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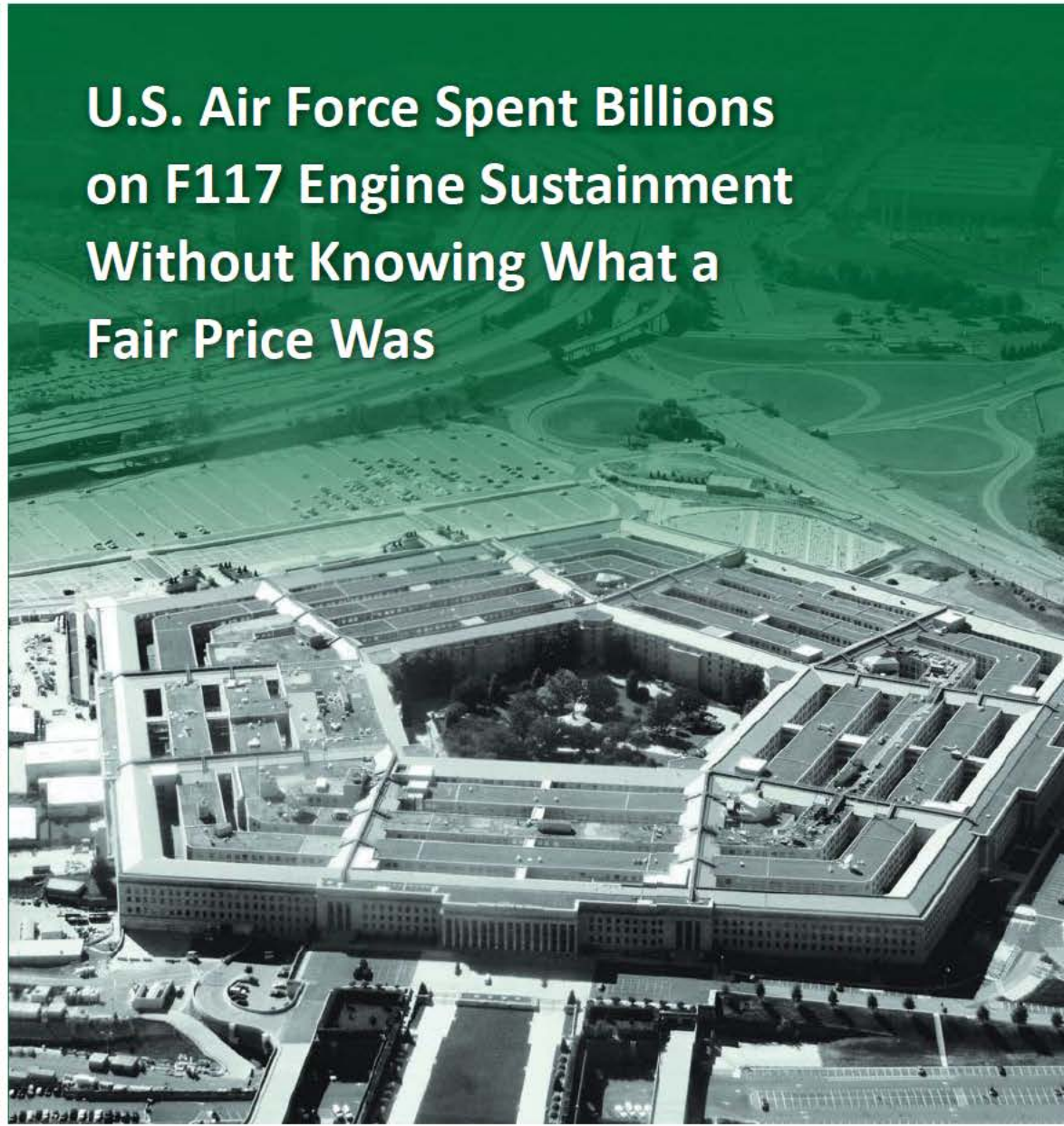
INSPECTOR GENERAL

U.S. Department of Defense

MARCH 11, 2016



U.S. Air Force Spent Billions on F117 Engine Sustainment Without Knowing What a Fair Price Was



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Results in Brief

U.S. Air Force Spent Billions on F117 Engine Sustainment Without Knowing What a Fair Price Was

March 11, 2016

Objective

The audit objective was to determine whether the U.S. Air Force (Air Force) is purchasing sole-source F117 engine sustainment services at fair and reasonable prices through the Globemaster III Integrated Sustainment Program (GISP) contract. This is the second in a series of audits addressing the acquisition of F117 engine sustainment services provided by Pratt & Whitney. This report focuses on evaluating the Air Force's approach to pricing the F117 engine sustainment services acquired as commercial services through the GISP base contract.

Finding

Air Force officials awarded the GISP base contract without obtaining sufficient data to determine whether the Air Force purchased the F117 engine sustainment services provided by Pratt & Whitney at fair and reasonable prices. This occurred because the Air Force did not perform key steps needed to implement a successful performance-based logistics (PBL) contract.

