for labor surplus 52.220-2, Notice of total labor surplus area set-aside 52.220-3, Utilization of labor surplus area concerns 52.220-4, Labor surplus area subcontracting program Waiver/Exemption: *"Utilization" clause not required in contracts for: (1) small purchases; (2) purchases outside the U.S.; and (3) personal services.*	Subpart 206.203, Set asides for small business and labor surplus areas

STATUTES (AND CLAUSES) REQUESTED FOR WAIVER

STATUTE(S) REQUESTED FOR WAIVER	APPLICABLE FAR CLAUSES	APPLICABLE DFARS CLAUSES
Rehabilitation Act of 1973; Affirmative Action for the Handicapped 29 USC § 793 Waiver/Exemption: *President may waive if in the national interest. C.F.R. exempts contracts for: (1) less than $2.5K and for indefinite quantities under threshold; (2) work outside U.S.; and (3) State and local governments.*	Subpart 22.14, Employment of the handicapped 52.222-36, Affirmative action for handicapped workers Waiver/Exemption: *Contracting agency head may waive in the interests of national security, or after determining special circumstances in the national interest so require.*	Subpart 222.1400, Employment of the handicapped
Clean Water Act 33 USC § 1318 Waiver/Exemption: *Clause does not apply in contracts under $100K or to be performed outside the U.S.*	Subpart 23.105, Solicitation, provision, and contract clause 52.223-1, Clean air and water certification 52.223-2, Clean air and water Waiver/Exemption: *Contracting Agency head may waive if in the paramount interest of the U.S., or exempt a class of contracts after consultation with the head of the EPA.*	Subpart 223.104, Exemptions
Clean Air Act 42 USC § 7606 Waiver/Exemption: *Clause does not apply in contracts under $100K or to be performed outside the U.S.*	52.223-1, Clean air and water certification 52.223-2, Clean air and water 52.223-3, Clean air and water Waiver/Exemption: *Contracting Agency head may waive if in the paramount interest of the U.S., or exempt a class of contracts after consultation with the head of the EPA.*	
Affirmative Action for Disabled and Viet Nam Era Veterans; Readjustment Act of 1972 38 USC § 4212 Waiver/Exemption: *C.F.R. exempts contracts for: (1) less than $10K and indefinite orders under threshold; (2) work outside the U.S.; and (3) State and local governments.*	Subpart 22.13 Special disabled and Vietnam era veterans 52.222-35, Affirmative action for special disabled and Vietnam era veterans 52.222-37, Employment reports on special disabled veterans and veterans of the Vietnam era Waiver/Exemption: *Agency head may waive for contracts in the interests of national security, or in the national interest and it: (a) is impractical to act on each request individually; or (b) will substantially contribute to the convenience of administering the Act.*	Subpart 222.1300, Special disabled and Vietnam era veterans

STATUTES (AND CLAUSES) REQUESTED FOR WAIVER

STATUTE(S) REQUESTED FOR WAIVER	APPLICABLE FAR CLAUSES	APPLICABLE DFARS CLAUSES
Walsh-Healey Public Contracts Act of 1936 **41 USC § 35-45** Waiver/Exemption: *Secretary of Labor and OSHA may exempt. C.F.R. exceptions: (1) purchases in the "open market"; (2) public exigency; (3) perishables; (4) certain agricultural products; and (4 transportation and communciation services.*	**Subpart 22.6, Walsh Healey Public Contracts Act** **52.222-19, Walsh Healey Public Contracts Act representation** **52.222-20, Walsh Healey Public Contracts Act** Waiver/Exemption: *Also (1) coal dealers; (2) certain small businesses; (3) public utilities and services; (4) commodity exchanges; (5) periodicals; (6) articles manufactured outside U.S.; and (7)where related solely to safety and health standards.*	**Subpart 222.6, Walsh Healey Public Contracts Act**
Drug Free Workplace--Certifications **41 USC § 701** Waiver/Exemption: *None.*	**Subpart 23.5, Drug-free workplace** **52.223-5, Certification regarding a drug-free workplace** **52.223-6, Drug-free work-place**	**Subpart 223.5, Drug-free workplace** **252.223-7004, Drug-free work force**
Women Owned Businesses **PL 100-533**	**Subpart 19.9, Contracting opportunities for women-owned small businesses** **52.219-13, Utilization of women-owned small businesses** Waiver/Exemption: *No clause required in contracts for: (1) small purchases; (2) purchases outside U.S.; and (3) personal services.*	
Equal Opportunity **EO 11246** Waiver/Exemption: *Secretary of Labor waiver permitted for commercial supplies. C.F.R. exempts contracts for: (1) less than $10K and indefinite quantities under threshold; (2) work outside U.S.; (3) State and local governments; (4) certain educational institutions; and work near Indian reservations.*	**Subpart 22.8, Equal employment opportunity** **52.222-21, Certification of non segregated facilities** **52.222-22, Previous contracts and compliance reports** **52.222-23, Notice of requirement for affirmative action to ensure equal employment opportunity** **52.222-25, Affirmative action compliance** **52.222-26, Equal opportunity** **52.222-27, Affirmative action compliance requirements** **52.222-28, Equal opportunity pre-award clearances of subcontracts** Waiver/Exemption: *Agency head may exempt for national security or under the FAR where "special circumstances in the national interest so require".*	**Subpart 222.8, Equal employment opportunity**

