Report No. D-2007-119 August 27, 2007

Inspector General

United States Department of Defense

Procurement of Propeller Blade Heaters for the C-130 Aircraft

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Acronyms

DLA	Defense Logistics Agency
DSCR	Defense Supply Center, Richmond, Virginia
ESA	Engineering Support Activity
GAO	Government Accountability Office
IG	Inspector General
NAVAIR	Naval Air Systems Command
NAVICP	Naval Inventory Control Point, Philadelphia, Pennsylvania
PBL	Performance-Based Logistics
UTC	United Technologies Corporation
VPV	Virtual Prime Vendor
WRALC	Warner Robins Air Logistics Center, Warner Robins, Georgia

INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-4704

August 27, 2007

MEMORANDUM FOR DIRECTOR, DEFENSE LOGISTICS AGENCY

SUBJECT: Report on Procurement of Propeller Blade Heaters for the C-130 Aircraft (Report No. D-2007-119)

We are providing this report for review and comment. We conducted the audit in response to a Defense Hotline allegation. We considered management comments from the Defense Supply Center, Richmond, Virginia, on a draft of this report when preparing the final report.

DoD Directive 7650.3 requires that all recommendations be resolved promptly. The Defense Supply Center, Richmond, Virginia, comments were partially responsive. We request additional comments on Recommendation 6. by September 26, 2007.

If possible, please send management comments in electronic format (Adobe Acrobat file only) to Joseph.Bucsko@dodig.mil. Copies of the management comments must contain the actual signature of the authorizing official. We cannot accept the / Signed / symbol in place of the actual signature. If you arrange to send classified comments electronically, they must be sent over the SECRET Internet Protocol Router Network (SIPRNET).

We appreciate the courtesies extended to the staff. Questions should be directed to Mr. Henry F. Kleinknecht at (703) 604-9324 (DSN 664-9324) or Mr. Joseph P. Bucsko at (703) 604-9337 (DSN 664-9337). See Appendix D for the report distribution. The team members are listed inside the back cover.

By direction of the Deputy Inspector General for Auditing:

Bruce A. Burton for

Richard B. Jolliffe
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Acquisition and Contract Management

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Department of Defense Office of Inspector General

Report No. D-2007-119 **August 27, 2007**
(Project No. D2006-D000CH-0097.000)

Procurement of Propeller Blade Heaters for the C-130 Aircraft

Executive Summary

Who Should Read This Report and Why? DoD acquisition and contracting personnel should read this report because it concerns the increasing cost of noncompetitive spare parts and the benefits of competition.

Hotline Allegation. The audit was initiated in response to a Defense Hotline allegation that SMR Technologies, Inc., was not given a fair opportunity by the Defense Logistics Agency (DLA) to compete for the C-130 aircraft propeller blade heater requirement despite receiving source approval from the Naval Inventory Control Point Philadelphia and the Warner Robins Air Logistics Center engineering support activities. The allegation was substantiated; see the Finding for the audit results.

Background. Over the past 10 years, the DoD Inspector General has worked closely with DLA and other DoD Components to achieve fair pricing for noncompetitive items. Previous audit reports have discussed the reasonableness of prices paid for spare parts from Hamilton Sundstrand and other Defense contractors. See Appendix B for the list of prior reports and Appendix C for prior Hamilton Sundstrand audits.

Since October 1996, DLA, through the Defense Supply Center, Richmond, Virginia, (DSCR), has supported the blade heater requirement through its single-source virtual prime vendor (VPV) contract with Hamilton Sundstrand. According to DSCR, the VPV contract is a performance-based logistics (PBL) support contract that provides "worldwide, wholesale consumable repair parts supply support for the 54H60 Propeller System" used on the C-130 and P-3 aircraft. In June 2002, DSCR awarded a follow-on VPV contract with a 3-year base term and three 3-year options that could extend support through 2014.

In March 1999, Warner Robins Air Logistics Center and Hamilton Standard (now Hamilton Sundstrand) identified a potential replacement for the current propeller blade heater. The replacement is made of Thermion® material that could significantly improve erosion and foreign object impact damage. In February 2000, Hamilton Sundstrand began working on the DoD-funded development of the new propeller blade heater through the Navy Component Improvement Program. The intent of this program is to procure manufacturing data and data rights to foster future competition. We plan to address the new blade heater development in a subsequent report.

Results. While DSCR successfully competed the worldwide* demand requirements for the C-130 aircraft propeller blade heater and reduced the unit price from $509.72 to

* Customers other than the Air Force C-130 propeller shop.

$265.00 (about 48 percent), the worldwide demand represents only about 13 percent of the requirements. DSCR continues to procure the remaining requirements for the Air Force C-130 propeller shop, under its single-source VPV contract with Hamilton Sundstrand at the higher price. As a result, DSCR's single-source "quasi-PBL" philosophy for the VPV program has stifled competition, precluding SMR Technologies, Inc., from receiving a fair opportunity to compete for blade heater requirements even though its entry into the market has reduced blade heater contract prices by about 48 percent. We calculate that DSCR could have achieved cost savings of about $2 million for the Air Force and the taxpayer, if the blade heater requirement had been competed when two approved sources became available. We also calculate that the Air Force will pay $1 million more than necessary if DSCR continues to procure the 3,673 blade heaters in contractor inventory at the higher price of $509.72. In addition, DSCR continued to pay higher prices for worldwide demand orders totaling $86,652, after the effective date of the competitive contract (March 15, 2006), resulting in overcharges of $41,602.

We recommend that the Commander, DSCR determine whether the Defense supply system is capable of effectively supporting items for the C-130 propeller shop when substantial savings from competition are available. We recommend that the Commander address why the Services should fund a development program, procure technical data, and develop alternative sources, if DSCR intends to continue procuring items sole-source from Hamilton Sundstrand on its VPV contract. We recommend the Commander compete blade heater requirements and take appropriate action to maintain dual sources, review the impact of royalty agreements on price reasonableness, and determine whether competitive items should be procured on the VPV contract at significantly higher prices. We also recommend that the Commander incorporate unilateral rights to delete items in the VPV contract before exercising any future options. We further recommend the Commander assure DSCR is not obligated to procure inventory under the VPV contract in excess of industry standards. Finally, we recommend that the Commander procure blade heaters for worldwide demand at the lower competitive prices and obtain a refund from Hamilton Sundstrand for overcharges. See the Finding section of the report for detailed audit results and recommendations.

Review of Internal Controls. DSCR internal controls were not adequate. We identified material internal control weaknesses for procurement and contract administration relating to the acquisition of the C-130 blade heater.

Management Comments and Audit Response. We received comments from the Commander, DSCR. The Commander, DSCR generally concurred with the report recommendations. However, the Commander, DSCR non-concurred and provided management comments that did not fully address Recommendation 6. related to the VPV contract add/delete provision. Therefore, we request that the Defense Supply Center, Richmond, Virginia, provide additional comments to the final report on Recommendation 6. by September 26, 2007.

See the Finding section of the report for a discussion of management comments on the recommendations and our audit response. See the Management Comments section of the report for a complete text of comments.

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Background

The audit was initiated in response to a Defense Hotline allegation that SMR Technologies, Inc. (SMR), was not given a fair opportunity by the Defense Logistics Agency (DLA) to compete for the C-130 aircraft propeller blade heater (blade heater) requirement. SMR had received approval as an alternate source of supply from both the Naval Inventory Control Point, Philadelphia, Pennsylvania (NAVICP), and the Warner Robins Air Logistics Center, Warner Robins, Georgia (WRALC), engineering support activities by November 2004.

Virtual Prime Vendor Program. Since October 1996, DLA, through the Defense Supply Center, Richmond, Virginia (DSCR), has supported the blade heater requirement through its single-source virtual prime vendor (VPV) contract with Hamilton Sundstrand. According to DSCR, the VPV contract is a performance-based logistics (PBL) support contract that provides "worldwide, wholesale consumable repair parts supply support for the 54H60 Propeller System" used on the C-130 and P-3 aircraft. In June 2002, DSCR awarded a follow-on VPV contract with a 3-year base term and three 3-year options that could extend support through 2014.

Source Approval. The process to obtain alternate source approval is lengthy and difficult, taking SMR more than 2 years to become an approved source for the blade heater. According to the SMR [redacted] the company spent $[redacted] to become an approved source for the C-130 propeller blade heater. Table 1 shows the amount spent by SMR to reverse engineer the blade heater.

Table 1. Reverse Engineering Costs for C-130 Aircraft Propeller Blade Heater

Description	Costs
Engineering-Development	[redacted]
Engineering-Boot Enhancement	[redacted]
Government Approval	[redacted]
Developmental Testing	[redacted]
Tooling	[redacted]
Total Cost	[redacted]

The source approval process began on May 10, 2002, when SMR submitted an unsolicited source approval request package to DSCR. SMR's package was returned several times during the process because key technical data were missing. SMR provided the requested data and after becoming satisfied with the technical aspects of SMR's drawing, the engineering support activities (ESA) decided to test the part to measure, "erosion effects, susceptibility to FOD [Foreign Object Damage], and degradation in heating characteristics, using the approved blade heater as baseline." According to the Navy, the SMR blade heater was flown for approximately 100 hours and performed 182 landings; the subsequent inspections of the blade heater uncovered no signs of damage or erosion to it. As a result, SMR's blade heater was approved for use by NAVICP in October 2004 and WRALC in November 2004.

Figure 1 shows the blade heater manufactured by SMR.

Figure 1. C-130 Aircraft Propeller Blade Heater Manufactured by SMR

SMR Technologies Complaint. On February 22, 2005, SMR sent a letter to the honorable Senator Robert C. Byrd of West Virginia, seeking his assistance in convincing DLA to competitively bid the entire requirement for blade heaters.

> During the process of seeking approval with the value engineering group at Defense Supply Center Richmond (DSCR), SMR was assured that the long term contract with the current sole-source supplier, Hamilton Sundstrand (HAM,) would not be renewed at the option period date.
>
> Unfortunately, the legal office at DLA recently informed SMR that because this item is one of several items covered by the existing contract between DLA and Hamilton Sundstrand, the option for the existing contract would be exercised, resulting in continued sole-source supply for the Government. Three 3-year options remain on the existing contract. Continued sole-source status for the nine-year period will result in unnecessary waste of taxpayer dollars amounting to $3.75 million, assuming current DLA contract pricing, vs. SMR standard customer pricing.

In response to SMR's letter, Senator Byrd sent a letter to the Director of Congressional Affairs, DLA on March 7, 2005. In Senator Byrd's letter, he noted that SMR had received source approval for its blade heater, and that the company was advised that it would be considered for future procurements when the 3-year option for the VPV came under review. Senator Byrd relayed SMR's concern that DLA did not plan on competing the blade heater requirement, and asked that someone review the procurement.

Previous Hamilton Sundstrand Audits. Several DoD Inspector General (IG) audits have shown that Hamilton Sundstrand has charged DoD excessive prices for single-source spare parts and repeatedly refused to provide cost information necessary to determine fair and reasonable prices to DoD contracting officials when requested. In June 1999, United Technologies Corporation acquired Sundstrand and merged it with its Hamilton Standard division, forming Hamilton Sundstrand. See Appendix C for more information on the following audits.

DoD IG Report No. 98-064, "Commercial and Noncommercial Sole-Source Items Procured on Contract N000383-93-G-M111," February 6, 1998, showed that DLA paid about $[redacted] ([redacted] percent) more than fair and reasonable prices for $6.1 million worth of "commercial items" purchased from Sundstrand during calendar years 1994 through 1996.