Specifically, the Air Force:

- entered into a PBL arrangement for sustainment services without establishing technical and cost/pricing baselines; and
- did not establish an effective approach to monitor the impact of any efficiencies made during the performance of the GISP contract or predecessor contract for its engine fleet.

Finding (cont'd)

~~(FOUO)~~ As a result, the Air Force does not know whether the \$1.57 billion spent on F117 engine sustainment services for the FY 2012 through FY 2014 GISP base contract was a fair and reasonable price. The Air Force likely overpaid for services and has not positioned itself with options for future F117 engine sustainment, other than to fully rely on Pratt & Whitney.

Recommendations

We recommend that the Assistant Secretary of the Air Force (Acquisition) (SAF/AQ): (1.a) establish a baseline for the performance and costs of the F117 engine sustainment services; (1.b) obtain and use actual cost data from the GISP contract to support any future sole-source PBL contracts for F117 engine sustainment; (1.c) include metrics in any future PBL contracts that would allow monitoring of the availability, reliability, and affordability of the F117 engine sustainment; and (1.d) require the contracting officer to include a reporting requirement in all future sole-source commercial PBL contracts to collect data other than certified cost and pricing information.

Management Comments and Our Response

~~(FOUO)~~ Comments from the Acting SAF/AQ partially addressed Recommendations 1.b and 1.c. Specifically, the Acting SAF/AQ commented that the Air Force plans to obtain commercial pricing and performance data from Pratt & Whitney in its future F117 engine sustainment support contract to address Recommendation 1.b. However, the comments did not address the Air Force's plans for obtaining such data in the GISP contract options. Additionally, to address Recommendation 1.c, the Acting SAF/AQ stated the Air Force planned to include metrics for availability and reliability in its future F117 engine sustainment support contract. However, the comments did not address including metrics on affordability. We request that the Acting SAF/AQ provide comments to the final report describing how the Air Force intends to collect uncertified cost or pricing data during



Results in Brief

U.S. Air Force Spent Billions on F117 Engine Sustainment Without Knowing What a Fair Price Was

Management Comments and Our Response (cont'd)

(~~FOUO~~) the GISP contract options and clarify the specific metric that will be included in future F117 engine sustainment contracts to monitor and ensure affordability and a planned date of completion.

(~~FOUO~~) Comments from the Acting SAF/AQ did not address the specifics of Recommendations 1.a and 1.d. Regarding Recommendation 1.a, the Acting SAF/AQ did not address plans to establish performance and cost/pricing baselines for F117 engine sustainment before awarding its planned firm-fixed-price PBL contract directly to Pratt & Whitney. Regarding Recommendation 1.d, the Acting SAF/AQ did not address plans to collect uncertified cost or pricing data during performance of the current GISP contract options to position itself for more effective negotiations on future contracts for F117 engine sustainment.

We request that the Acting SAF/AQ provide comments to the final report to explain how the Air Force intends to develop performance and cost baselines before it awards another PBL contract for F117 engine sustainment, and to describe the data that the Air Force plans to collect from the GISP contract to position itself for more effective negotiations in future F117 engine sustainment contracts. In summary, we request additional comments on all recommendations. Please see the Recommendations Table on the next page.

Recommendations Table

Management	Recommendations Requiring Comment
Assistant Secretary of the Air Force (Acquisition)	1.a, 1.b, 1.c, 1.d

Please provide Management Comments by April 8, 2016.





**INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
4800 MARK CENTER DRIVE
ALEXANDRIA, VIRGINIA 22350-1500**

March 11, 2016

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION, TECHNOLOGY,
AND LOGISTICS
ASSISTANT SECRETARY OF THE AIR FORCE
(FINANCIAL MANAGEMENT AND COMPTROLLER)

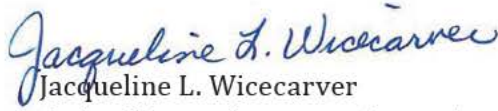
SUBJECT: U.S. Air Force Spent Billions on F117 Engine Sustainment Without Knowing
What a Fair Price Was (Report No. DODIG-2016-059)

~~(FOUO)~~ We are providing this report for review and comment. The Air Force spent \$1.57 billion on F117 engine sustainment services for FY 2012 through FY 2014 without knowing whether it paid a fair and reasonable price.

We considered management comments on a draft of this report when preparing the final report. DoD Instruction 7650.03 requires that recommendations be resolved promptly. The Acting Assistant Secretary of the Air Force provided comments that partially addressed Recommendations 1.b and 1.c and did not address the specifics of Recommendations 1.a and 1.d. Therefore, we request additional comments on all recommendations by April 8, 2016.

Please provide comments that conform to the requirements of DoD Instruction 7650.03. Please send a PDF file containing your comments to audapi@dodig.mil. Copies of your comments must have the actual signature of the authorizing official for your organization. We cannot accept the /Signed/ symbol in place of the actual signature. If you arrange to send classified comments electronically, you must send them over the SECRET Internet Protocol Router Network (SIPRNET).

We appreciate the courtesies extended to the staff. Please direct questions to me at (703) 604-9077 (DSN 664-9077).