STATUTES (AND CLAUSES) REQUESTED FOR WAIVER

STATUTE(S) REQUESTED FOR WAIVER	APPLICABLE FAR CLAUSES	APPLICABLE DFARS CLAUSES
Gratuities 10 USC § 2207 Waiver/Exemption: *Exempts personal service contracts.*	3.101-2, Solicitation and acceptance of gratuities by Government personnel Subpart 3.2, Contractor gratuities to Government personnel 52.203-3, Gratuities Waiver/Exemption: *Exempts contracts between defense agencies and foreign countries that do not obligate DoD appropriated funds.*	Subpart 203.203, Reporting violations of the gratuities clause
Debarred or Suspended Subcontractors 10 USC § 2393(d) Waiver/Exemption: *None.*	9.405-2, Restrictions on subcontracting 52.209-6, Protecting the Governments interest when subcontracting with contractors debarred, suspended or proposed for debarment	Subpart 209.4, Debarment, suspension, and ineligibility
Compensation to Former DoD Employees 10 USC § 2397b Waiver/Exemption: *Exempts contractors below $10M in defense sales.*	3.104-1, General 3.104-2, Applicability 3.104-3, Statutory prohibitions & restrictions	203.170-1, Policy
Compensation to Former DoD Employees (Defense contractors) 10 USC § 2397c Waiver/Exemption: *Exempts contractors below $10M in defense sales.*	3.104-1, General 3.104-2, Applicability 3.104-3, Statutory prohibitions & restrictions	203.170-3, Penalties 252.203-7000, Statutory prohibitions on compensation to former DoD employees
Prohibition of Employment of Persons Convicted of Fraud 10 USC § 2408 Waiver/Exemption: *None.*		203.570-2, Policy 252.203-7001, Special prohibition of employment Waiver/Exemption: *Small purchase exemption only.*
Byrd Amendment 31 USC § 1352 Waiver/Exemption: *None.*	Subpart 3.8, Limitation on the payment of funds to influence federal transactions 52.203-11, Certification and disclosure regarding payments to influence certain federal transactions 52.203-12, Limitations on payments to influence certain federal transactions	

STATUTES (AND CLAUSES) REQUESTED FOR WAIVER

STATUTE(S) REQUESTED FOR WAIVER	APPLICABLE FAR CLAUSES	APPLICABLE DFARS CLAUSES
Officials not to Benefit 41 USC § 22 Waiver/Exemption: *None - except for contracts awarded under certain agricultural statutes.*	3.102, Officials not to benefit 52.203-1, Officials not to benefit	
Anti-Kickback Act 41 USC § 51 *et. seq.* Waiver/Exemption: *None.*	3.502, Subcontractor kickbacks 52.203-7, Anti-kickback procedures	203.502, Subcontractor kickbacks
Procurement Integrity Act Certificate of Procurement Integrity 41 USC § 423 Waiver/Exemption: *None.*	Subpart 3.104, Procurement integrity 43.106, Procurement integrity modifications 52.203-8, Requirement for certificate of procurement integrity 52.203-9, Requirement for certificate of procurement integrity--modification 52.203-10, Price or fee adjustment for illegal or improper action 52.203-13, Procurement integrity--service contracting	Subpart 203.104, Procurement integrity
Rights in Technical Data 10 USC § 2320 Waiver/Exemption: *None.*	Subpart 27.4, Rights in data and copyrights 52.227-14, Rights in data--general 52.227-15, Representation of limited rights data and restricted computer software 52.227-17, Rights in data--special works 52.227-22, Major systems--minimal rights	Subpart 227.4, Rights in data and copyrights 252.227-7013, Rights in technical data and computer software 252.227-7018, Restrictive markings on technical data 252.227-7019, Identification of restricted rights computer software 252.227-7022, Government rights (unlimited) 252.227-7026, Deferred delivery on technical data or computer software 252.227-7027, Deferred ordering of technical data or computer software 252.227-7028, Requirement for technical data representation 252.227-7029, Certification of technical data conformity 252.227-7030, Technical data--withholding of payment 252.227-7036, Certification of technical data conformity

STATUTES (AND CLAUSES) REQUESTED FOR WAIVER

STATUTE(S) REQUESTED FOR WAIVER	APPLICABLE FAR CLAUSES	APPLICABLE DFARS CLAUSES
Validation of Proprietary Data Restrictions 10 USC § 2321 Waiver/Exemption: *None.*		227.403-73, Validation of restrictive markings on technical data 252.227-7037, Validation of restrictive markings on technical data
Procurement Limitations Imposed by the Buy America Act 10 USC § 2506 (Renumbered as 10 USC § 2533) 10 USC § 2507 (Renumbered as 10 USC § 2534(b) Waiver/Exemption: *Buy American Act exemptions apply, as below.*		225.7004, Restriction on machine tools and powered and non-powered valves 225.7007, Restriction on acquisition of foreign buses 225.7010, Restriction on certain chemical weapon antidote 225.7014, Restriction on carbonyl iron powders 225.7016, Restriction on air circuit breakers for naval vessels 252.225-7017, Preference for U.S. or Canadian valves and machine tools 252.225-7023, Restriction on acquisition of carbonyl iron powder 252.225-7029, Restriction on acquisition of air circuit breakers Waiver/Exemption: *SECDEF amy waive in the interests of national security.*
Buy American Act 41 USC § 10a-10d Waiver/Exemption: *Exception for supplies and materials: (1) to be used outside U.S. or (2) available wihtin the U.S. in insufficient commercial quantities of a satisfactory quality.*	25.1, Buy American Act--supplies 25.2, Buy American Act--construction 52.225-1, Buy American certificate 52.225-3, Buy American Act--supplies 52.225-5, Buy American Act--construction Waiver/Exemption: *Also waived where: (1) unreasonable cost; (2) inconsistent with public interest; and (3) for commissary resale.*	225.1, Buy American Act--supplies 225.2, Buy American Act--construction 252.225-7000, Buy American Act--Balance of Payments program certificate 252.225-7001, Buy American Act and Balance of Payments program