DoD IG Report No. D-2000-098, "Spare Parts and Logistics Support Procured on a Virtual Prime Vendor Contract," March 8, 2000, showed that the DLA VPV contract was not the most economical and effective purchasing strategy to obtain spare parts and logistics support.

DoD IG Report No. D-2000-099, "Procurement of the Propeller Blade Heaters for the C-130 and P-3 Aircraft," March 8, 2000, showed that DLA paid between $[redacted] and $[redacted] (or between [redacted] and [redacted] percent) more than fair and reasonable prices for blade heaters procured from Hamilton Sundstrand.

DoD IG Report No. D-2004-012, "Sole-Source Spare Parts Procured From an Exclusive Distributor," October 16, 2003, showed that DLA paid prices that were $[redacted] ([redacted] percent) higher than fair and reasonable prices on 35 orders (29 contracts) for 11 sole-source Hamilton Sundstrand spare parts procured from AAR Defense Systems from March 1999 through August 2002.

DoD IG Report No. D-2006-122, "Commercial Contract for Noncompetitive Spare Parts With Hamilton Sundstrand Corporation," September 29, 2006, found that the Air Force negotiating team used questionable commercial item determinations for noncompetitive spare parts used on Defense weapon systems and a high-risk "commercial" pricing strategy that failed to effectively use either marketplace pricing or cost analysis for noncompetitive spare parts placed on the strategic sourcing contract with Hamilton Sundstrand.

Development of New Blade Heater. In March 1999, WRALC and Hamilton Standard (now Hamilton Sundstrand) identified a potential replacement for the current propeller blade heater. The replacement blade heater will be made from Thermion® material, which is a conductive fabric that promises significantly improved erosion and foreign object impact damage protection. In a memorandum dated August 6, 1999, the Navy addressed its efforts to pursue developing the Thermion® blade heater under the Component Improvement Program with Hamilton Standard stating they were committed to procuring the new improved blade heaters once qualification testing was successfully completed. In January 2000, the Naval Air Systems Command (NAVAIR) entered into a contract with United Technologies Corporation, Hamilton Standard Division. In February 2000, a task order was awarded that provided funding for blade heater improvements. The Air Force funded the initial investment of

$300,000, and to date, DoD (Navy and Air Force) and foreign militaries have funded the entire development of the new blade heater, totaling over $1.1 million. We plan to address the new blade heater development in a subsequent report.

Objectives

Our overall audit objectives were to evaluate whether SMR received a fair opportunity to supply C-130 aircraft propeller blade heaters after obtaining approval as an alternate source of supply and whether DLA obtained the best value for its customers when it used a VPV contract to procure the blade heaters noncompetitively from Hamilton Sundstrand. See Appendix A for a discussion of the scope and methodology and Appendix B for prior audit coverage related to the objectives.

Review of Internal Controls

We identified material internal control weaknesses for DSCR as defined by DoD Instruction 5010.40, "Managers' Internal Control (MIC) Program Procedures," January 4, 2006. DSCR did not have internal control procedures for procurement and contract administration to:

- fully consider competition to include conducting a cost-benefit analysis before exercising contract options;
- efficiently fortify and promulgate new entrants into the market when the sole-source contractor continues to charge unreasonable prices;
- determine whether procuring competitive items from a single source on a "quasi-PBL" contract is beneficial, while considering the long-term impact on future competition;
- ensure contract deletion clauses retain DoD's unilateral right to delete items when competition becomes available; and
- ensure requirements are procured at the appropriate contract price when requirements are divided on multiple contracts.

Implementing Recommendations 1., 3., 5., 6., and 8. will improve DSCR procurement and contract administration procedures. If these procedures had been implemented, potential monetary benefits of $2 million could have been achieved. A copy of the report will be provided to the DLA senior official responsible for internal controls.

Competition for the C-130 Aircraft Propeller Blade Heater

While DSCR successfully competed the worldwide demand requirements for the C-130 aircraft propeller blade heater and reduced the unit price from $509.72 to $265.00 (about 48 percent), the worldwide demand represents only about 13 percent of the total requirements. DSCR continues to procure the remaining requirements, for the Air Force C-130 propeller shop, under its single-source VPV contract with Hamilton Sundstrand at the higher price. Propeller blade heaters continue to be procured at higher prices because DSCR:

- believes it needs to use its “quasi-PBL” VPV contract to maintain a high level of support for the Air Force C-130 propeller shop;
- is less concerned with cost, procuring items competitively, and developing alternative sources even when substantial savings are available; and
- inappropriately agreed to purchase excessive levels of contractor inventory at the higher noncompetitive price.

As a result, DSCR’s single-source VPV program has stifled competition, precluding SMR Technologies, Inc., from receiving a fair opportunity to compete for blade heater requirements even though its entry into the market has reduced blade heater contract prices by about 48 percent. We calculate that DSCR could have saved the Air Force and taxpayers about $2 million if the blade heater requirement had been competed once two approved sources became available. The Air Force will also pay $1 million more than necessary for 3,673 blade heaters in contractor inventory. In addition, DSCR continued to pay the higher price for worldwide demand orders totaling $86,652, after the effective date of the competitive contract (March 15, 2006), resulting in overcharges of $41,602.

Competition and Performance-Based Logistics

Benefits of Competition and Dual-Sourcing. Competition and dual-sourcing have inherent benefits for the taxpayers. In October 1983, former Secretary of Defense and United States Senator William S. Cohen outlined four basic benefits to competitive procurement that still hold true after more than 20 years (Public Contract Law Journal, October 1983, Volume 14, Number 1).

> **Competition in contracting saves money.** Studies have indicated that between 15 and 50 percent can be saved through increased competition.
>
> **Competition also curbs cost growth.** Competitive procurement has led to improvements in system performance and on-schedule delivery by contractors.

> **Competition may also promote significant innovative and technical changes.** In some cases, competition serves as an incentive for firms to be more progressive in developing cost-reducing design changes and improvements in manufacturing technology in order to gain advantage over their competitors. Increased product quality and reliability are potential benefits of competition, especially when performance and quality are included in the solicitation as production award criteria. A long-term benefit of competition, moreover, is enhanced mobilization capability and industry responsiveness.
>
> **The last, and possibly the most important, benefit of competition is its inherent appeal of "fair play."** Competition maintains integrity in the expenditure of public funds by ensuring that government contracts are awarded on the basis of merit rather than that of favoritism. **[emphasis added]**

Former Senator Cohen also addressed the concentration of the industrial base as an impediment to competition and stated that, "The lack of competition in government contracting is not solely the result of procedural problems. In some cases, sole-source contracting may be related to the degree of concentration in the industrial base: the more concentrated the marketplace, the less opportunity for competition." Further, former Senator Cohen noted that the Government:

> May encourage the shrinkage of the industrial base by relying on the same contractor time and again. Noncompetitive contracting may further concentrate the industrial base, which, in turn, leads to less competition. While there is no quick fix for strengthening the U.S. industrial base, increased use of competitive contracting in general and **dual-sourcing** in particular will broaden the base at both the prime and lower tiers. **[emphasis added]**

Performance-Based Logistics Concept and DoD Guidance. In 1999, the Aerospace Industries Association first proposed the performance-based logistics (PBL) concept as the preferred sustainment strategy as part of the joint Aeronautical Commander's Group. PBL was defined as "a weapon system sustainment strategy that features integrated supply chains and increased industry/government partnering to meet warfighter performance requirements."

DoD subsequently endorsed the idea and attempted to use the strategy when it represented a "best value." In January 2004, the Acting Undersecretary of Defense for Acquisition, Technology, and Logistics established guiding principles for conducting business case analyses to determine the best value when considering PBL support. Best value was defined as "**the expected outcome that, in the Department's consideration, provides the greatest benefit per cost in response to requirements."** In a March 2004 memorandum, the Acting Under Secretary also outlined that the "cost per operational unit of performance (i.e. cost per flight hour) shall be capable of being reduced through the application of a PBL approach." Subsequently, a May 18, 2004, Departmental briefing again stated that PBL contract incentives should be tied to cost and performance.

Competition of Worldwide Demand

DSCR successfully competed the worldwide demand requirements for the C-130 aircraft propeller blade heater and reduced the unit price from $509.72 to $265.00 (about 48 percent); however, the worldwide demand represents only about 13 percent (400 world-wide demand/3,000 annual demand[1]) of total requirements.

Split Requirement. In a September 9, 2005, e-mail to Hamilton Sundstrand, a DSCR Supplier Relationship Manager explained the decision to split the requirement for the Air Force propeller shop and worldwide customers.

> The Air Force and Navy Engineering Support Activities (ESA) reviewed the Inspection Report of the SMR blade heater submitted by Hamilton Sundstrand. Both ESAs were in agreement that the Hamilton Sundstrand report was vague and did not provide enough detail to show validity of the discrepancies identified. Their consensus was that the report was not conclusive enough to determine SMR is not an acceptable supplier of this part. Both ESAs looked at the form, fit, and function of the item and determined SMR is a qualified parts provider. Since SMR was qualified as a supplier, the blade heater will now become a competitive item. Looking forward, this is how DSCR plans to approach the procurement of the item:
>
> - The NSN will remain on the VPV contract. Requirements from NADEP-CP [Naval Aviation Depot, Cherry Point, North Carolina] and WR-ALC will continue to be ordered against the VPV.
>
> - Worldwide requirements for this NSN will be solicited as competitive buys.

On December 16, 2005, DSCR issued a competitive solicitation for the C-130 aircraft propeller blade heater with an expected demand of 400 units per year, a guaranteed minimum of 200 and a maximum quantity of 600 per year. The delivery requirements for the worldwide contract were exactly the same as the VPV contract (8 days for routine orders and 2 days for priority orders). The blade heater had been procured sole-source from Hamilton Sundstrand since 1980.

[1] We calculated the annual demand by averaging annual purchases of the blade heater from calendar year 1998 through calendar year 2005, using Haystacks procurement history report.

Table 2 shows the quotes from Hamilton Sundstrand and SMR.

Table 2. Quotes for Competitive Solicitation

		Hamilton Sundstrand		SMR Technologies	
Period	Quantity	Unit Price	Total	Unit Price	Total
Base Year	400	$265.00	$106,000	[redacted]	[redacted]
Option 1	400	274.00	109,600		
Option 2	400	283.00	113,200		
Option 3	400	293.00	117,200		
Option 4	400	303.00	121,200		
Total	**2,000**		**$567,200**		**$826,400**

Quantity Variances. On March 15, 2006, DSCR awarded Hamilton Sundstrand the contract for worldwide orders based on the lower overall price. Hamilton Sundstrand was also under contract for the remaining requirements for the Air Force C-130 propeller shop of roughly 2,600 blade heaters annually, which afforded them significantly more pricing leverage during the competition. Basically, the SMR price was based on an annual quantity of 400, while the Hamilton Sundstrand price was based on an annual quantity of about 3,000 (400 worldwide demand plus 2,600 C-130 propeller shop demand).

Using a [redacted] percent quantity curve, we calculate that the SMR price for 3,000 blade heaters would have been about $285, about [redacted] percent less than it proposed and only slightly higher than the Hamilton Sundstrand's price of $265. Further, now that a new baseline has been established by competition, there is no reason to believe that SMR would not be competitive on future procurements and future competitions could result in even lower prices for the blade heater. SMR representatives have also stated they could compete at the lower price.

Performance-Based Logistics Support

DSCR believes it needs to use its single-source "quasi-PBL" VPV contract to maintain a high level of support for the Air Force C-130 propeller shop. We do not believe hiring a single contractor to procure and manage spare parts constitutes a true PBL program. For example, the contractor has little, if any, incentive to improve reliability as would be the case on a true PBL contract. A true PBL strategy is designed to shift from buying parts and managing inventory to buying performance and managing results. While the VPV contract has improved supply availability, the contract is not designed to increase reliability or reduce total cost of ownership, key components of any PBL contract. Consequently, the contractor's primary incentive under the DSCR "quasi-PBL" contract is to provide more parts to earn more profit.