Jacqueline L. Wiccarver
Acting Deputy Inspector General
for Auditing

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Acronyms and Abbreviations

Introduction

Objective

The audit objective was to determine whether the U.S. Air Force (Air Force) is purchasing sole-source F117 engine sustainment services at fair and reasonable prices through the Globemaster III Integrated Sustainment Program (GISP) contract. This is the second in a series of audits addressing the Air Force acquisition of F117 engine sustainment services. This report focuses on evaluating the Air Force's approach to pricing the F117 engine sustainment services acquired as commercial services through the GISP base contract. See Appendix A for scope, methodology, and prior audit coverage.

The results of the first audit appear in a 2014 report by the DoD Office of Inspector General (DoD OIG).¹ This report addressed whether the Air Force adequately supported its determination that F117 engine sustainment services provided by Pratt & Whitney met the Federal Acquisition Regulation's (FAR) commercial item definition. See Appendix B for more information on the first report. As part of the first audit, we requested that the President, Pratt & Whitney Military Engines, provide information on its commercial customers for engine sustainment services. We also requested data related to sustainment services for the F117 engine. Pratt & Whitney provided limited data on one commercial customer. However, Pratt & Whitney did not provide requested cost data because of concerns about appropriate safeguards to protect the data so that the Air Force could not obtain and use the cost data in pending contract negotiations. Consequently, we began a second audit.

As part of the second audit, we subpoenaed Pratt & Whitney on October 27, 2014, to provide F117 engine sustainment cost and pricing data. We have been corresponding with Pratt & Whitney's legal counsel and to date have received multiple installments of portions of the requested F117 engine sustainment information. We intend to analyze this information and report our results in a separate body of work.

¹ DoD OIG Report No. DODIG-2015-058, "U.S. Air Force May Be Paying Too Much for F117 Engine Sustainment," December 22, 2014.

Background

The F117 engine is the military version of Pratt & Whitney's commercial PW2000 engine, which is used in Boeing 757 aircraft. For the past 20 years, the Air Force acquired F117 engine sustainment from Boeing as part of its C-17 Globemaster III (C-17) aircraft sustainment. Boeing subcontracted the sustainment of the F117 engine to Pratt & Whitney,² the engine's original equipment manufacturer (OEM). According to an Air Force official, the Air Force has more than 1,200 F117 engines.

C-17 Aircraft and F117 Engine

The C-17 is a heavy-lift aircraft that transports personnel, vehicles, equipment, and other supplies in its large cargo bay. The Air Force uses the C-17 to support combat missions and humanitarian efforts. Boeing manufactured the C-17, delivering the first C-17 to the Air Force in 1993. According to an Air Force official, Boeing delivered the last aircraft in September 2014. The Air Force Life Cycle Management Center, C-17 Division, manages the C-17 program, which includes F117 engine sustainment. According to an Air Force official, the Air Force has 222 C-17 aircraft in its fleet. Each C-17 aircraft is powered by four Pratt & Whitney F117 engines, as shown in Figure 1.



Figure 1. C-17 Aircraft Powered by Four F117 Engines at Take-off
Source: DoD

² Pratt & Whitney is a United Technologies Corporation company that designs, manufactures, and services aircraft engines. Pratt & Whitney Military Engines, a component of Pratt & Whitney, manufactures and services military engines, such as the F117 engine. Pratt & Whitney also manufactures and services commercial engines for commercial passenger aircraft.

Performance-Based Logistics Is DoD's Preferred Sustainment Strategy for Weapon Systems

DoD designated performance-based logistics (PBL) as the preferred equipment sustainment strategy in an effort to increase weapon systems readiness, while reducing support costs and supply chain infrastructure. In 2003, DoD incorporated into policy the requirement for acquisition managers to use performance-based arrangements for sustaining products and services wherever feasible. A PBL contract is a type of performance-based arrangement that provides weapon system support by designating the required system performance outcome, such as acquiring a level of system availability, and focuses on incentivizing the contractor to reduce costs through innovation.

As a business model, PBL differs from traditional support in many ways. In a traditional support model, the Government buys a weapon system and associated spares, repairs, tools, and data. The Government must specify which goods and services are desired and how many of each are needed. In a PBL contract, the Government buys performance outcomes.³ PBL contracts do not provide detailed descriptions of what Government goods and services are required to meet performance outcomes. Rather, the Government identifies its desired system performance, and the contractors determine how to deliver that performance outcome. Additionally, a traditional contract approach focuses on transactions of goods or services. The contractor charges the Government for each repair or replacement transaction when equipment fails or requires overhaul. According to the PBL Guidebook,⁴ this traditional contract approach does not incentivize the contractor to reduce the need for repairs, because the contractor's workload and revenue increase as equipment failures increase. It explains that in a PBL contract, the contractor is incentivized to reduce repairs and cost of parts and labor because contractor profit is increased by reducing costs. The PBL Guidebook further states that the Government should benefit by sharing in the cost savings achieved by the contractor.⁵ These savings could occur during the performance of the existing contract or when awarding a follow-on contract at a lower price.

³ For PBL, "performance" is defined in terms of military objectives, such as operational availability, reliability, cost per unit usage, or logistics response time.