STATUTES (AND CLAUSES) REQUESTED FOR WAIVER

STATUTE(S) REQUESTED FOR WAIVER	APPLICABLE FAR CLAUSES	APPLICABLE DFARS CLAUSES
Cargo Preference Act and Preference for U.S. Flag Vessels 10 USC § 2631 46 USC 1241(b) Waiver/Exemption: *May be waived by Congress, the President, or the Secretary of Defense.*	Part 47.5, Ocean transportation by U.S. flag vessels 52.247-64, Preference for privately owned U.S. flag commercial vessels Waiver/Exemption: *Temporary waivers available for: (1) small purchases; (2) transportation between foreign countries under Foreign Assistance Act funding; (3) classified shipments; and (4) Panama Canal Commission or treaty shipments.*	Subpart 247.5, Ocean transportation by U.S. flag vessels 252.247-7022, Representation of extent of transportation by sea 252.247-7023, Transportation of supplies by sea 252.247-7024, Notification of transportation of supplies by sea
Trade Agreements Act of 1979 19 USC § 2512(a) et seq. Waiver/Exemption: *President may defer or waive where: (1) delay not more than two years; (2) authority to agency heads to waive subject to interagency review on a case-by-case basis when in the national interest; or (3) authority for SECDEF to waive subject to interagency review for reciprocal procurement agreement countries.*	25.4, Purchases under the Trade Agreements Act of 1979 52.225-8, Buy American Act--Trade Agreements Act --Balance of payments certification 52.225-9, Buy American Act--Trade Agreements Act --Balance of payments program	225.4, Purchases under the Trade Agreements Act of 1979 252.225-7006, Buy America Act--Trade Agreements Act--Balance of payments program certificate 252.225-7007, Trade Agreements Act
Berry Amendment PL 102-396, § 9005 Waiver/Exemption: *SECDEF may waive on basis of nonavailability.*		Subpart 225.7002, Restrictions on food, clothing, fabrics, and specialty metals Subpart 225.7003, Restrictions on hand or measuring tools 252.225-7012, Preference for certain domestic commodities 252.225-7013, Domestic wool preference 252.225-7014, Preference for domestic specialty metals 252.225-7015, Preference for domestic hand or measuring tools Waiver/Exemption: *Exceptions permitted for: (1) small purchases; (2) articles for use outside U.S.; (3) acquired by vessels in foreign waters; (4) emergency acquisitions; (5) commissary resale; (6) inadequate U.S. quantities or quality; and (7) where necessary to comply with foreign agreements.*

STATUTES (AND CLAUSES) REQUESTED FOR WAIVER

STATUTE(S) REQUESTED FOR WAIVER	APPLICABLE FAR CLAUSES	APPLICABLE DFARS CLAUSES
Sales Commissions 22 USC § 2779 Waiver/Exemption: *None.*		Subpart 225.7308, Contract clause 252.225-7027, Limitation on sales commissions and fees
Jewel Bearings PL 101-511, § 8121 Waiver/Exemption: *None.*	Subpart 8.2, Jewel bearings and related items 52.208-1, Required sources for jewel bearings and related items 52.208-2, Jewel bearings and related items certificate	

SECTION 809 NOMINATION PACKAGE
COMMERCIAL DERIVATIVE ENGINE (CDE)
A TWO PHASED PILOT PROGRAM

NOMINATION OF CDE AS AN ACQUISITION PILOT PROGRAM

NAME OF PROGRAM: Commercial Derivative Engine (CDE) Phase 1 (F117 Engine for the C-17A aircraft) and CDE Phase 2 (for the acquisition(s) of commercial derivative engines)

REGULATORY WAIVERS REQUIRED

Following are the regulations that the Air Force proposes be waived for the CDE procurement. The waivers would apply to any CDE-unique procurements (with engine, engine component and engine support contractors) that the Air Force requires to support the C-17A (Phase 1) and other aircraft (Phase 2) programs.

FAR REGULATIONS

FAR Part 6

Requires procedures and establishes authority for competitive acquisition and methods of justifying sole-source acquisition

WHY: Commercial methods are free to choose competitive or non-competitive acquisitions based on their effectiveness. This waiver aims to tailor the justification requirements and level of approval for follow-on sole source and competitive acquisition of engines, engine components and engine support.

FAR Part 7

Requires acquisition planning for all acquisitions to promote full and open competition.

WHY: This regulation needs to be waived to recognize that the Acquisition Plan (AP) and the Acquisition Strategy Report (ASR) are duplicative. The AP serves the purpose of this FAR requirement. There is no need for a separate ASR.

52.203-2 Certificate of Independent Price Determination

Requires the Offeror to certify that his offer has been arrived at independently without agreement from other Offerors.

WHY: This certification requires administration

52.203-4 Contingent Fee Representation and Agreement

Requires the Offeror to affirm whether or not he has employed or retained anyone to solicit or obtain the contract and if he has made an agreement to provide them with a commission for obtaining the contract.

WHY: Not part of standard commercial practices.

52.203-5 Covenant Against Contingent Fees

Requires the Offeror to warrant that no person or agency has been employed or retained to solicit or obtain this contract for a contingent fee, except a bona fide employee.

WHY: Not part of standard commercial practices.