VPV Program Decision Paper. In May 2002, DSCR prepared a business decision paper that supported the award of a follow-on contract to the initial VPV contract. DSCR stated that the VPV contract is a PBL support contract that provides "worldwide, wholesale consumable repair parts supply support for the 54H60 Propeller System" used on the C-130 and P-3 aircraft.

DSCR concluded that the VPV program should be continued because it proved capable of improving logistical support for the Air Force C-130 propeller shop while enhancing customer satisfaction because it used a single source for both the competitive and sole-source items. DSCR also concluded that multiple vendor support diffuses support integration and establishes conditions that can lead to reduced responsiveness to requirements by compounding coordination responsibilities and enforcing redundant costs and processes. Further, a single-source VPV emphasizes the importance of total logistics support and the support functions that go along with supplying parts. The primary customer (Air Force C-130 propeller shop) has attributed improvements to and praised the VPV program.

DSCR's final business decision was based on the comparison of total cost under the VPV alternative to costs under traditional support, while considering qualitative benefits of the VPV program. The analysis used pricing information, projected demand, and DLA cost recovery rates to calculate the total cost to the customer. Using actual demand on the initial VPV contract from FY 1999 through FY 2001, DSCR calculated the cost comparison. The DSCR analysis determined that traditional support ($65.7 million) costs relatively the same as the VPV contract ($66.5 million). However, the majority of items used in the cost comparison were sole-source from Hamilton Sundstrand and the competitive price for the blade heater was not available for the cost comparison.

DSCR Preference for Single-Source VPV Supplier. From the outset, DSCR was apprehensive about removing the blade heater requirement from the VPV contract. [redacted] First, DSCR sought to have SMR join Hamilton Sundstrand's family of suppliers and when that failed, DSCR split the requirement between the Air Force C-130 propeller shop and worldwide customers, stifling competition in order to preserve the VPV contract. [redacted]

[redacted]

[redacted]

[redacted]

DSCR Request for SMR to Join Hamilton Sundstrand. [redacted]

[redacted]

In June 2005, Hamilton Sundstrand obtained and tested an SMR C-130 blade heater. Hamilton Sundstrand concluded that SMR's blade heater was not a suitable substitute for its C-130 blade heater, and thus would not include SMR in its family of suppliers. Clearly, Hamilton Sundstrand, as the current sole source, has no incentive to qualify SMR's blade heater, its competition, as a suitable substitute, especially when Hamilton Sundstrand receives a royalty payment on every blade heater from its current licensee to produce the item. Further, a previous audit of blade heater prices showed that Hamilton Sundstrand costs were significantly less than the price charged to DLA, so adding another supplier to the Hamilton Sundstrand family of suppliers would not have reduced the DLA price to its customers.

DSCR then asked the WRALC and NAVICP ESAs for their views on Hamilton Sundstrand's conclusion. Both ESAs disagreed with Hamilton Sundstrand, noting that their analysis was vague and failed to provide sufficient information to justify the discrepancies cited.

DSCR Deputy Commander Preference for Single-Source Supplier. In a June 21, 2005, letter to Senator Robert Byrd of West Virginia, the Deputy Commander, DSCR communicated that procuring C-130 blade heaters from Hamilton Sundstrand on the single-source VPV contract was preferable to competition:

> As you recall, the blade heaters are one of 1150 parts included on our virtual prime vendor contract with Hamilton Sundstrand Corp. These items are components of the C-130 aircraft's hub and blade assembly. Under the contract, Hamilton Sundstrand is responsible for the full range of logistics functions–from forecasting and purchasing to quality control and distribution–for each item on the contract. The contract requires Hamilton Sundstrand to deliver items within two or eight days

> after receiving an order. In order to meet these very stringent delivery requirements, Hamilton Sundstrand must build and maintain an inventory for most items included in this contract. For the blade heaters, Hamilton Sundstrand currently has an inventory capable of satisfying approximately ten quarters (two and one-half years) of demand.
>
> We remain very pleased with the excellent support Hamilton Sundstrand provides all our worldwide customers, especially our primary C-130 maintenance customers at Warner Robins Air Logistics Center (WR-ALC) and Naval Aviation Depot, Cherry Point, NC [North Carolina] (NADEP-CP). Both WRALC and NADEP-CP have consistently praised the support Hamilton Sundstrand has provided. In recognition of this support, we intend to exercise the option, which will extend the contract through the summer of 2008.
>
> We have been working with Hamilton Sundstrand to bring SMR into its family of suppliers supporting the C-130 aircraft. Once SMR becomes a qualified supplier to Hamilton Sundstrand, it can compete for Hamilton Sundstrand's blade heater subcontracts.
>
> If SMR has not been added to Hamilton Sundstrand's supplier team by September 1, 2005, we will issue competitive solicitations to satisfy orders for worldwide demand. These orders represent approximately one-fifth of all blade heater orders. We will continue to satisfy orders from WRALC and NADEP-CP under the VPV contract.

Emergency Requirement. In January 2007, a contractual issue prevented Hamilton Sundstrand from delivering blade heaters to the Air Force propeller shop under the VPV contract. In order to keep the maintenance line operational, WRALC procured 14 blade heaters from SMR for a unit price of $265.00. SMR provided overnight delivery of the blade heaters. Without SMR, WRALC could have potentially had to shutdown its maintenance line. Clearly, maintaining dual sources provides significant benefit to DoD.

Comparison of PBL Concept to the Single-Source VPV Contract. The VPV contract is not a true PBL contract and can be more accurately described as a parts management contract. The key distinction made is based on what the contractor is motivated to accomplish. Hamilton Sundstrand, under the VPV contract, is motivated by supplying parts because delivering parts triggers increased profit. Under properly implemented PBL contracts, the contractor's profit is tied to the performance of the weapon system. Thus, the contractor is motivated to develop sound technical changes and improve the reliability of items managed for the reason that the increased reliability will contribute to increased overall weapon system performance and reduced total cost of ownership.

For example, DoD, not Hamilton Sundstrand, has funded the development of a new blade heater to improve the item's reliability. Clearly, the focus of the VPV contract is on supplying parts and not performance. Thus, DSCR should be able to compete parts where possible to achieve substantial savings. We believe DLA, as a world-class supplier of parts, has the ability to supply parts to the warfighter at the best price.

DSCR needs to determine whether the DLA supply system is capable of effectively supporting items for the Air Force C-130 propeller shop when substantial savings from competition are available.

New Blade Heater Development. Both the Navy and Air Force have spent roughly $1 million developing a new blade heater under the Navy's Component Improvement Program. The intent of the program is to procure technical data to competitively procure items and develop new sources. We plan to address the new blade heater development in a subsequent report. However, DSCR, by its actions, has made it clear that it desires to keep the blade heater on the sole-source VPV contract with Hamilton Sundstrand in direct conflict with the Services' goals.

DSCR needs to address why the Services should fund a development program, procure technical data, and develop alternative sources, if it intends to continue procuring items sole-source from Hamilton Sundstrand on its "quasi-PBL" contract.

Benefits of Competition

DSCR is less concerned with cost, procuring items competitively, and developing alternate sources even when substantial savings are available than maintaining its VPV contract. Consequently, in June 2005, DSCR decided to include the blade heater in the noncompetitive VPV contract option that extended support through October 2008 (if both remaining 3-year options are exercised, through October 2014) rather than conducting competition of the requirement between the two approved sources (SMR and Hamilton Sundstrand).

Different Opinions on Competition. The DSCR Value Engineering Office and WRALC, its core customer, questioned the decision to not compete the blade heater between the two approved sources by recognizing the obvious advantage of reducing the unreasonable price.

In February 2005, DSCR Value Engineering questioned the decision not to compete the VPV contract requirement:

> **The Navy flight tested sample blade heaters from SMR, concluding that they were preferable to those of H-S [Hamilton Sundstrand].** Further, SMR has offered to provide blade heaters at prices significantly below those of H-S and to meet or beat the H-S delivery times. **Finally, the attached audit report shows that DSCR did not negotiate fair and reasonable prices with H-S. Based on these facts, it does not appear to me that DSCR can defend its decision to not open up the blade heater business to competition while H-S contract options are available. [emphasis added]**

DSCR's decision also drew criticism from WRALC, its core customer. On June 9, 2005, a WRALC engineer explicitly stated that WRALC was in favor of competing the C-130 blade heater requirement:

> I need your assistance on getting DLA's position on why they are continuing to buy the propeller blade heater (P/N 715841) on the VPV contract with Hamilton Sundstrand. This contract is in process to have an option period exercised. The heater could be bought competitively between Hamilton Sundstrand's vendor (B.F. Goodrich) and SMR Technologies. DSCR has approval authority from both Air Force and Navy ESAs to buy from either source. SMR was told that they would be given the opportunity to bid when the option period was over. I have attached some email giving background information. **Now after the AF and Navy were requested to consider this source, we are told that we need to ask DLA to separate this item for the VPV contract and buy it separately. What is the point of us approving this source if DSCR is not going to give this company consideration to bid. As a side note, there is an IG audit going on with the blade heater for overpricing. It seems competitive bidding would help to reduce this cost for the customer. [emphasis added]**

Subsequent to the award of the competitive contract, WRALC again requested that DSCR research the feasibility of competing the remaining Air Force propeller shop requirements. On September 25, 2006, the Deputy Director, Combat Sustainment Group, WRALC requested:

> **. . . the present acquisition method for the propeller blade heater (NSN 1610-00-914-0224) be reviewed to determine if the part may be acquired more economically through competitive breakout . . .**
>
> Our understanding is that your organization has received a commitment from the Virtual Prime Vendor contractor to lower its price to a more reasonable value. **The addition of a second source has provided the US Government with two actual manufacturers for the blade heater while establishing a stronger vendor base. The only remaining question is whether this requirement should be pulled completely off the Virtual Prime Vendor contract or a predetermined percentage of the total requirement be sustained. [emphasis added]**

On January 26, 2007, the DSCR Director of Aviation Supplier Operations responded to the concerns expressed by WRALC. The Director explained that the current level of support provided under the VPV contract, DSCR's pessimistic view of SMR prices, and the risk of potential Hamilton Sundstrand legal action justify the decision to not compete the full requirement of blade heaters.

> **. . . First and foremost, we wanted to ensure that we continue to provide you, the Maintenance Wing customer, with the enhanced level of support you have come to expect under the VPV contract.** We felt, as you aptly assessed, that if we reduce the number of items under the contract, then we will erode the business case upon which the contract is based . . .
>
> **Second, we considered whether further competition would enhance our position. Based on the prices offered for the world-wide competition, we were pessimistic that the competitor [SMR] would be able to offer a lower price than what Hamilton [Hamilton**

> **Sundstrand] offered on the world-wide contract.** We felt that Hamilton would not likely offer a lower price; instead, a new competition would afford Hamilton an opportunity to raise its price. Further, until a new contract was awarded, we would continue to order the blade heater under the VPV contract at the VPV contract price.
>
> **Finally, we considered whether Hamilton would have legal recourse if we stopped ordering the blade heater or deleted it from the VPV contract. We felt the legal risk was moderate that Hamilton might be successful in pursuing a partial termination or constructive change claim.** If it were successful, its remedy would include the purchase of its blade heater inventory at the VPV contract price.
>
> Considering all these factors, we concluded that the Government's best interest lay in having Hamilton reduce the VPV price to the world-wide price once its existing inventory was exhausted. In order to ensure compliance with this agreement, we will be periodically auditing Hamilton's blade heater inventory. We expect the inventory to be exhausted around the third quarter of fiscal year 2007. **[emphasis added]**

Impact of PBL on Competition. Both the Government Accountability Office (GAO) and DSCR recognize that PBL contracts will negatively impact prices for competitive items.