⁴ The 2014 PBL Guidebook section 1.4, "How Performance-Based Arrangements Work."

⁵ The 2014 PBL Guidebook section 1.5, "Aligning the Interests of Government and Industry," and the November 2011 PBL "Proof Point Project – A Study to Determine the Impact of Performance Based Logistics (PBL) on Life Cycle Costs."

History of the Air Force C-17 Sustainment Strategy

The Air Force has altered the C-17 aircraft sustainment strategy many times over the years. Originally, the Air Force intended to sustain the C-17 aircraft itself. However, because of base realignment and closure actions, the Air Force adopted a PBL strategy, where it contracted all the necessary support to Boeing. Congress then directed the Air Force to develop core logistics capabilities⁶ for the C-17 in accordance with section 2464, title 10, United States Code. In 2003, the Air Force's C-17 support strategy shifted again to a public-private partnership⁷ with Boeing.

On October 1, 2003, the Air Force awarded Boeing the Globemaster III Sustainment Partnership (GSP) contract FA8614-04-C-2004 to support the sustainment of the C-17 aircraft, including its F117 engine. The GSP was a weapon system PBL strategy where Boeing had total system support responsibilities for the C-17, which included program management; sustaining logistics support; materiel and equipment management; sustaining engineering; depot-level aircraft maintenance; engine sustainment; long-term sustainment planning; and support to foreign military sales customers. Through the GSP contract, the Air Force implemented its public-private partnership with Boeing. Boeing subcontracted F117 engine sustainment to Pratt & Whitney and partnered with the Air Logistics Centers to perform the C-17 depot maintenance and repair support.

The C-17 Contracting Branch, located at Robins Air Force Base, Georgia, awarded Boeing the GISP contract FA8526-12-D-0001 on October 1, 2011 to continue C-17 sustainment. In the GISP contract, the Air Force became the C-17 overall product support manager (PSM),⁸ responsible for meeting warfighter sustainment and readiness requirements. Boeing transitioned to a product support integrator, meaning that Boeing was accountable for total weapon systems availability and performance through management, direction, and integration of program support activities and resources. Boeing continued subcontracting F117 engine sustainment to Pratt & Whitney, which performs F117 engine fleet management

⁶ According to section 2464, title 10, United States Code, core logistics capabilities refers to capabilities to maintain and repair weapons systems and other military equipment necessary to enable the armed forces to fulfill strategic and contingency plans. It states that it is essential for national defense that DoD maintain a Government-owned, Government-operated core logistics capability to ensure a ready and controlled source of technical competence and resources necessary to effectively respond to contingency situations and other emergency requirements.

⁷ A PBL strategy can include the use of public and private sector capabilities through government and industry partnering initiatives, in accordance with statutory requirements. Public-private partnerships leverage the strengths of both sectors.

⁸ The PSM is responsible for managing support functions required to field and maintain the readiness and operational capability of major weapon systems, subsystems, and components.

program services⁹ to meet the engine availability requirements for the Air Force. Table 1 shows the sustainment contracts awarded by the Air Force for the C-17 aircraft and its F117 engine fleet.

Table 1. History of Air Force Contract Awards for F117 Engine Sustainment

Contract	Date of Contract Award	Period of Performance
GSP	October 1, 2003	October 1, 2003 – September 30, 2011
GISP base	October 1, 2011	October 1, 2011 – September 30, 2014
GISP base extension	September 29, 2014	October 1, 2014 – March 31, 2015
GISP undefinitized contract action ¹	July 29, 2015 ²	July 29, 2015 – September 30, 2015
GISP undefinitized contract action	October 1, 2015	October 1, 2015 – March 31, 2016

¹ Undefinitized contract action is any contract action for which the contract terms, specifications, or price are not agreed upon before the period of performance has begun under the action.

² The Air Force definitized this contract action on August 28, 2015. There was a gap in the period of performance for F117 engine sustainment from April 1, 2015 to July 29, 2015.

(FOUO) The GISP contract is a 10-year, sole-source PBL contract with an estimated value of \$11.75 billion.¹⁰ According to C-17 Division officials, the Air Force spent \$4.57 billion on the GISP contract in FY 2012 through FY 2014 funding as of June 15, 2015. Of the \$4.57 billion spent on the GISP contract, the Air Force reported that it has spent \$1.57 billion on F117 engine sustainment services for FY 2012 through FY 2014. The Air Force pays a fixed monthly price for F117 engine availability, meaning that a specified number of F117 engines are available and ready for use.

Pricing Sole-Source Commercial Services

The Air Force acquired the F117 engine sustainment services through the GISP contract with Boeing. Boeing subcontracted performance of these services to Pratt & Whitney using a sole-source commercial, firm-fixed-price, PBL subcontract. The GISP contracting officer determined that the F117 engine sustainment services acquired through the GISP contract were commercial services. In the first report,¹¹

⁹ Fleet management program services include more than just the receipt, inspection, repair, testing, handling, and transport of the F117 engines included in a typical overhaul. Material management, program management, maintaining technical documentation, and updating data systems are examples of additional services that may be included in a fleet management program.