52.209-7 Organizational Conflicts of Interest Certificate - Marketing Consultants

Office of Federal Procurement Policy Letter 89-1, Conflict of Interest Policies Applicable to Consultants

Requires that any Government contractor who retains a marketing consultant in connection with a Government contract must provide to the Contracting Officer as a condition of award, an extensively detailed certification on the consultant and the nature of the consultant services.

WHY: Certifications of this type are normally not required as a condition of commercial business contracts, they involve contractor time and money, and provide no added value to the ultimate product being purchased by the Government. This cost adds unnecessarily to contractor overhead expense.

52.210-5 New Material

52.210-6 Listing of Used or Reconditioned Material, Residual Inventory and Former Government Surplus Property

52.210-7 Used or Reconditioned Material, Residual Inventory, and Former Government Surplus Property

Requires the contractor to specify the use of new or used material in the performance of the contract. It also it requires the contractor to notify the Government if he believes that used or reconditioned supplies are in the Government's interest.

WHY: This is not a clause normally found in the commercial sector. It places an additional burden on the contractor to track these materials and ensure compliance with this regulation.

15.703 Acquisitions Requiring Make-or-Buy Programs

52.215-21 Changes or Additions to Make-or-Buy Programs

Requires contractors to submit make-or-buy programs on non-R&D contracts whose value is expected to exceed $5M. Requires the contractor to notify the government of proposed changes to the Make-or-Buy Plan. It also requires him to get the Government's approval before making changes.

WHY: This is a Government-unique requirement. In the commercial sector, the buyer is concerned only with the end product-- not the make-or-buy business decisions that the producer makes. The requirement for the Government to approve these business decisions drives the commercial sector away from Government contracts. This requirement also imposes an administrative burden, which directly translates into cost to the Government.

52.215-26 Integrity of Unit Prices, Alternative 1

Mandates that the contractor identify supplies which he does not manufacture or to which he will not contribute significant added value. Also prescribes accounting procedures to insure that unit prices are in proportion to unit costs.
WHY: These requirements do not apply to commercial items for which there are established market prices. However, where there are other bases for determining fair and reasonable price using other than cost (e.g., CDE) then the provisions apply, but are inappropriate and contrary to commercial practices. This degree of intrusive insight into the seller's processes is not necessary to properly regulate the buyer-seller relationship for CDE.

52.215-27 Termination of Defined Benefit Pension Plan
Requires the contractor to notify the Government when it intends to terminate a defined benefit pension plan. Requires the contractor to refund to the Government its equitable share. This is a flowdown requirement to all subcontractors.
52.215-39 Reversion or Adjustment of Plans for Post Retirement Benefits other than Pensions(PRB)
Requires the contractor to notify the Government when it intends to terminate or reduce a PRB plan. If PRB fund assets revert or inure to the contractor, the contractor shall make a refund or give credit to the Government for its equitable share.
WHY: This type of provision is not something normally required in a commercial contract. This requires a contractor to account for costs in a way different for the Government than for other customers. Dictating the type of accounting he must do, as well as adding a provision that is a potential liability to the contractor increases the cost to the Government. It could discourage commercial contractors. Additionally, these mandated procedures require increased administrative support since the prime must construct a tracking system for his subcontractors.

52.215-31 Waiver of Facilities Capital Money
This clause states that, if the contractor did not propose Facilities Capital Cost of Money, then it is an unallowable cost to the contract.
WHY: Deleting this clause is a fall-out from the statutory waiver to relieve the CDE contractor from mandated cost accounting standards. If the Government doesn't dictate the contractor's accounting system, then issues about what costs are allowable go away.

52.215-32 Certification of Commercial Pricing for Parts or Components
52.215-37 Commercial Pricing Certificate--Notice
Requires contractors to certify that the prices offered to the Government are no higher than the lowest commercial price that the items were sold to the public during the most recent regular reporting period for which sales data are reasonably available. Any higher priced items must be separately identified, including how much higher the prices are, and a written justification as to why the prices are higher. The Government is also given the right to audit Contractor records in order to verify the certified information. If the Government is charged a higher price because the certification is inaccurate, incomplete, or misleading, the price must be reduced.
WHY: This certification, which is a contract condition of award for commercial items,

can be a nightmare for a large commercial contractor who sells products nationally or internationally. It requires management information on all prices charged at all locations and significant manpower to monitor and administer the system to insure accurate information is available at the most detailed level at all times. This requirement is a major deterrent to commercial contractors doing Government business. An example of this requirement causing commercial contractors to refuse to do business with the Government during Desert Storm is cited in the Executive Summary of the Section 800 report.

52-216-7 Allowable Cost and Payment
52.216-26 Payments of Allowable Costs Before Definitization
Provides direction to the contractor on invoicing, reimbursing costs, payment, negotiation of final indirect rates, billing rates, quick close-out procedures, audit and final payment. The second clause provides the same direction but is used in undefinitized contractual actions.
WHY: While most commercial contracts would include a clause for invoicing and payment, it is unlikely that they would contain language regarding such things as payment of unallowable versus allowable costs, post performance negotiation of overhead rates and unilateral authority to audit at any time prior to payment. These rigid administrative requirements drive a contractor to separately track costs and cause him to increase his proposed profit to cover his liability for expenses that the Government may unilaterally determine are unacceptable.

52.216-15 Predetermined Indirect Cost Rates
Requires the Contractor to annually submit to the Administrative Contracting Officer and audit activity proposed indirect cost rates for negotiation with the Government.
WHY: Negotiation of indirect cost rates is inconsistent with commercial practice. Commercial contractors would be required to significantly modify their accounting system in order to comply with this requirement.