GAO Report 04-715, "Defense Management: Opportunities to Enhance the Implementation of Performance-Based Logistics," August 16, 2004, found that DoD's proposed policy of pursuing PBL could limit opportunities to take advantage of competition when it is available.

> . . . this proposed policy **[Performance-Based Logistics] could limit opportunities to take advantage of competition when it is available for subsystems or components as well as limit opportunities to gain purchasing power from volume discounts on components** across an entire fleet and avoid the administrative costs charged by a prime integrator. **[emphasis added]**

DSCR's May 2002 business decision paper to support the award of the follow-on VPV contract also concluded that a disadvantage of the contract is that competition may be limited and prices could be negatively impacted.

> To the extent that there are any possible disadvantages, it is that the **competition for a single VPV vendor may be limited. Any limitation on competition could be a negative in the contract pricing. The safeguards against this possibility are to maximize the competitive opportunities**, use historical and other pricing information as a negotiation point to minimize prices, and to structure pricing to reflect logistical support need. **[emphasis added]**

According to the Deputy Director of Aviation Supplier Operations, DSCR issued a competitive solicitation for the follow-on VPV contract. However, Hamilton Sundstrand was the only viable source, since Hamilton Sundstrand was the sole-source provider for over 800 of the approximate 1,100 items on contract.

Blade Heater Competition. Table 3 shows that if DSCR had conducted a competition for the entire blade heater requirement before exercising the October 2005 VPV contract option, cost savings of about $2 million could have been realized (without escalating for inflation). From the annual demand quantity, we removed expected worldwide demand for FYs 2007 and 2008.

Table 3. Potential Cost Avoidance Savings

		VPV Contract Price		Competitive Price		
FY	Annual Qty	Unit	Total	Unit	Total	Savings
2006	3,000	$509.72	$1,529,160	$265.00	$ 795,000	$ 734,160
2007	2,600	509.72	1,325,272	265.00	689,000	636,272
2008	2,600	509.72	1,325,272	265.00	689,000	636,272
Total	**8,200**		**$4,179,704**		**$2,173,000**	**$2,006,704**

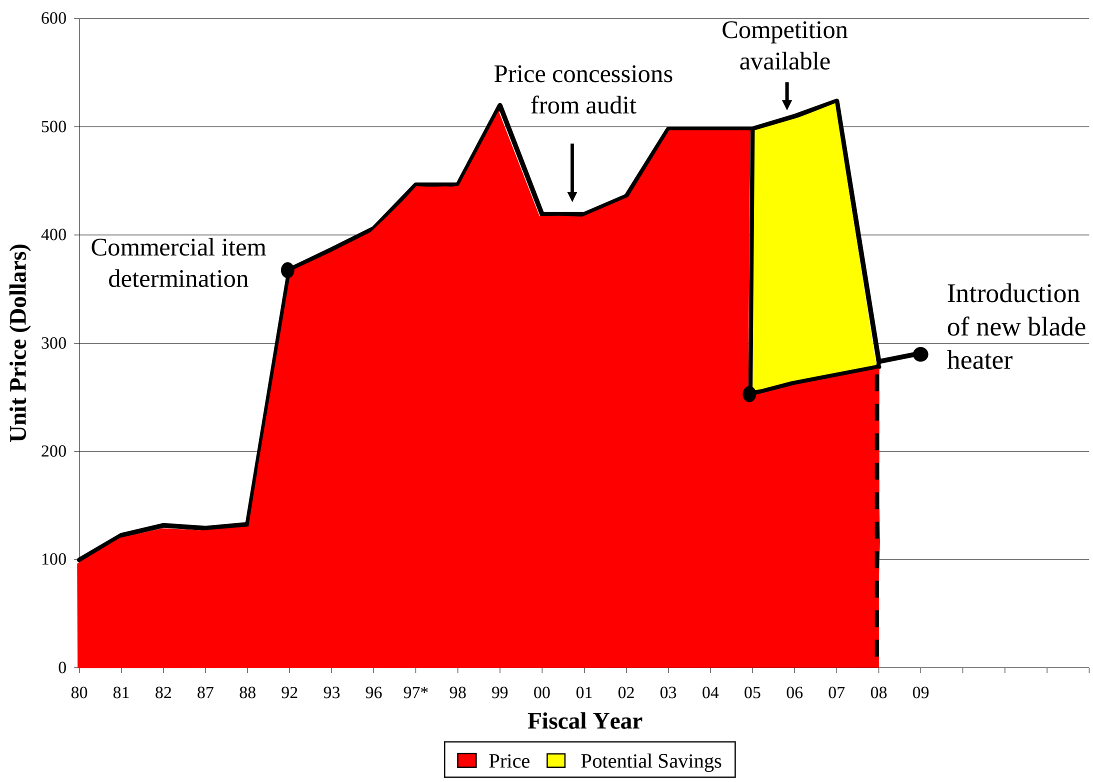
In addition to obtaining cost savings, maintaining dual sources allows DoD to meet requirements when problems arise. As mentioned previously, SMR was able to meet an Air Force emergency requirement and keep the C-130 propeller shop maintenance line operational when the VPV contract was not able to provide the needed parts.

Reasonable Prices. The DoD IG has written several audit reports addressing unreasonable prices and problems obtaining sufficient information to establish price reasonableness from single-source contractors, particularly Hamilton Sundstrand. The audit reports recommended that DoD either obtain cost data or reverse engineer the single-source parts and create competition to achieve lower prices.

DoD IG Report No. D-2000-099, "Procurement of the Propeller Blade Heaters for the C-130 and P-3 Aircraft," March 8, 2000, determined that a cost-based fair and reasonable unit price for the C-130 aircraft propeller blade heater was about $[redacted].

From 1998 through 2005, we calculate that DSCR and ultimately its customers have paid more than $[redacted] in excessive prices and profits to Hamilton Sundstrand on noncompetitive procurements of the C-130 aircraft propeller blade heater.

Figure 2 shows the excessive profit built into the single-source price for the blade heater since 1992 and that competition reduced prices to be in line with the cost-based fair and reasonable unit price when escalated for inflation. The cost-based fair and reasonable price was escalated or de-escalated using the Bureau of Labor Statistics Producer Price Index for Aircraft Engines and Parts except for FY 1980 through FY 1988, which represent the actual prices paid. The figure also shows the potential cost savings that existed but were not achieved because DSCR awarded the blade heater noncompetitively to Hamilton Sundstrand. Further, according to the Propulsion Team Lead for NAVAIR, a new Thermion® blade heater is scheduled for introduction into the fleet in October-November 2008; thus, savings will be minimized for the obsolete blade heater. Although the exact status of this program is in question, we believe there is a strong possibility that a Thermion® blade heater can be available to the fleet in the next 2 years. We will further address the Thermion® blade heater in a subsequent report.



*From March through October incorrectly priced at $218, subsequently re-priced to $446.

Figure 2. Excessive Profit in the Blade Heater Unit Price

After our previous audit report was issued, Hamilton Sundstrand made only small concessions to its excessive price for the blade heater. However, Hamilton Sundstrand was forced to make substantial price concessions in the face of competition from a second source, SMR. This example clearly demonstrates the benefits of competition and value in maintaining dual sources; DSCR should promote competition, not discourage it. The development of competitive sources for the blade heater was solely SMR's doing. Once a competitive source did exist, however, DSCR inappropriately chose to maintain a single-source approach instead of the inherently beneficial approach of dual sources. DSCR actions to continue to rely only on the same single-source contractor who for 15 years charged excessive prices sends the wrong message to commercial contractors and new entrants, and is clearly inappropriate.

Further, DSCR actions are in complete contrast to their comments to our previous audit. The Director, DLA commented then that "DSCR is also working to develop and qualify an alternative manufacturing source for the blade heater. This effort should result in more reasonable pricing for the blade heater in the future."

DSCR needs to compete the C-130 aircraft propeller blade heater requirement currently covered by the VPV contract and take appropriate action to maintain a competitive industrial base.

VPV Pricing Model. The VPV contract also provides a lucrative pricing model for Hamilton Sundstrand. Our previous report identified that, in August 1987, Hamilton Sundstrand and Goodrich negotiated a licensing agreement for the blade heater and other items on the VPV contract. The agreement paid Hamilton Sundstrand a [redacted] percent royalty payment, later reduced to [redacted] percent, for every blade heater that was sold, leased, used, or disposed of by Goodrich, excluding sales made directly to Hamilton Sundstrand. Thus, to facilitate a pyramid of profits/markups under the agreement, it was more beneficial for Hamilton Sundstrand to use its subcontractor, Derco Aerospace, to procure the blade heaters from Goodrich for the VPV contract. In April 2002, Sikorsky Aircraft, part of United Technologies Corporation (UTC), the same parent company as Hamilton Sundstrand, acquired Derco Aerospace.

Figure 3 explains how the licensing agreement works and details a gross profit for UTC of $208 on each blade heater sold.

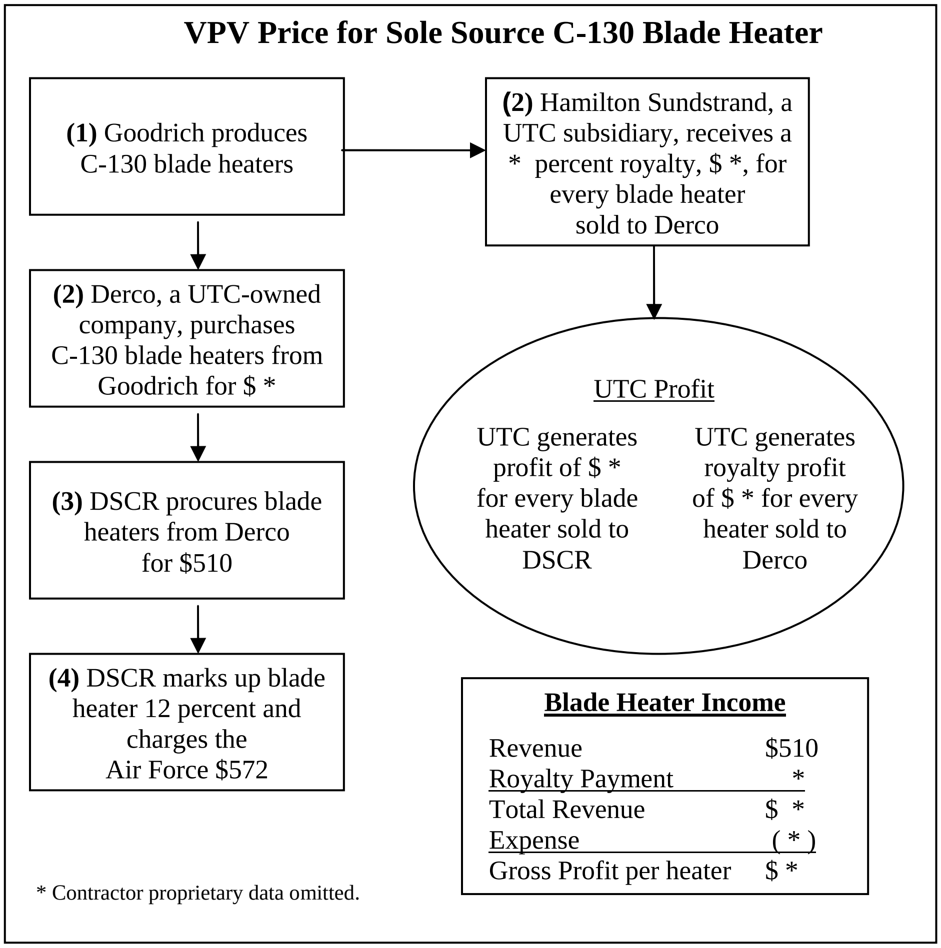


Figure 3. Pyramiding of Profits/Markups under the VPV Program

In contrast, figure 4 shows the competitive pricing model if DSCR were to manage the blade heaters.