¹⁰ (FOUO) According to the C-17 Division, the Air Force expects to spend \$19 billion on the contract through September 2021.

¹¹ DoD OIG Report No. DODIG-2015-058, "U.S. Air Force May Be Paying Too Much for F117 Engine Sustainment," December 22, 2014.

we questioned whether the GISP contracting officer obtained sufficient support to conclude that the F117 engine sustainment services were commercial. In this report, we focus on evaluating the Air Force's approach to pricing F117 engine sustainment as commercial services through the GISP base contract, in accordance with Federal and Defense acquisition regulations.

The FAR¹² states that negotiating the contract type and negotiating prices are closely related and should be considered together with the objective to negotiate a contract type and price that will result in reasonable contractor risk and provide the contractor with the greatest incentive for efficient and economical performance. However, the circumstances of an acquisition—for example, when an acquisition is determined to be commercial—may limit the type of contract and the type of information the contracting officer is permitted to request to support negotiations.

Using a subcontract that was both sole-source and commercial to acquire F117 engine sustainment services affected the Air Force's ability to price these services. For example, the FAR¹³ states that a commercial acquisition generally requires a firm-fixed-price contract type and prohibits obtaining certified cost or pricing data¹⁴ to support the determination of a fair and reasonable price. A February 2015 memorandum from the Director of Defense Pricing¹⁵ explains the concept behind the exemption from providing certified cost or pricing data for commercial acquisitions. It states that the item or service, its value, and its prices are the result of supply and demand in the commercial market, where buyers and sellers have other commercial alternatives that compete with the commercial item or service being acquired. Therefore, detailed cost or pricing data are not necessary to support commercial acquisitions.

However, sole-source acquisitions can lead to pricing challenges because there is only one seller. The Defense FAR Supplement (DFARS) Procedures, Guidance and Information (PGI)¹⁶ encourages contracting officers to exercise care and attention when acquiring sole-source commercial services to ensure they obtain sufficient data for determining a fair and reasonable price. In a sole-source acquisition,

¹² FAR Subpart 16.1, "Selecting Contract Types."

¹³ FAR Subpart 12.2, "Special Requirements for the Acquisition of Commercial Items."

¹⁴ Certified cost or pricing data are required for certain acquisitions and include all facts that prudent buyers and sellers would reasonably expect to affect price negotiations significantly. Such facts may include vendor quotations, information on changes in production methods or purchasing volume, and unit-cost trends. The certification of data means that, to the best of the contractor's knowledge and belief, the data are accurate, complete, and current as of the date before contract award.

¹⁵ Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics Memorandum, "Commercial Items and the Determination of Price for Commercial Items," February 4, 2015.

¹⁶ DFARS PGI 215.403-3, "Requiring Data Other Than Certified Cost or Pricing Data" and 215.404-1, "Proposal Analysis Techniques."

the contractor could overcharge the Government in the absence of competition. Therefore, obtaining sales data and evaluating the purchases of multiple buyers would help establish price reasonableness for sole-source commercial acquisitions. If recent sales of similar services are not available for a price comparison, then cost data from the contractor may be necessary to determine a fair and reasonable price. See Appendix C for a detailed discussion of the policy guidance for commercial acquisitions.

FY 2015 National Defense Authorization Act F117 Requirements

The FY 2015 National Defense Authorization Act, signed into law in December 2014, directs the Secretary of the Air Force not to enter into a contract for the sustainment of the F117 engine until the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD[AT&L]) certifies that the Air Force has obtained sufficient data to determine a fair and reasonable price for F117 sustainment, maintenance, repair, or overhaul, as compared to the PW2000 commercial-derivative engine sustainment price for these services in the private sector.¹⁷

The House Armed Services Committee's report on the FY 2015 National Defense Authorization Act stated that the Air Force has struggled to reign in F117 engine sustainment costs. The House committee was also concerned that the Air Force could not determine whether it is paying a fair and reasonable price for those services because limited performance and cost data were available to the Air Force as a result of the GISP contract structure and administration. The House committee encouraged the Air Force to seek a competitive strategy to obtain F117 engine sustainment services and also encouraged it to consider awarding a contract directly to Pratt & Whitney if process and cost efficiencies could be gained.

Review of Internal Controls

DoD Instruction 5010.40¹⁸ requires DoD organizations to implement a comprehensive system of internal controls that provides reasonable assurance that programs are operating as intended and to evaluate the effectiveness of the controls. We identified an internal control weakness in the process the Air Force used to determine whether the sustainment services for the F117 engine were fair and reasonable. We will provide a copy of the report to the senior official responsible for internal controls in the Air Force.

¹⁷ In the FY 2016 National Defense Authorization Act, signed into law in November 2015, section 322 repealed the language in section 341 of the FY 2015 National Defense Authorization Act.

¹⁸ DoD Instruction 5010.40, "Manager's Internal Control Program Procedures," May 30, 2013.