52.216-10 Incentive Fee
52.216-16 Incentive Price Revision - Firm Target
Provides detail on Contractor required submissions, Government responsibilities, and procedures for administering the payment and adjusting the price on fixed-price-incentive (firm target) targets.
WHY: This method of price determination and detailed payment procedures is inconsistent with commercial practice, requires dedicated manpower and costs, and could be simplified significantly for the CDE contract. A commercial contractor may be discouraged from CDE participation because of unique Government pricing and payment requirements.

52.217-7 Option for Increased Quantity - Separately Priced Line Items
This clause permits the exercise of options upon receipt of written notification by the Government.
WHY: This clause is generally tailored to direct the contractor to a separate option exercise clause in the special provisions portion (Section H) of the contract. This allows the flexibility of listing a number of line items with their option exercise windows and additional provisions that are unique to each procurement. Examples of these additional provisions include: the

requirement to exercise some CLINs concurrently or, conversely, the authority to require that all of the options will be priced as separately exercisable line items. Since the Government generally has to add a special provision anyway, this clause is redundant; it is just another convoluted, confusing clause that the contractor must track.

52.222-35 Affirmative Action for Special Disabled and Vietnam Era Veterans - 38 USC 4212 and EO 11758

These regulations prescribe preferences and obligations for the prime contractor with regard to special business interests.

WHY: These socio-economic preferences are incompatible with commercial business practices and add extra costs to the contract. To mandate supplier preferences based on factors other than best value is counter to the normal subcontracting process in the commercial marketplace and is a barrier for commercial firms desiring to enter the defense sector. A statutory waiver has been requested.(15 USC 648)

52.222-2 Payment for Overtime Premium

Authorizes the use of overtime in the performance of the contract not-to-exceed a specific amount.

WHY: This clause requires the contractor to track overtime as well as directs him on how he may compensate his employees. This is not a clause that would normally be used in the commercial sector. It levees an additional administrative burden on the contractor. Additionally, it restricts the contractor's flexibility in incentivizing his employees.

52.225-1 Buy American Certificate - 10 USC 2507
52.225-3 Buy American Act - Supplies - 10 USC 2507
52.225-6 Balance of Payments Program Certificate - 19 USC 2501
52.225-7 Balance of Payments Program - 19 USC 2501
52.225-8 Buy American Act-Trade Agreements Act-Balance of Payments Program Certificate - 19 USC 2501
52.225-9 Buy American Act-Trade Agreements Act-Balance of Payments Program - 19 USC 2501

The Buy American Act (41 U.S.C. 10) provides that the Government give preference to domestic end products.

WHY: To encourage subcontractor selection from the widest range of available sources and encourage the "best value" sourcing used in the commercial marketplace, foreign subcontracting should not be prohibited. Statutory waiver of the Buy American Act for CDE subcontractors is being requested. This statutory and contract clause requirements are redundant and inclusion in the contract adds oversight and reporting costs while adding no value.

52.225-11 Restrictions on Certain Foreign Purchases - 22 USC 2370
52.226-1 Utilization of Indian Organizations and Indian Owned economic enterprises - 22 USC 2755

Part 27.3 Patent Rights Under Government Contracts - 28 USC 1498, 25 USC 283

52.227-12 Patent Rights-Retention by the Contractor (Long Form) - 28 USC 1498, 25 USC 283

Specifies the detailed reporting information and procedures entailed in contractor retention of patent rights.

WHY: Procedural and reporting requirements are inconsistent with commercial methods of doing business. It is desirable for the contractor to retain patent rights and necessary for the Government to retain use rights; but, a more simplified, commercial approach with minimal reporting would facilitate commercial subcontractor/vendor involvement.

52.232-9 Limitation on Withholding of Payments

Provides a limitation of the amount that can be withheld from the contractor during the performance of the contract.

WHY: No value added. This clause later states that the Contracting Officer can determine that this limitation is inappropriate. Additionally, the Air Force proposes that all clauses that have withholding provisions be waived. So, the waiver of this clause would be a fall-out from deleting the other clauses.

52.232-13 Notice of Progress Payments

52.232-16 Progress Payments

Provides for progress payments based on a percentage of costs incurred under a complicated set of criteria and rules.

WHY: In the commercial marketplace the buyer makes progress payments for a long term fixed price project based on accomplishments rather than incurred costs. The Government-unique procedure of paying based on costs demands a special accounting system to accrue costs and is intrusive to commercial firms.

52.242-1 Notice of Intent to Disallow Cost

Provides for notification to the contractor of the Government's intent to disallow costs. It also gives him a time frame in which he can respond to this decision. The Contracting Officer then has the ability to make a final, unilateral determination about the allowabililty of the cost.

WHY: This drives the contractor to establishing a separate accounting system for allowable vs. unallowable costs. This increases the overhead, and eventually the cost to the Government. Additionally, this clause serves to intimidate the contractor by giving the Government the right to threaten that a cost may be considered "unallowable". This is a potential liability to the contractor that he will price in his risk factors affecting profit.

52.242-12 Report of Shipment

Requires the contractor to send a prepaid notice of shipment to the transportation officer to be received 24 hours before the shipment is received.

WHY: While this is done by some commercial businesses, it is not done in all commercial business. If the contractor does not have the Government-mandated system, it would increase the cost of his overhead to require set up of a unique one. This decision should be left up to the individual program office and contractor.

52.242-13 Bankruptcy

Requires notification by the contractor of intent to file for bankruptcy.
WHY: This is not a clause commonly used in the commercial arena. As such, it has the potential of causing an overhead cost for tracking this information. No value added.