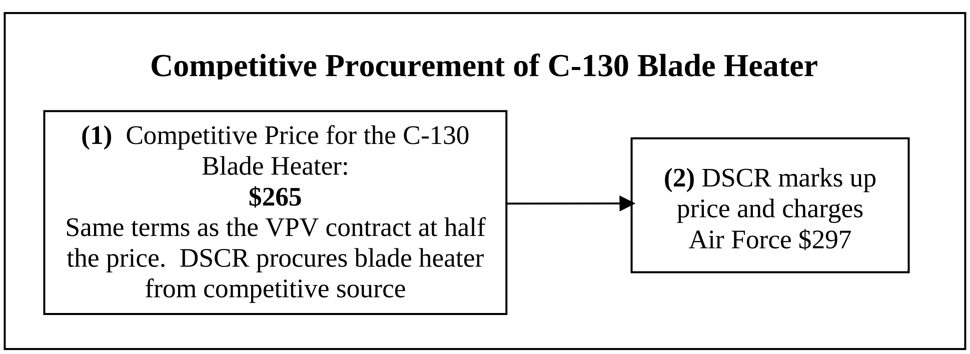


Figure 4. Competitive Blade Heater Pricing Model

DSCR needs to review all Derco-supplied items under the VPV contract to identify any royalties paid to Hamilton Sundstrand and evaluate those royalties to determine the reasonableness of prices.

Premium for VPV Contract Competitive Items. Using the VPV contract to procure and manage items that could be procured competitively by DSCR adds a premium to the customer's price. For example, DSCR had procured a guided drive pin (national stock number 5315-00-807-5999) through the VPV contract at a unit price of $14.75. Since 2002, DLA has competed the item and reduced the unit price 83 percent to $2.38.

We prepared an illustration of the different pricing models that DSCR could use to supply parts. According to the contracting officer, Derco charges a [redacted] percent markup and Hamilton Sundstrand receives a royalty of [redacted] percent for most items covered by the royalty agreement with Goodrich. We compared the cost of VPV support, traditional Government contracting (with and without royalty), and competition. In the example, we assume a manufacturer sells an item for $[redacted] in the sole-source environment and $[redacted] when competition exists. We also apply the appropriate FY 2007 DLA cost recovery rate for direct vendor delivery or stock as well as the Defense Contract Management Agency-approved interim billing rates for Hamilton Sundstrand. Table 4 illustrates the difference in price based on the alternatives available to DLA.

Table 4. Comparison of VPV and Traditional Procurements

	Sole-Source Environment						Competition	
	VPV		Traditional		Traditional with Royalty			
Description	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount
Manufacturer price		[redacted]		[redacted]		[redacted]		[redacted]
Royalty to OEM	[redacted]	[redacted]			[redacted]	[redacted]		
Distributor markup	[redacted]	[redacted]						
OEM material burden			[redacted]	[redacted]				
OEM G&A			[redacted]	[redacted]				
OEM profit			[redacted]	[redacted]				
Total sell price to DLA		$175.00		$140.60		$120.00		
DLA cost recovery rate	12.4	21.70	32.1	45.13	32.1	38.52	32.1	24.08
Customer price		**$196.70**		**$185.73**		**$158.52**		**$99.08**
Potential reduction (percent)				**5.6**		**19.4**		**49.7**

Clearly, DSCR procuring items competitively will result in the lowest price for support. The VPV program and traditional Government contracting are relatively comparable for sole-source items. However, the VPV program fails to procure competitive items at fair and reasonable prices. Based on the large premiums paid for competitive spare parts under the VPV contract, we question whether the premium can be justified. DLA needs to be a world-class manager of parts for the warfighter that has the ability to maintain the current level of support for its customers, while substantially reducing prices by conducting competitions for high-dollar items when the opportunity presents itself. DSCR needs to determine whether competitive items should continue to be procured under the VPV contract when significant savings can be realized through competition.

Hamilton Sundstrand Inventory

The DSCR contracting officer inappropriately agreed to purchase 3,673 blade heaters in the Hamilton Sundstrand inventory at the higher price of $509.72 in order to obtain the lower competitive price for future VPV requirements and because the VPV contract clause to delete items required a bilateral modification[2] to remove the item.

Inventory Agreement. A Memorandum for Record signed by the DSCR contracting officer and a Hamilton Sundstrand representative detailed the agreement.

> After the award of the VPV contract, this item was determined competitive and a solicitation, SP040506R0522, was issued for a LTC [Long Term Contract] to support the worldwide demand only which equated to approximately 20% of the total demand. As a result of the solicitation an award was issued to Hamilton Sundstrand at a unit price of $265.00. Due to the difference in unit price, negotiations were opened to reduce the unit price on the VPV contract to the $265.00. . . . Hamilton Sundstrand, countered with the following proposal: purchase the current inventory of 3,673 (2973 in stock and 700 on order) at the $509.72 price ($1,872, 201.00) and modify the contract to reflect the $265.00 unit price for future buys. The current inventory equates to approximately 1 year of demands. **Agreement was reached that the current inventory, 3673, would be purchased, based on demands, through the VPV contract at the current contract price. Once the current inventory is depleted, a bi-lateral modification will be issued to reduce the contract price to $265.00. [emphasis added]**

[2] A "bilateral modification" (supplemental agreement) is a contract modification that is signed by both the contractor and contracting officer.

Because of the inventory agreement, DSCR and the Air Force will pay respectively about $900,000 and $1 million more than necessary for blade heaters procured at the noncompetitive price (Table 5).

Table 5. Overpayment for Blade Heater Inventory

		VPV Price		Competitive Price		
	Quantity	Unit	Total	Unit	Total	Overpayment
DSCR	**3,673**	**$509.72**	**$1,872,202**	**$265.00**	**$ 973,345**	**$ 898,857**
Customer	**3,673**	**571.83***	**2,100,331**	**297.29***	**1,091,946**	**1,008,385**

*The customer price includes the acquisition price multiplied by the DLA cost recovery rate. The DLA cost recovery rate recoups supply center operations costs, depot costs, corporate, and other miscellaneous costs.

Excessive Blade Heater Inventory. Because of its royalty agreement with Goodrich, UTC clearly has incentive to hold substantially more inventory of the blade heater than the normal industry practice because it directly equates to more profit. Also DSCR appears to be willing to procure any excessive inventory level maintained by the VPV contractor.

The days sales of inventory calculation demonstrates the efficiency of the supply chain by specifically measuring the number of days necessary to exhaust inventory. The days sales of inventory is calculated by taking the number of days in a year (365) and dividing by the inventory turnover ratio, which is a measure of the number of times that inventory is turned over each year. The inventory turnover ratio is calculated by dividing cost of goods sold in a given year by the average inventory that is held during the year. Using financial data from 2006 annual reports, we compared four firms in the aerospace industry that have comparable products. The firms compared were Honeywell (comparable product lines to Hamilton Sundstrand), United Technologies (parent company of Hamilton Sundstrand and Derco Aerospace), Goodrich Aerospace (current blade heater manufacturer), and BE Aerospace (parent company of SMR Technologies). The days sales of inventory calculation ranged from 65 to 163 days for the four Aerospace firms. UTC days sales of inventory was 86.

We calculated the days sales of inventory for the blade heater by dividing the on-hand inventory by the annual demand; the result of that calculation was multiplied by 365 days. On July 18, 2006, we counted that 3,133 blade heaters were stocked on-hand at Derco Aerospace. Again, the annual demand for the blade heater is about 3,000 pieces; therefore, we calculate that the Hamilton Sundstrand/Derco days sales of inventory is 382 days or slightly more than a year's expected usage. The production lead time for the blade heater indicates that 112 days of inventory is reasonable.

Figure 5 shows the inventory maintained for the blade heater is significantly higher than average days of inventory for multiple aerospace contractors.

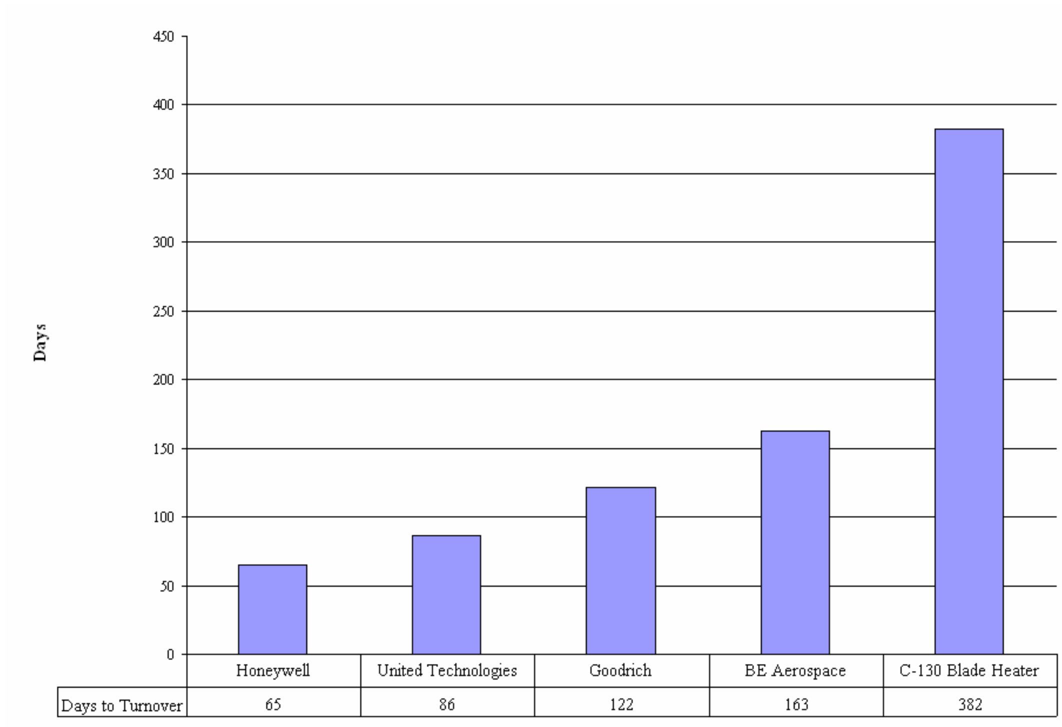


Figure 5. Comparison of the Blade Heater Inventory to Aerospace Industry

DSCR needs to assure it is not obligated to procure inventory under the VPV contract in excess of industry standards.