Finding

Air Force Did Not Determine What a Fair and Reasonable Price Was for Sustaining its F117 Engine Fleet

Air Force officials awarded the GISP base contract without obtaining sufficient data to determine whether the Air Force purchased the F117 engine sustainment services provided by Pratt & Whitney at fair and reasonable prices. This occurred because the Air Force did not perform key steps needed to implement a successful PBL contract. Specifically, the Air Force:

- entered into a PBL arrangement for sustainment services without establishing technical and cost/pricing baselines; and
- did not establish an effective approach to monitor the impact of any efficiencies made during the performance of the GISP contract or predecessor contract for its engine fleet.

(FOUO) As a result, the Air Force did not know whether the \$1.57 billion spent on F117 engine sustainment services for the FY 2012 through FY 2014 GISP base contract was a fair and reasonable price. The Air Force likely overpaid for services and has not positioned itself with options for future F117 engine sustainment other than to fully rely on Pratt & Whitney, which views the Air Force as its competitor.

Air Force Deemed Prices Reasonable, Although it Did Not Obtain Sufficient Information

The Air Force did not obtain sufficient information to evaluate the reasonableness of the prices for F117 engine sustainment services purchased through the GISP contract. Although DoD and Air Force senior leadership were involved in seeking cost data for the Air Force, Pratt & Whitney declined to provide critical cost and pricing information that the Air Force needed to determine fair and reasonable prices. Without sufficient supporting information, the Air Force relied on a questionable analysis of Pratt & Whitney's proposed F117 engine sustainment prices and declared the GISP contract prices fair and reasonable.

The FAR¹⁹ requires contracting officers to acquire supplies and services at fair and reasonable prices. The FAR and DFARS contain guidance regarding the types of data the contracting officer is required to obtain in various situations to support

¹⁹ FAR 15.402, "Pricing Policy," contains this requirement.

the determination of a fair and reasonable price. Where prices are based on adequate price competition, contracting officers generally do not have to request data from the contractor to determine the reasonableness of the price.

However, if the contracting officer determines that data are needed to determine the reasonableness of the price offered, the FAR encourages contracting officers to first collect current pricing information available within the Government such as catalogs, the results of market research, or recent sales. If the reasonableness of the proposed prices cannot be determined from this information, contracting officers may request data other than certified cost or pricing data²⁰ (uncertified cost or pricing data) from the contractor to the extent necessary to determine a fair and reasonable price. However, the FAR does not require a contractor to provide the data.

Commercial Sales Data Redacted and Incomplete

The Air Force contracting officials tried to obtain pricing information to support a fair and reasonable price determination for the GISP base contract. The DFARS PGI²¹ states that to support proposal analysis for sole-source, commercial items, the contracting officer must request non-Government commercial sales in quantities comparable to those in the solicitation. This information should include prices at which the same or similar items have been previously sold during a relevant time period.²²

An Air Force price analyst stated that she began requesting Pratt & Whitney's commercial customer sales data in January 2011 through Boeing, the prime contractor. Pratt & Whitney would not provide this information, which it deemed proprietary, to Boeing, but agreed to allow Air Force officials to review a limited number of invoices that contained redacted information. The Air Force official stated that it was not clear that the redacted invoices were for commercial customers, or whether those invoices represented services that were similar to the F117 engine sustainment services. According to the DFARS PGI,²³ contracting officials must validate the integrity of the sales data provided to support a price reasonableness determination. Because of Pratt & Whitney's redactions, the Air Force pricing official could not validate the integrity of the sales data. The redacted invoices were not sufficient to evaluate the reasonableness of Pratt & Whitney's proposed F117 engine sustainment pricing.

²⁰ As defined in FAR 2.101, "Definitions," data other than certified cost or pricing data means pricing data, cost data, and judgmental information necessary for the contracting officer to determine a fair and reasonable price or to determine cost realism. These data could be the same as certified cost or pricing data, but without the accompanying certificate.

²¹ DFARS PGI 215.404-1, "Proposal Analysis Techniques."

²² FAR 15.403-3, "Requiring Data Other Than Certified Cost or Pricing Data."

²³ DFARS PGI 215.403-3, "Requiring Data Other Than Certified Cost or Pricing Data."

Air Force's Analysis of Proposed Prices was Questionable

(FOUO) The Air Force relied on Boeing, the Navy Price Fighters (NPF), and the Defense Contract Audit Agency (DCAA) to analyze the F117 engine sustainment proposal for price reasonableness. According to the GISP base contract price negotiation memorandum, the Air Force officials used a (b)(4)

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] to validate Pratt & Whitney's proposed prices.

While the FAR requires the prime contractor to assess whether prices proposed by subcontractors are fair and reasonable, the contracting officer is ultimately responsible for determining whether items and services are acquired at fair and reasonable prices. The Air Force did not obtain additional information in order to determine whether Pratt & Whitney's proposed prices were fair and reasonable.

(FOUO) [REDACTED]
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(FOUO) Air Force officials requested that DCAA audit the GISP contract proposal, which included the F117 engine sustainment services. DCAA determined that a majority of Pratt & Whitney's proposed prices for F117 engine sustainment were unsupported because Boeing's analysis was insufficient. DCAA stated Boeing did not obtain current sales or price data for the same or similar services to those acquired under the GISP contract. DCAA noted that the F117 engine sustainment prices were increasing and stated that without a reevaluation of the previous negotiated price and changes in industry, Boeing did not provide a current basis to determine that Pratt & Whitney proposed a fair and reasonable price.