52.243-6 Change Order Accounting
This provision prescribes the format the contractor is to use when submitting proposals for costing change orders.
WHY: Deleting this clause is a flowdown from deleting the cost accounting standard clauses. Levying this type of accounting system could preclude commercial contractors from participating due to the need for establishing a separate accounting system. If the contractor elects to add this system, it imposes an increased cost to the overhead pool.

52.244-1 Subcontracts (Fixed Price Contracts)
52.244-2 Subcontracts (Cost Reimbursement and Letter Contracts)
This clause requires the contractor to notify the Government (and get the Contracting Officer approval) prior to entering into specifically identified subcontracts. Additionally it requires that detailed subcontractor cost information be provided to the Government to assist the Contracting Officer in making the approval decision.
WHY: This takes the management responsibility for the contract away from the contractor when he is the one performing the work. It requires a flowdown to subcontractor and vendors and is a costly system to implement and administer. While much of this information will be obtained by the contractor in his performance of the contract, it is doubtful that it would be to the level of detail prescribed in this clause.

52.244-5 Competition in Subcontracting
Requires the competition of subcontracts.
WHY: This is a requirement not levied on the commercial arena. There are additional costs for the administration of the purchasing system to ensure ongoing compliance with this provision. Additionally, it discourages the long term advantages that are used in the commercial market place of investing in a "preferred supplier" concept and working with that supplier over the life of the product to continually improve the product's quality and price.

52.246-24 Limitation of Liability High Value Items
Provides that the contractor shall not be liable for loss of or damage to property of the Government that occurs after Government acceptance of the supplies
WHY: This is not a clause that would normally appear in commercial contract. It places an additional administrative burden on the prime.

52.247-1 Commercial Bill of Lading Notations
Directs the contractor to ensure, before shipping, that specific shipping notations are annotated.
WHY: The commercial sector does not have a specific clause that is levied across the board for them to use in providing shipping notations. This is another specific regulation levied upon the contractor that he will have to track. Shipping notations are something that can be addressed between the program office and the contractor for each specific contract.

52.248-1 Value Engineering
Encourages the contractor to voluntarily prepare and submit value engineering change proposals, allowing the contractor to share in any realized savings.
WHY: This type of "continuous improvement" engineering is currently encouraged through the incentive structure of the contract. Having a separate clause requiring value engineering is only duplicative and an additional cost since it drives a requirement to track the value engineering system.

52.252-6 Authorized Deviations in Clauses
Notifies the contractor that use of a clause with an authorized deviation is indicated by the addition of (Deviation) after the clause.
WHY: No value added. These clauses state the obvious and are merely administrative in nature.

DoD FAR CLAUSES:

215.872-3 (d) Work Measurement
Requires contractor to have a work measurement system.
WHY: No value added. This requirement is a military-unique one imposing a substantial overhead burden on the contractor and an administrative burden on the Government.. Whatever abuses mandating such a system is supposed to correct are far out-weighed by the costs of a work measurement system.

252.203-7002 Display of DoD Hotline Poster
Requires the contractor to display the DoD Hotline posters prepared by the DoD IG.
WHY: This is another instance of requiring something of the contractor that is not normally required in the commercial sector. The deletion of this clause does not prevent someone from calling the DoD IG.

252.204-7003 - Control of Government Personnel Work Product

252.209-7000 Acquisitions From Subcontractors Subject to On-Site Inspection Under the Intermediate Range Nuclear Forces (INF) Treaty
Prescribes that the contractor shall not deny consideration for a subcontract award under the contract because he is subject to on-site inspections under the INF treaty.
WHY: This is not a standard commercial practice. Contracts/subcontracts are awarded on the basis of the "best value" concept. (Clause is in need of revision as it relates to Soviets.)

252.210-7003 Acquisition Streamlining
Requires the contractor to have a system to send suggestions for potential acquisition streamlining ideas to the program office.

WHY: This is another requirement levied on the contractor that he is forced to administer and track. This leads to additional overhead with no value added. The contractor always has the right to submit suggestions for improvements or trade-offs to the program office. There is no need to levy a specific clause delineating a right that exists.

252.210-7005 Bill of Materials
Requires a bill of materials be submitted that is in accordance with MIL-STD-295 .
WHY: It is not common in the commercial sector to require a bill of materials to a specific standard. The contractor will have a system for preparing a bill of materials; however, this requirement could make him establish a new system to be compliant with the MIL-STD. This directly translates into increased costs.

252.215-7000 Pricing Adjustments

252.219-7008 Pilot Mentor-Protégé Program
WHY: It is not standard commercial practice to dictate socio-economic programs. Contracts and subcontracts are awarded on a "best value" concept.

252.225-7015 Preference for Domestic Hand or Measuring Tools
252.225-7016 Restriction on Acquisition of Antifriction Bearings
252.225-7017 Preference for U.S. and Canadian Valves and Machine Tools
252.225-7031 Secondary Boycott of Israel
252.226-7002 Utilization of Indian Organizations and Indian-Owned Economic Enterprises
Restricts the contractors choice of sources for specific items or specific effort.
WHY: This is not a standard commercial practice. Contracts and subcontracts are awarded on a "best value" concept, subject to import/export license restrictions.

252.242-7001 Material Management and Accounting Systems
Requires contractors to establish a separate material management and accounting system for Government contracts with rules, procedures, and reporting requirements that could be different from commercial accounting methods.
WHY: This single group of requirements is probably the greatest barrier for commercial company involvement in Government contracts. Developing an approved Government accounting system, maintaining that system, opening the system to innumerable reviews and auditors, and exposing the firm to significant legal penalties for errors is an expensive and cumbersome undertaking with excessive risk in the view of many commercial firms. The pilot program may accept a cost accounting process consistent with commercial methods of doing business.