Contract Provision. The VPV contract "add/delete" provision inappropriately requires both the consent of Hamilton Sundstrand and DoD in order to add or delete items to the contract, including when adequate competition is available. Specifically, the provision states:

> 1.2.2 <u>Deletion of Item.</u>
>
> 1.2.2.1 The following classes of items may be deleted from the contract:
>
> a) Obsolete items may be deleted from the contract by bilateral modification. The Contractor will identify replacement items, which may be added to the contract under paragraph 1.2.1.1 (c). The government will not purchase or draw down contractor assets for obsolete items.
>
> b) The Government by unilateral modification may delete items, which can be obtained only from a single source, even though alternate sources may have existed at the time of award. This provision may only be used to delete items that Hamilton Sundstrand can no longer support

under the contract. Due to the nature of these items, contractor assets will not be available to purchase or draw down.

c) The Government may delete items from the contract for other reasons by bilateral modification. Draw down of contractor inventory for these items will be negotiated on a case-by-case basis and draw down agreements will be included in the modification deleting the items. [emphasis added]

We compared the VPV contract provision to the DLA-Honeywell strategic supplier contracts SP0740-01-D-9711 (build-to-order) and SP0410-00-D-0007 (catalog). The DLA-Honeywell contracts only procure sole-source items; however, the "add/delete" provisions ensure DoD by unilateral modification[3] can delete items if another acceptable source becomes available. Specifically, the provision for contract SP0740-01-D-9711 states:

7. Add and Delete –

Deleting Items

The Government retains the right to unilaterally delete from the contract, any items which were awarded on a sole source basis, in the event an alternate product is available from another acceptable source of supply. The Government will provide a 60-day advance notice to the Contractor prior to deleting any NSN from the contract. [emphasis added]

The provision for the catalog contract SP0410-00-D-0007 states:

(c) The contractor agrees to the deletion from the contract items which are identified by the Government as having another acceptable source of supply. Deletions will provide for a mutually agreed upon inventory ramp-down period, prior to the item being removed from the contract via modification. **[emphasis added]**

DSCR needs to modify the "add/delete" provision for the VPV contract to ensure that DoD has the unilateral right to remove items from the contract when competition is available. DSCR should not exercise any future options for the VPV contract until this provision is modified.

DSCR Legal Opinion. The DSCR Associate Counsel for Contracts and contracting officer believe that DSCR's best course of action is to purchase C-130 blade heaters through the VPV contract because competitively procuring these requirements through another contract would potentially create a constructive termination for convenience that could result in DLA paying termination costs.

On September 22, 2006, the DSCR Associate Counsel for Contracts and contracting officer stated to the DoD IG:

Once the world-wide contract was awarded, DSCR approached Hamilton Sundstrand Corp (HSC) about reducing the unit price of the

[3] A "unilateral modification" is a contract modification that is signed only by the contracting officer.

blade heater under the VPV contract. The VPV contract is fixed price with an economic price adjustment. Under the VPV contract, HSC is not obligated to entertain or agree to any price reduction (outside those that may be effectuated by operation of the EPA Clause). Thus, in order to obtain the price reduction, one of the following actions would have to take place:

- HSC would have to reduce the price voluntarily;
- the Government would have to negotiate a quid pro quo to obtain the price reduction; or
- the Government would have to obtain the blade heaters under another contract, and, with or without notifying HSC, cease ordering the blade heater under the VPV contract.

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Impact on Contract Minimum. The VPV contract is an indefinite-delivery, indefinite-quantity contract that only requires that the contract minimum of approximately $15.8 million be purchased during the 3-year option period or about $5.3 million each year. There are currently over 1,100 items on contract and there were purchases of almost $19 million (3-year demand about $57 million) during 2006. The blade heater annual demand is approximately 3,000 pieces (2,600 C-130 propeller shop and 400 worldwide demand). The C-130 propeller shop annual purchases, currently covered under the VPV contract, account for only $689,000 at the reduced competitive price. Clearly, purchasing this item on another contract will not prevent DLA from purchasing the contract minimum. Further, considering that there is no legal obligation to buy the blade heater under the VPV contract and that the blade heater is only 3 to 4 percent of the annual purchases, the DSCR agreement to purchase inventory at noncompetitive prices is clearly inappropriate.

Contract Prices for Worldwide Demand

Since March 2006, DSCR continued to satisfy worldwide demand orders on the VPV contract at a unit price of $509.72, instead of the appropriate contract price of $265.00 each, resulting in overcharges of $41,602. Through April 18, 2007, DSCR processed 57 worldwide demand orders for 170 blade heaters. Table 6 shows the overcharges DSCR paid for C-130 blade heaters to fill worldwide demand orders.

Table 6. Worldwide C-130 Blade Heater Orders Overcharges

		VPV Contract Price		Competitive Contract Price		
Orders	Quantity	Unit	Total	Unit	Total	Overcharge
57	170	$509.72	$86,652	$265.00	$45,050	$41,602

DSCR needs to procure blade heaters for worldwide demand at the lower competitive price and obtain a refund from Hamilton Sundstrand for the amount overcharged.

Conclusion

DSCR's single-source "quasi-PBL" philosophy for the VPV program has stifled competition, precluding SMR from receiving a fair opportunity to compete for blade heater requirements even though its entry into the market has ultimately reduced blade heater contract prices by about 48 percent. Given the wishes of its core customer to achieve the best possible price for the blade heater, we question the decisions and actions of DSCR. It appears that DSCR is more concerned about its relationship with Hamilton Sundstrand and safeguarding its single-source VPV contract rather than brokering the best deal for its customers and the taxpayers. The taxpayers have benefited from SMR's entry into the market but DSCR failed to give SMR a fair opportunity to compete for the entire blade heater requirement. DSCR actions also do not have the inherent appeal of "fair play" and ignore the benefits of maintaining dual sources.

Recommendations, Management Comments, and Audit Response

We recommend that the Commander, Defense Supply Center, Richmond, Virginia:

1. Determine whether the supply system is capable of effectively supporting items for the C-130 propeller shop when substantial savings are available from competition.

Management Comments. The Commander, DSCR concurred with the recommendation. The Commander commented that DSCR will conduct an analysis to determine what savings and benefits can be attributable to the VPV contract and whether those savings will be maintained effectively by continuing the VPV contract or by altering the support strategy. The Commander commented that the analysis will consider whether the VPV contract should remain the single acquisition package for the hub and blade system or whether individual items, such as the blade heater, should be managed separately or in smaller combinations. The Commander commented that the analysis will also attempt to address whether the VPV contract has affected the industrial base for the competitive items included on the contract. Finally, the Commander commented that the analysis will also consider whether royalties paid to Hamilton Sundstrand have affected the reasonableness of prices paid. All actions will be completed by December 1, 2007.

Audit Response. We consider the DSCR comments responsive.

2. Address why the Services should fund a development program, procure technical data, and develop alternative sources if DSCR intends to continue procuring items sole-source from Hamilton Sundstrand on its virtual prime vendor contract.

Management Comments. The Commander, DSCR concurred with the recommendation. The Commander commented that, after completing the analysis discussed in Recommendation 1., DSCR will consider whether to continue with the VPV contract or pursue alternative support strategies.

Audit Response. We consider the DSCR comments responsive.

3. Compete the C-130 aircraft propeller blade heater requirement currently covered by the virtual prime vendor contract and take appropriate action to maintain a competitive industrial base.

Management Comments. The Commander, DSCR concurred with the recommendation. The Commander commented that, after completing the analysis discussed in Recommendation 1., DSCR will consider whether to continue with the VPV contract or pursue alternative support strategies.

Audit Response. We consider the DSCR comments responsive.

4. Review all Derco-supplied items under the virtual prime vendor contract to identify any royalties paid to Hamilton Sundstrand and evaluate these royalties to determine reasonableness of prices.

Management Comments. The Commander, DSCR concurred with the recommendation. The Commander commented that, after completing the analysis discussed in Recommendation 1., DSCR will consider whether royalties paid to Hamilton Sundstrand have affected the reasonableness of prices paid.

Audit Response. We consider the DSCR comments responsive.

5. Determine whether competitive items should continue to be procured under the virtual prime vendor contract at significantly higher prices.

Management Comments. The Commander, DSCR concurred with the recommendation. The Commander commented that, after completing the analysis discussed in Recommendation 1., DSCR will consider whether to continue purchasing both competitive and sole-source items under the VPV contract or pursue alternative support strategies.

Audit Response. We consider the DSCR comments responsive.

6. Modify the "add/delete" provision for the virtual prime vendor contract to ensure that DoD has the unilateral right to remove items from the contract when multiple sources are available before exercising any future contract options.

Management Comments. The Commander, DSCR non-concurred with the recommendation. The Commander commented that the bilateral add/delete provision is appropriate for the VPV contract, which included both competitive and sole-source items and requires the contractor to invest in inventory to meet stringent delivery requirements. The Commander also commented that the report comparisons of add/delete provisions from the VPV contract to the DLA-Honeywell contracts are misplaced. Specifically, the Commander commented that the DLA-Honeywell contracts include only sole-source items, while the VPV contract always included both competitive and sole-source items and permits DSCR the authority to keep the item on contract if a sole-source item later becomes competitive. The Commander also commented that the DLA-Honeywell Build-to-Order contract does not require the contractor to invest in inventory, while the VPV contract requires Hamilton Sundstrand to forecast, purchase, and store items to meet delivery requirements. Thus, if the Government unilaterally deleted any competitive items from the contract, Hamilton Sundstrand would face increased cost risk. Finally, the Commander commented that, like the DLA-

Honeywell Catalog contract, the VPV contract add/delete and reverse attrition provisions appropriately allocate risk by requiring bilateral agreement and inventory drawdown.

Audit Response. We agree that DLA has an obligation to support an inventory drawdown when contractor inventory was purchased to support DLA contract requirements. Given this understanding and irrespective of whether items are competitive or sole-source, we do not see how the contractor faces an increased "cost" risk with a unilateral add/delete provision that addresses contractor inventory drawdown. Clearly, giving away DoD rights to delete items is not a best business practice and, as shown by this report, has restricted competition and associated savings for the blade heater. In addition, our comparison to the DLA-Honeywell Strategic Supplier contracts add/delete provisions are not "misplaced;" the comparison provisions provide good examples of how to write contract terms that provide DoD the flexibility to take advantage of opportunities when they arise. For example, the DLA-Honeywell Catalog contract allows DLA to unilaterally remove parts but also addresses DLA responsibility for contractor inventory drawdown. We request that the Commander, DSCR provide additional comments to the final report to explain how the bilateral add/delete provision of the VPV contract does not impact DSCR's ability to conduct competitions when substantial savings are available. If the provision impacts its ability to conduct competitions, the Commander needs to modify the provision before exercising any future contract options.

7. Assure it is not obligated to procure inventory under the virtual prime vendor contract in excess of industry standards.

Management Comments. The Commander, DSCR concurred with the recommendation. The Commander commented that DSCR will relate to Hamilton Sundstrand that DSCR is not obligated to purchase inventory balances that exceed reasonable, industry-based standards. All actions will be completed by October 1, 2007.

Audit Response. We consider the DSCR comments responsive.

8. Procure blade heaters for worldwide demand at the lower competitive price and obtain a refund from Hamilton Sundstrand for the amount overcharged.

Management Comments. The Commander, DSCR concurred with the recommendation. The Commander commented that DSCR will seek a refund for the misdirected orders. All actions will be completed by October 1, 2007.

Audit Response. We consider the DSCR comments responsive.

Appendix A. Scope and Methodology

We conducted this performance audit from January 2006 through May 2007 in accordance with generally accepted Government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

We interviewed or visited individuals within the DSCR; NAVAIR; WRALC; Naval Aviation Depot, Cherry Point, North Carolina; Defense Contract Management Agency, Windsor Locks, Connecticut; NAVICP; Thermion Systems International; SMR Technologies, Inc.; Hamilton Sundstrand Corporation; and Derco Aerospace. We reviewed the VPV contract documentation to include prices, statements of work, and contract clauses. We reviewed the contract documentation for the competitive worldwide contract. We reviewed current delivery orders of the VPV contract to determine whether worldwide demands were being filled by the competitive contract. We reviewed documentation from ESAs involved in source approval process. We reviewed costs incurred to reverse engineer the C-130 blade heater by SMR. We reviewed information contained in a Freedom of Information Act request related to this audit. We used the Bureau of Labor Statistics Producer Price Index for Aircraft Engines and Parts to escalate or deescalate the blade heater cost-based price. We reviewed the Component Improvement Program contract documentation to include delivery orders, Government funding, statements of work, and deliverables for the new blade heater. We reviewed the progress and costs associated with the development of the new blade heater.