(FOUO) Air Force officials also requested that NPF analyze the GISP contract proposal and assist the Air Force in developing a Government pricing objective. The NPF's analysis generally accepted Boeing's analysis of Pratt & Whitney's proposed prices without obtaining sufficient support and did not address the shortcomings that DCAA had noted in Boeing's analysis. The NPF used the FY 2009 through FY 2011 F117 engine overhaul negotiated price as a starting point for evaluating Pratt & Whitney's proposed prices. The NPF did not verify that sufficient analysis was performed in determining the prior price was fair and reasonable. DFARS PGI requires contracting officials to verify and document that sufficient analysis was performed before using the prior price paid.²⁴ Air Force officials used NPF's analysis without obtaining additional supporting information to establish its pricing objective. The Air Force officials negotiated a higher average F117 engine overhaul price for the follow-on GISP contract.

(b)(4)

Uncertified Cost Data Not Provided

(FOUO) The C-17 contracting and program officials requested approval from the Assistant Secretary of the Air Force (Acquisition) (SAF/AQ) leadership to enter into negotiations for the GISP contract; however, the Air Force C-17 contracting official did not inform the SAF/AQ leadership of the challenges in obtaining sufficient data. Instead, Air Force contracting and program officials informed the SAF/AQ approving official that Pratt & Whitney had provided them "unprecedented access to commercial sales data in terms of both quantity and quality." However, on August 5, 2011, the Director, Defense Pricing, expressed concern during a mandatory prenegotiation peer review²⁵ that the Air Force did not know how

²⁴ DFARS PGI 215.403-3, "Requiring Data Other Than Certified Cost or Pricing Data."

²⁵ Peer reviews are conducted for sole-source procurements valued at over \$500 million to ensure that DoD contracting officers are consistently and appropriately implementing policy and regulations, to improve the quality of the contracting process, and to facilitate sharing best practices and lessons learned within DoD.

(FOUO) much the engine sustainment work cost and recommended that it obtain cost data from Pratt & Whitney. The Director stated that it was not clear that (b)(4) the Director thought DoD should get better than average commercial pricing.

In response to the Director, Defense Pricing's recommendation, the Air Force contracting officer requested Pratt & Whitney provide cost data to include actual labor hours and costs, material costs, overhead expenses, subcontractor costs, and profits from the predecessor GSP contract. In a response letter, the Pratt & Whitney contracting official stated,

(FOUO) (b)(4)

The Director of Contracting, Warner Robins Air Logistics Center,²⁶ then became involved in obtaining the requested cost data from Pratt & Whitney. He spoke with the Director of Military Contracting at Pratt & Whitney regarding the data request. However, Pratt & Whitney still declined to provide the requested cost data. The Director of Contracting then reported the Air Force's challenges to the Office of Defense Pricing.

(FOUO) In September 2011, senior leadership from both the Office of Defense Pricing and SAF/AQ joined efforts to obtain cost data from Pratt & Whitney to support the GISP base contract award. The Director, Defense Pricing, and the Deputy Assistant Secretary for Contracting at SAF/AQ met with the President, Pratt & Whitney Military Engines twice to discuss the data request. The Director stated that he believed an agreement had been reached to provide the requested cost data. The Director acknowledged that the Air Force needed to proceed with the award of the GISP contract based on the price analysis performed and the contract's critical support to the warfighter, with the understanding that the contract include a reopener clause that would enable the Air Force to secure a downward price adjustment if cost data suggested that the price was not fair and reasonable.

²⁶ The Air Force renamed the Warner Robins Air Logistics Center the Warner Robins Air Logistics Complex in 2012.

The Air Force included a reopener clause in the GISP base contract that acknowledged the Government was working with Pratt & Whitney to obtain additional data to support price reasonableness for engine sustainment and allowed the Air Force to reopen negotiations should any data be received.²⁷ However, Pratt & Whitney never provided any cost data to the Air Force.

Air Force Declared Prices Fair and Reasonable, Although it Had Insufficient Information

(FOUO) Air Force contracting officials did not have sufficient commercial sales data or cost data to support a fair and reasonable price determination for F117 engine sustainment services. In addition, contracting officials did not perform sufficient analysis of Pratt & Whitney's proposed engine sustainment prices. The Air Force did not acknowledge any problems in obtaining sufficient supporting data from Pratt & Whitney in the GISP business and contract clearance²⁸ documentation. (b)(4)

[REDACTED]

[REDACTED]

[REDACTED]

Air Force Did Not Implement a Successful PBL Contract to Acquire F117 Engine Sustainment Services

Problems with the Air Force's PBL implementation caused the Air Force to have insufficient data to determine whether it purchased sole-source F117 engine sustainment at fair and reasonable prices. Specifically, the Air Force entered into a firm-fixed-price PBL arrangement for sustainment services without first establishing initial technical and cost/pricing baselines. Further, the Air Force did not establish an effective approach to monitor the impact of any efficiencies made during the performance of the GISP contract or predecessor GSP contract for its engine fleet.