252.249-7001 Notification of Substantial Impact on Employment
Requires notification by the contractor of the effect of substantial changes in the contractor's labor rolls.
WHY: This is not a clause commonly used in the commercial arena. As such, it has the potential of causing an overhead cost for tracking this information. No value added.

252.225-7002 Qualifying Country Sources as Subcontractors
Prevents the contractor from precluding qualifying country sources from competing for subcontracts.

252.225-7025 Foreign Source Restrictions
Restricts the contractor to the use of domestic sources for specific items.
WHY: This is not a standard commercial practice. Contracts and subcontracts are awarded on a "best value" concept, subject to import/export license restrictions.

252.227-7027 Deferred Ordering of Technical Data
Requires the contractor to allow the Government to order tech data generated in the performance of the contract for period of 3 years after acceptance of all items delivered under the contract.
WHY: Not a common commercial practice. The contractor will have to price risk involved in the potential interrupt in his workload to comply with this requirement. This clause potentially limits commercial contractors from choosing to compete for a contract.

252.227-7030 Technical Data--Withholding of Payment
Allows the Government to withhold up to ten percent of the contract amount until all data is satisfactorily delivered and accepted.
WHY: Not a common commercial practice. It could preclude commercial industry participation in the program. Removal of this clause does not force Government acceptance of an inferior product, nor does it infringe on the Government's right to obtain a product that meets the contractual requirements.

252.227-7039 Patents--Reporting of Subject Inventions
Requires the contractor to provide interim reports annually and a final report listing any inventions and allowing the government to make copies of any patent applications.
WHY: Not a common commercial practice. Requires additional administration and potentially discourages the commercial sector from wanting to participate in a DoD contract.

252.232-7006 Reduction or Suspension of Contract Payments Upon Finding of Fraud
Notifies the contractor that 10 USC 2307(e) permits the head of the agency to reduce or suspend payments to the Contractor upon a determination that the contractor's request for payment is based on fraud.
WHY: Not a common commercial practice. The deletion of this clause would not affect the ability of the government to pursue fraud charges through the Justice Department.

252.234-7001 Cost/Schedule Control Systems
Requires the contractor to establish, maintain and use a specific type of cost/schedule control system.

WHY: Not a commercial requirement. Places an additional burden of contractors to establish and maintain a system that may not be compatible with the one they currently operate. This has a tendency to be very costly and discourages the commercial sector involvement.

252.242-7000 Post-Award Conference

Requires the contractor to attend any postaward conference convened by the contracting activity.

WHY: No value added. Post award conferences are listed in another section of our contracts, if they are required. This clause is merely duplicative in nature, and does not need to be mandated.

252.242-7002 Submission of Commercial Freight Bills for Audit

Requires the contractor to furnish individual freight bills in excess of $500 to the General Services Administration (GSA) for audit.

WHY: Not a commercial requirement. This causes an additional administrative burden for the contractor that is passed on to the Government.

252.242-7005 Cost/Schedule Status Report

Provides a minimum set of standards upon which the Offerors must base, a written summary of the management procedures he will establish and maintain during contract performance. After contract award, the contractor is required to implement these.

WHY: This is not a commercial requirement. This places an additional burden on contractors to operate in a specific way. It is not appropriate for the Government to tell contractors how to manage their cost and schedule. This clause adds additional cost to the contract and discourages commercial sector involvement.

252.248-7000 Preparation of VECPs

Requires preparation of VECPs be in accordance with the prescribed format in MIL-STD-973.

WHY: The Government can evaluate VECPs in any format as long as the required information is there. Having a specific format adds costs, discourages commercial firms and, probably, discourages some VECPs. The Government should be open to money-saving opportunities in any format.

AF, AFMC and ASC FAR SUPPLEMENTS

These regulations serve to levy additional requirements on the contractor.

WHY: Since most of the regulations are already supplemented by the DOD FAR supplement, the lower level supplements tend to be more of "how to" type of regulations. They are often based on lessons learned under mistakes made in other programs, and while they may have been necessary at the time, they require an additional burden on contractors to maintain service, command and center unique supplements that dictate how they should run a program. These regulations are not used in the commercial sector, nor are they used in other commands

or services. Potentially, a contractor specializing in the defense arena may be required to operate a number of different ways on programs operating under different FAR supplements.

Attachment B

Process Action Team
Department of Defense
Military Specifications and Standards

Blueprint for Change

This is a draft report of the
Process Action Team's
Strategy and Recommendations

Management and Manufacturing Specifications and Standards Requiring Priority Action

The following list was prepared using DoDI 5000.2; the list of key acquisition documents in DoD 4120.3-M; two industry surveys conducted by the Army Materiel Command and the Office of the Secretary of Defense's Defense Management Review-Working Group Nine; and the American Defense Preparedness Association Report, "Doing Business With DoD, The Cost Premium" and their statements on Military Specifications and Standards before the House Armed Services Committee, Subcommittee on Investigations, July 22, 1992.