Reliability of Computer-Processed Data. We relied on computer-processed data from DLA's Standard Automated Material Management System and the Haystacks Gold Software for procurement history data to include prices and quantities purchased. To verify the accuracy of the information, we compared the two sets of data to each other and to actual source documents. We discovered minor omissions of data in the Haystacks procurement data; however, the errors were not material and we were able to mitigate the impact of these errors by obtaining information from the DLA system. We did not find material errors that would preclude the use of the computer-processed data to meet audit objectives or that would change the conclusions reached in the report.

Government Accountability Office High-Risk Area. GAO has identified several high-risk areas in DoD. This report provides coverage of the DoD Supply Chain Management and Contract Management high-risk areas.

Appendix B. Prior Coverage

During the last 9 years, GAO and DoD IG have issued 30 reports discussing technical data rights and commercial and noncommercial prices of weapon systems and spare parts. Unrestricted GAO reports can be accessed over the Internet at http://www.gao.gov. Unrestricted DoD IG reports can be accessed at http://www.dodig.mil/audit/reports. Dates in parentheses indicate redacted versions.

GAO

GAO Report No. GAO-06-839, "Weapons Acquisition: DOD Should Strengthen Policies for Assessing Technical Data Needs to Support Weapon Systems," July 14, 2006

GAO Report No. GAO-05-169, "Contract Management: The Air Force Should Improve How It Purchases AWACS Spare Parts," February 15, 2005

GAO Report No. GAO-04-715, "Defense Management: Opportunities to Enhance the Implementation of Performance-Based Logistics," August 16, 2004

GAO Report No. GAO-02-565, "Defense Acquisitions: Navy Needs Plan to Address Rising Prices in Aviation Parts," May 31, 2002

GAO Report No. GAO-02-452, "Defense Inventory: Trends in Services' Spare Parts Purchased from the Defense Logistics Agency," April 30, 2002

GAO Report No. GAO-02-505, "Defense Acquisitions: Status of Defense Logistics Agency's Efforts to Address Spare Part Price Increases," April 8, 2002

GAO Report No. GAO-01-244, "Performance and Accountability Series: Major Management Challenges and Program Risks, Department of Defense," January 2001

GAO Report No. GAO-01-23, "Defense Acquisitions: Prices of Navy Aviation Spare Parts Have Increased," November 6, 2000

GAO Report No. GAO-01-22 (OSD Case No. 2080), "Defense Acquisitions: Price Trends for Defense Logistics Agency's Weapon Systems Parts," November 3, 2000

GAO Report No. NSIAD-00-123, "Defense Acquisitions: Prices of Marine Corps Spare Parts Have Increased," July 31, 2000

GAO Report No. NSIAD-00-30 (OSD Case No. 1920), "Defense Inventory: Opportunities Exist to Expand the Use of Defense Logistics Agency Best Practices," January 26, 2000

GAO Report No. NSIAD-00-22 (OSD Case No. 1903), "Contract Management: A Comparison of DoD and Commercial Airline Purchasing Practices," November 29, 1999

GAO Report No. NSIAD-99-90 (OSD Case No. 1808), "Contract Management: DoD Pricing of Commercial Items Needs Continued Emphasis," June 24, 1999

DoD IG

DoD IG Report No. D-2006-122, "Commercial Contract for Noncompetitive Spare Parts With Hamilton Sundstrand Corporation," September 29, 2006

DoD IG Report No. D-2006-055, "Spare Parts Procurements From TransDigm, Inc.," February 23, 2006

DoD IG Report No. D-2004-064, "Acquisition of the Boeing KC-767A Tanker Aircraft," March 29, 2004

DoD IG Report No. D-2004-012, "Sole-Source Spare Parts Procured From an Exclusive Distributor," October 16, 2003

DoD IG Report No. D-2002-112, "Industrial Prime Vendor Program at the Air Force Air Logistics Centers," June 20, 2002

DoD IG Report No. D-2002-059, "Results of the Defense Logistics Agency Strategic Supplier Alliance with Honeywell International, Incorporated," March 13, 2002

DoD IG Report No. D-2001-171, "Industrial Prime Vendor Program at the Naval Aviation Depot – Cherry Point," August 6, 2001

DoD IG Report No. D-2001-072, "Industrial Prime Vendor Program at the Naval Aviation Depot – North Island," March 5, 2001

DoD IG Report No. D-2001-001, "Contract Award for the Fluid Flow Restrictor Spare Part," October 3, 2000

DoD IG Report No. D-2000-192, "Results of the Defense Logistics Agency Strategic Supplier Alliance for Catalog Items," September 26, 2000

DoD IG Report No. D-2000-099, "Procurement of the Propeller Blade Heaters for the C-130 and P-3 Aircraft," March 8, 2000 (June 12, 2000)

DoD IG Report No. D-2000-098, "Spare Parts and Logistics Support Procured on a Virtual Prime Vendor Contract" March 8, 2000 (June 14, 2000)

DoD IG Report No. 99-218, "Sole-Source Noncommercial Spare Parts Orders on a Basic Ordering Agreement," July 27, 1999 (October 12, 1999)

DoD IG Report No. 99-217, “Sole-Source Commercial Spare Parts Procured on a Requirements Type Contract,” July 21, 1999 (August 16, 1999)

DoD IG Report No. 99-026, “Commercial Spare Parts Purchased on a Corporate Contract,” October 30, 1998 (January 13, 1999)

DoD IG Report No. 98-088, “Sole-Source Prices for Commercial Catalog and Noncommercial Spare Parts,” March 11, 1998 (October 13, 1998)

DoD IG Report No. 98-064, “Commercial and Noncommercial Sole-Source Items Procured on Contract N000383-93-G-M111,” February 6, 1998 (June 24, 1998)

Appendix C. Prior Hamilton Sundstrand Audits

Several DoD IG audits have shown that Hamilton Sundstrand has charged DoD excessive prices for single-source spare parts and repeatedly refused to provide cost information necessary to determine fair and reasonable prices to DoD contracting officials when requested. In June 1999, United Technologies Corporation acquired Sundstrand and merged it with its Hamilton Standard division forming Hamilton Sundstrand Corporation.

DoD IG Report No. 98-064, "Commercial and Noncommercial Sole-Source Items Procured on Contract N000383-93-G-M111," February 6, 1998, showed that DLA paid about $[redacted] ([redacted] percent) more than fair and reasonable prices for $6.1 million of "commercial items" purchased from Sundstrand during calendar years 1994 through 1996. The audit showed that higher prices were paid for commercial items because:

- as a sole-source supplier with technical data rights, Sundstrand set "market-based" catalog prices for commercial items at "what the market would bear," and there was no competitive commercial market to ensure the reasonableness of prices;

- Sundstrand refused to negotiate catalog prices for commercial items based on price analysis of previous cost-based prices, refused to provide DLA contracting officers with "uncertified" cost or pricing data for commercial catalog items, and terminated Government access to the Sundstrand cost history system; and

- guidance on commercial items qualified any item "offered for sale, lease, or license to the general public" as a commercial item without clearly addressing commercial pricing concerns, particularly when DoD was the primary customer procuring significantly larger quantities than other commercial customers.

DoD IG Report No. D-2000-098, "Spare Parts and Logistics Support Procured on a Virtual Prime Vendor Contract," March 8, 2000, showed that the DLA VPV contract was not the most economical and effective purchasing strategy to obtain spare parts and logistics support because:

- Hamilton Standard's dealer did not always obtain the best available prices or procure economic order quantities;

- the parts procured were primarily military specific, so there was no virtual inventory of commercial assets and depot stock to either satisfy DLA logistics response time goals or effectively reduce Government inventory, or improve National Defense readiness; and

- Warner Robins used the VPV contract to buy Air Force-managed reparable parts for wholesale inventory and continued to charge redundant management fees for logistics support.

As a result, DLA did not achieve the desired goals and benefits of improving logistics response times, reducing DoD inventory, improving Defense readiness, and reducing overall costs. We calculate that DLA and Warner Robins can jointly reduce user costs by at least $29.4 million and lower logistics support costs from 52.9 percent to 14.9 percent for FYs 2001 through 2006 using a tailored purchasing strategy.

DoD IG Report No. D-2000-099, "Procurement of the Propeller Blade Heaters for the C-130 and P-3 Aircraft," March 8, 2000, showed that DLA paid between $[redacted] and $[redacted] or from [redacted] and [redacted] percent more than fair and reasonable prices for blade heaters procured from Hamilton Sundstrand and Goodrich. The audit showed that higher prices were paid for commercial items because DLA contracting officers:

- failed to conduct negotiations for blade heaters after the commercial item determination was made and accepted significantly higher commercial prices without obtaining some assurance that prices were reasonable (for example, requesting cost data);

- failed to challenge the contractor on the rights to the technical data for the blade heaters and excluded solicitation provisions for royalty information, and thus were unaware of the excessive licensing fees for royalty payments that Goodrich paid Hamilton Sundstrand; and

- used unnecessary third party or DLA logistic support rather than using the actual manufacturer.

The report calculated that the DLA supply centers could have reduced total ownership costs for their customers from between $[redacted] to $[redacted] during FYs 2001 through 2006 by using a combination of both cost- and price-based acquisition tools and negotiating long-term contracts with Goodrich, the blade heater manufacturer.

DoD IG Report No. D-2004-012, "Sole-Source Spare Parts Procured From an Exclusive Distributor," October 16, 2003, showed that DLA paid prices that were $[redacted] ([redacted] percent) higher than fair and reasonable prices on 35 orders (29 contracts) for 11 sole-source Hamilton Sundstrand spare parts procured from AAR Defense Systems from March 1999 through August 2002. The prices paid to AAR Defense Systems, an exclusive distributor for Hamilton Sundstrand, were too high because contracting officers:

- were directed by the original equipment manufacturer, Hamilton Sundstrand, to procure spare parts through its exclusive distributor even though the distributor provided limited value to DoD;

- relied on inaccurate and misleading information other than cost or pricing data originating from Hamilton Sundstrand and failed to perform cost analysis of original equipment manufacturer prices to determine price reasonableness; and

- failed to sufficiently document and escalate negotiations in cases where the behavior of the original equipment manufacturer was either unreasonable or uncooperative.

DoD IG Report No. D-2006-122, "Commercial Contract for Noncompetitive Spare Parts With Hamilton Sundstrand Corporation," September 29, 2006, found that the Air Force negotiating team used questionable commercial item determinations for noncompetitive spare parts used on Defense weapon systems and a high-risk "commercial" pricing strategy that failed to effectively use either marketplace pricing or cost analysis for noncompetitive spare parts placed on the strategic sourcing contract with Hamilton Sundstrand. The Air Force did attempt to obtain cost information to support price reasonableness after the DoD Office of Inspector General notified the Air Force of overpricing concerns based on two previous audits where contracting officers were not using either marketplace pricing or cost analysis to determine fair and reasonable prices for noncompetitive items. However, Hamilton Sundstrand denied the request and has repeatedly refused attempts by DoD contracting officials to obtain the information necessary to determine price reasonableness for noncompetitive spare parts. The Air Force pricing strategy was ineffective because:

- "catalog" (marketplace) pricing was not used to support price reasonableness for any of the 1,011 "commercial" items placed on contract;

- cost data was obtained for only 34.4 percent of the annual dollar value for items with historical demand and a significant number of items had not been procured for extended periods or were manufactured at locations with newly established manufacturing standards that had not been audited, making any cost analysis less effective; and

- price analysis of questionable previous Government prices was used to support prices for 65.6 percent of the annual dollar value for items with historical demand, and prices for a significant number of the items had previously been determined not to be fair and reasonable.