MIL-STD-490	Specifications Practices
MIL-STD-2000	Soldering Technology
MIL-STD-45743	Soldering
MIL-STD-202	Test Methods for Electronic and Electrical Component Parts
MIL-STD-275	Printed Wiring for Electrical Equipment
MIL-STD-454	Electronic Equipment Requirements
MIL-STD-461	Electromagnetic Emission and Susceptibility Requirements for the Control of Electromagnetic Interference
MIL-STD-462	Measurement of Electromagnetic Interface Characteristics
MIL-STD-463	Definitions and Systems of Units, Electromagnetic Interference, and Electromagnetic Compatibility Technology
MIL-STD-883	Test Methods and Procedures for Microelectronics
MIL-STD-2165	Testability Program for Electronic System and Equipment
MIL-STD-5400	Electronic Equipment, Aerospace, General Specification
MIL-E-6051	System Electromagnetic Compatibility Requirements
MIL-C-28809	Circuit Card Assemblies, Rigid, Flexible and Rigid-Flex
MIL-M-38510	Microcircuits

MIL-P-46843	Printed Wiring Assemblies
MIL-P-55110	Printed Wiring Boards
MIL-STD-881	Work Breakdown Structure
MIL-STD-1567	Work Measurement
MIL-STD-337	Design to Cost
MIL-STD-470	Maintainability Program Requirements for Systems and Equipment
MIL-STD-471	Maintainability Demonstration
MIL-STD-499	Engineering Management
MIL-STD-781	Reliability Testing for Engineering Development, Qualification, and Production
MIL-STD-785	Reliability Program for Systems and Equipment Development and Production
MIL-STD-790	Reliability Assurance Program for Electronic Parts Specifications
MIL-STD-1543	Reliability Program Requirements for Space and Missiles Systems
MIL-STD-1843	Reliability-Centered Maintenance for Aircraft, Engines and Equipment
MIL-STD-810	Environment Test Methods and Engineering Guidelines
MIL-STD-882	System Safety Program Requirements
MIL-STD-973	Configuration Management
MIL-STD-1388	Logistics Support Analysis
DOD-STD-1467	Software Support Environment
DOD-STD-2167	Defense System Software Development
DOD-STD-2168	Defense System Software Quality Program
MIL-STD-1472	Human Engineering Design Criteria for Military Systems, Equipment and Facilities

MIL-STD-1800	Human Engineering Performance Requirements for Systems
MIL-STD-1528	Manufacturing Management Program
MIL-STD-1785	System Security Engineering Program Management Requirements
DOD-STD-100	Engineering Drawing Practices
MIL-T-31000	Technical Data Package
MIL-STD-1521	Technical Reviews and Audits for Systems Equipment
MIL-STD-1250	Corrosion Prevention and Deterioration Control in Electronic Components
MIL-STD-1520	Corrective Action and Disposition System for Nonconforming Material
MIL-STD-1535	Supplier Quality Assurance Program Requirements
MIL-STD-1568	Materials and Processes for Corrosion Prevention and Control in Aerospace Weapons Systems
MIL-STD-1686	Electrostatic Discharge Control Program for Protection of Electronic Parts, Assemblies and Equipment
MIL-STD-2164	Environmental Stress Screening Process for Electronic Equipment
MIL-Q-9858	Quality Program Requirements
MIL-I-45208	Inspection System Requirements
MIL-STD-105	Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-45662	Calibrations System Requirements
MIL-STD-1310	Shipboard Bonding, Grounding, and Other Technology
DOD-E-8983	Electronic Equipment, Aerospace, Extended Space Environment
MIL-I-6870	Inspection Program Requirements, Nondestructive for Aircraft and Missile Materials and Parts
MIL-STD-980	Foreign Object Damage Prevention in Aerospace Products

MIL-STD-1367	Packaging, Handling, Storage, and Transportation Program Requirements for Systems and Equipment
MIL-STD-1379	Military Training - Military Unique Training Requirements
MIL-M-15071	Equipment and Systems Contexts Requirements for Manuals, Technical
MIL-M-38784	General Style and Format Requirements Manual, Technical
MIL-M-63036	Preparation of Operators Manual, Technical
MIL-M-63041	Depot Maintenance Work Requirements Manual, Technical
MIL-S-8879	Screw Threads, Controlled Radius Roots With Increased Minor Diameter

Attachment C

Memorandum

for

Deputy Under Secretary of Defense

(Acquisition Reform)

Draft

DRAFT MEMORANDUM

MEMORANDUM FOR Deputy Under Secretary of Defense (Acquisition Reform)

Subject: Establishment, Tasking and goals of the Commercial Procurement Practices Implementation Team

1. Commercial practice procurement of military jet engines has a forty year history in the Department of Defense. These engines have been acquired for specific aircraft and are often differentiated from their commercial counterpart only by military-required modifications. In fact, jet engine manufacturers have an extensive history of building similar products for both the commercial and military markets. It is not uncommon that engines , both commercial and military are manufactured in the same facility, with the same people, processes, materials and suppliers.

2. On that basis, the Defense Science Board has determined that the military jet engine industry is an ideal candidate for a commercial practices procurement program. The Board agreed that it was possible; that there are no insurmountable obstacles. Through the elimination of regulatory, process and traditional impediments, in combination with government and industry leadership and understanding, the government could procure jet engines using commercial practices. The result will be that both government and industry would experience a reduction of overhead costs and a shortening of the manufacturing and qualification process.

3. At this time, the Board feels that the program can cover mature production engines, as well as their follow-on support. Although commercial practice development of large military engines is not practical now, there are opportunities in the development of smaller engines for target or reconnaissance vehicles.

4. To implement the recommendations of the Board, establish and fund a joint team of government and industry representatives. This team will create a detailed, time-phased plan for commercial practices on current engine programs where practical; follow-on procurements of current in-production engines; and on future engines as they complete qualification and enter production. The team will also explore opportunities to implement commercial practices during jet engine development.

5. Provide a plan of action with milestones to implement commercial practices for military jet engine procurement within six months of the date of this memorandum.

Signature Block
Under Secretary of Defense (Acquisition & Technology)