As a result, we calculated that the contract prices for 93 items where price analysis was used, totaling more than $7.5 million annually, were $1.7 million or 28.4 percent higher than could be explained by inflating pre-Federal Acquisition Streamlining Act contract prices. We also calculated that price-based contract prices for two items with an annual value of $1.4 million were $[redacted] or [redacted] percent higher than cost-based prices.

Appendix D. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition, Technology, and Logistics
  Director, Acquisition Resources and Analysis
  Director, Defense Procurement and Acquisition Policy
Under Secretary of Defense (Comptroller)/Chief Financial Officer
  Deputy Chief Financial Officer
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  Commander, Defense Supply Center, Richmond, Virginia

Non-Defense Federal Organization

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House Subcommittee on Government Management, Organization, and Procurement, Committee on Oversight and Government Reform
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Defense Supply Center, Richmond, Virginia Comments

DEFENSE LOGISTICS AGENCY
DEFENSE SUPPLY CENTER RICHMOND
8000 JEFFERSON DAVIS HIGHWAY
RICHMOND, VIRGINIA 23297-5100

IN REPLY REFER TO DSCR-DI

JUL 30 2007

MEMORANDUM FOR DIRECTOR, DEFENSE LOGISTICS AGENCY, ATTN: OIIA (MR. MELVIN NICHOLSON)

SUBJECT: DoDIG Draft of a Proposed Report, Procurement of Propeller Blade Heaters for the C-130 Aircraft, (Project No. D2006-D000CH-0097.000)

As requested, subject report has been reviewed. Management comments/ recommendations and/or concurrence/nonconcurrence are provided at Attachment 1.

Should you have any questions, my point of contact for this action is Ms. Reneé P. Gilman, DSCR-DI, (804)-279-2996, DSN 695-2996, Renee.Gilman@dla.mil.

Andrew E Busch

ANDREW E. BUSCH
Brigadier General, USAF
Commander

Attachment

Federal Recycling Program Printed on Recycled Paper

Recommendation 1: Determine whether the supply system is capable of effectively supporting items for the C-130 propeller shop when substantial savings are available from competition.

Response: Concur. DSCR will conduct an analysis to determine what savings and benefits can be attributable to the VPV Contract and whether it is realistic to assume those savings will be maintained effectively by continuing with the VPV contract at option exercise or by altering the support strategy. With respect to support for the blade heater, support for the other competitive items included in the VPV contract, and support for sole source items included in the contract that are being considered for competitive breakout, the analysis will consider whether the contract should remain a single acquisition package for the hub and blade system or whether the individual items should be managed separately or in smaller combinations. The analysis will also attempt to address whether this support package has affected the industrial base for the competitive items included on the contract and whether the prices for those items have been artificially inflated because of the contract. The analysis will also consider whether royalties paid to Hamilton Sundstrand have affected the reasonableness of the prices paid for those items. DSCR will complete by 1 December 2007.

Recommendation 2: Address why the Services should fund a development program, procure technical data, and develop alternative sources, if it intends to continue procuring items sole-source from Hamilton Sundstrand on its quasi-performance-based logistics contract.

Response: Concur. After completing the analysis referred to in Response to Recommendation 1, DSCR will consider whether to continue with the VPV contract or pursue alternative support strategies for supporting break-out items.

Recommendation 3: Compete the C-130 aircraft propeller blade heater requirement currently covered by the virtual prime vendor contract and take appropriate action to maintain a competitive industrial base.

Response: Concur. After completing the analysis referred to in Response to Recommendation 1, DSCR will consider whether to continue supporting blade heater requirements with the VPV contract or pursue alternative support strategies.

Recommendation 4: Review all Derco-supplied items under the virtual prime vendor contract to identify any royalties paid to Hamilton Sundstrand and evaluate these royalties to determine reasonableness of prices.

Response: Concur. The analysis referred to in Response to Recommendation 1 will consider whether royalties paid to Hamilton Sundstrand under the VPV contract have affected the reasonableness of the prices paid for those items.

Recommendation 5: Determine whether competitive items should continue to be procured under the virtual prime vendor contract at significantly higher prices.

Response: Concur. After completing the analysis referred to in Response to Recommendation 1, DSCR will consider whether to continue purchasing both competitive and sole source items under the VPV contract or pursue alternative support strategies.

Recommendation 6: Modify the "add/delete" clause for the virtual prime vendor contract to ensure that DoD has the unilateral right to remove items from the contract when multiple sources are available before exercising future contract options.

Response: Non-concur. The Add/Delete provision included in the VPV contract is appropriate for acquisitions that, from their inception, (a) include both competitive and sole source items and (b) require the contractor to invest in inventory in order to meet stringent delivery requirements.

The Report compares the deletion of items provision of the VPV contract to similar provisions in DLA-Honeywell "Build-to-Order" and "Catalog" contracts. The comparison is misplaced because those contracts are distinguishable from the VPV contract, as follows:

1. Both the Build-to-Order and Catalog contracts are contracts for sole source items. They are supported by J&As and were awarded using other than full and open competition procedures under 10 U.S.C. § 2304(c)(2). The J&As limited the contract items to those that are available solely from Honeywell, and require deletion of any item that becomes competitively available.

In contrast, the VPV contract was awarded using full and open competition procedures. From its inception, it included items that are sole source to Hamilton, items that are sole source to other OEMs, and competitive items. No J&A exists limiting the VPV contract to sole source items. Unlike the sole source contracts, when a sole source item included on the VPV contract later becomes competitive, DSCR retains the authority to keep the item on the contract, because the contract's scope always included competitive items.

2. The Build-to-Order contract requires Honeywell to deliver each item within one production lead time for that item. Honeywell need not invest in an item until DLA places an order. The unilateral deletion provision is appropriate under this contract since there is no cost risk to Honeywell if an item is deleted.

In contrast, under the VPV contract, Hamilton Sundstrand must forecast, purchase and store items so that, when DLA orders the items, Hamilton can deliver them within 2 and 8 days. If DLA deletes an item unilaterally, Hamilton could be faced with the prospect of having lost its inventory investment the moment the item is deleted. Hamilton's cost risk would increase, perhaps significantly, if the Government unilaterally deleted any competitive items from the VPV contract.

3. Under the "Catalog" contract, Honeywell is also required to forecast, purchase, and maintain inventory sufficient to meet delivery requirements similar to those under the VPV Contract. The add/delete provision in that contract does not grant the Government a unilateral right to delete items that become competitively available. Instead, it contemplates a bilateral agreement under which DLA will purchase Honeywell inventory: "*Deletions will provide for a mutually agreed* upon inventory ramp-down period, prior to the item being removed from the contract via modification." Thus, prior to removing newly competitive items, DLA and Honeywell must agree to a ramp-down of Honeywell inventory.

Like the Honeywell Catalog contract, the VPV contract's add/delete and Reverse Attrition provisions appropriately allocate risk by requiring bilateral agreement for deletion and inventory draw-down.

Recommendation 7: Assure it is not obligated to procure inventory under the virtual prime vendor contract in excess of industry standards.

Response: Concur. DSCR will specifically relate to Hamilton Sundstrand that DSCR is not obligated to purchase inventory balances that exceed reasonable, industry-based standards. DSCR will complete by 1 October 2007.

Recommendation 8: Procure blade heaters for worldwide demand at the lower competitive price and obtain a refund from Hamilton Sundstrand for the amount overcharged.

Response: Concur. DSCR will seek a refund for the misdirected orders. DSCR will complete by 1 October 2007.

Team Members

The Department of Defense Office of the Deputy Inspector General for Auditing, Acquisition and Contract Management prepared this report. Personnel of the Department of Defense Office of Inspector General who contributed to the report are listed below.

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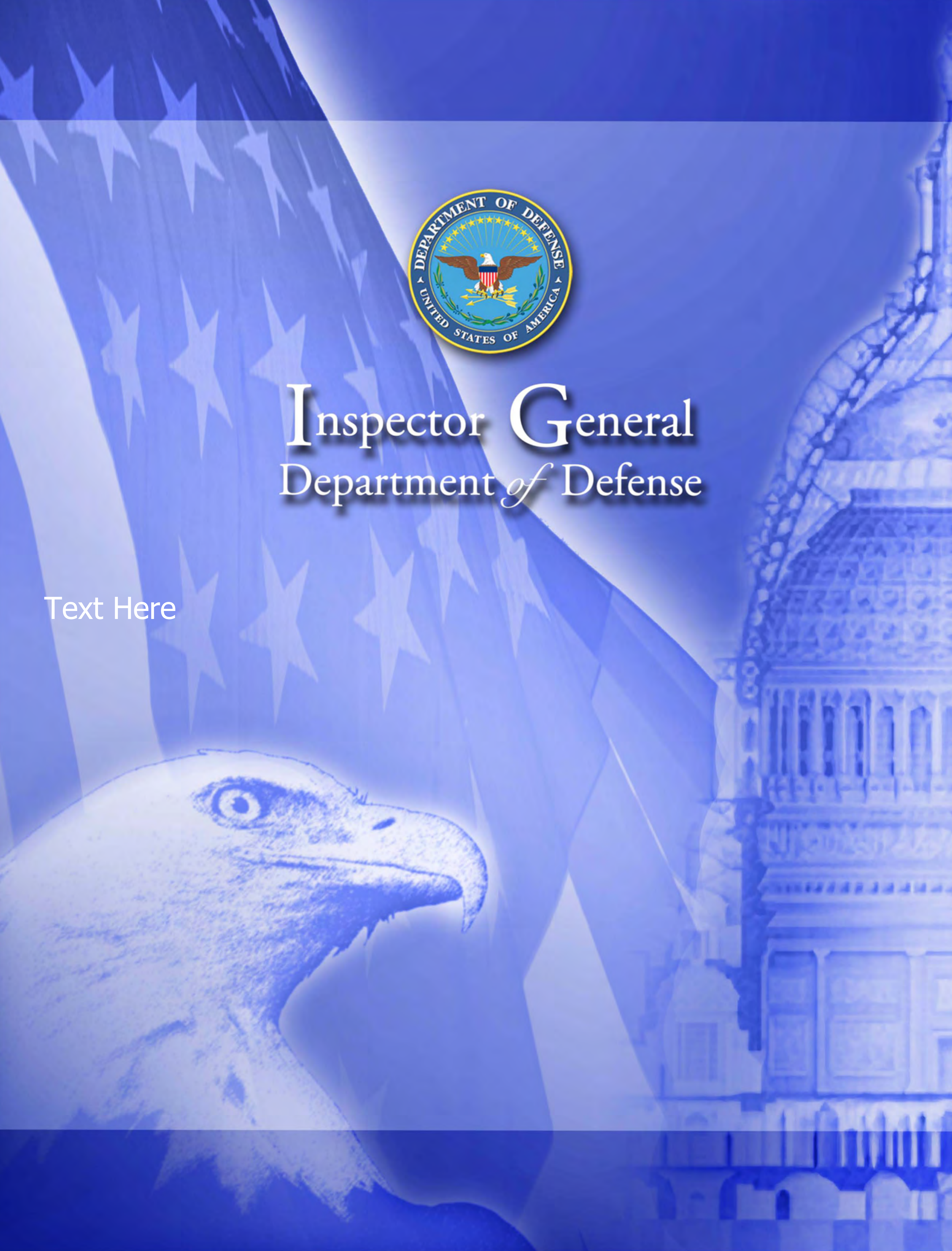
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