²⁷ The Air Force exercised this reopener clause once to renegotiate the F117 engine sustainment pricing rate for FY 2013 when the number of engine overhauls was lower than anticipated for the year. The Air Force deleted the reopener clause from the GISP contract in September 2014.

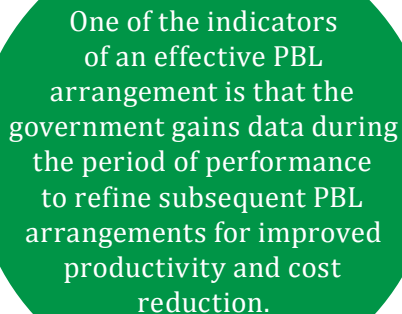
²⁸ According to the Air Force FAR Supplement subpart 5301.90, "Clearance," the Air Force has two types of clearance processes for noncompetitive contract actions: business clearance, defined as "approval to begin negotiations" and contract clearance, defined as "approval by the clearance approval authority to award a contract or contract modification." The objectives of these clearance processes are to accomplish an independent review by the clearance authority and to ensure the contracts effectively implement approved acquisition strategies, result in fair and reasonable business arrangements, and are consistent with laws, regulations, and policies.

Best Practices of Effective PBL Contracts

DoD Instruction 5000.02²⁹ requires program managers and PSMs to develop and implement affordable and effective performance-based product support strategies to achieve and sustain warfighter requirements. According to an August 2004 USD(AT&L) memorandum,³⁰ the Government should award fixed-price PBL contracts wherever possible. However, the Government should award cost-type contracts during the early stages of a PBL arrangement when it has limited or no knowledge of the system's performance or maintenance costs. Once the Government has obtained comprehensive knowledge of the performance and cost associated with the contract, it is a best practice³¹ to transition the contract into a fixed-price PBL arrangement.

The April 2011 PSM Guidebook³² details a series of steps for defining and implementing an affordable and effective product support strategy. It explains that baselining the system is one step that provides a foundation for developing a strong product support strategy. Another step is assessing the strategy, including monitoring performance, improvements, affordability, and cost control. Effective PBL implementation depends on identifying and refining performance metrics that accurately reflect warfighter requirements and measure contractor performance.

The November 2013 Assistant Secretary of Defense (Logistics and Materiel Readiness) memorandum, "Performance Based Logistics Comprehensive Guidance" provides additional PBL



One of the indicators of an effective PBL arrangement is that the government gains data during the period of performance to refine subsequent PBL arrangements for improved productivity and cost reduction.

guidance. It states that the Government must clearly understand the program requirements, cost, and technical characteristics, along with associated tradeoffs and alternatives for PBL arrangements to be effective. It further states that one of the indicators of an effective PBL arrangement is that the government gains data during the period of performance to refine subsequent PBL arrangements for improved productivity and cost reduction.

²⁹ DoD Instruction 5000.02, "Operation of the Defense Acquisition System," January 2015. The December 2008 version of DoD Instruction 5000.02 and November 2013 interim guidance had similar requirements to the January 2015 version.

³⁰ The August 2004 USD(AT&L) memorandum for Secretaries of the Military Departments, "Performance Based Logistics: Purchasing Using Performance Based Criteria."

³¹ The Tenets of PBL Second Edition, "A Guidebook to the Best Practices Elements in Performance-Based Life Cycle Product Support Management," June 2012, contains best practice elements in performance-based life cycle product support management.

³² In November 2015, the Assistant Secretary of Defense (Logistics and Materiel Readiness) released an updated version of the PSM Guidebook. Because the April 2011 PSM Guidebook was available at the time of the GISP contract award and has similar requirements as the November 2015 PSM Guidebook update, we will refer to the April 2011 PSM Guidebook throughout this report.

Air Force Not Prepared to Use a PBL Contract for F117 Engine Sustainment

The Air Force used a firm-fixed-price PBL arrangement without having comprehensive knowledge of the performance and costs to sustain the F117 engine. Air Force officials did not have the data they needed to successfully acquire F117 engine sustainment through a PBL contract. The Air Force did not baseline³³ the fleet management services and associated costs to sustain the F117 engine before awarding the GISP contract. As part of developing an effective PBL contract, the Air Force should define its performance and cost baselines as a starting point for monitoring the system.³⁴

For example, the Air Force should have identified the specific activities involved in sustaining the F117 engines, including supply chain management, and extent and frequency of the maintenance, repair, and overhaul efforts. Obtaining this information would have helped the Air Force to develop a baseline, including its own estimate of what F117 engine sustainment should cost. Over the past 10 years, the Air Force has not obtained technical³⁵ and cost data from Pratt & Whitney to establish baselines for the sustainment of its F117 engine fleet. Developing a baseline is an important step in the PBL business model, as a baseline allows program officials to assess and analyze the reliability and cost of the services throughout the life of the contract. To develop a sound baseline, program officials need to determine the weapon system's sustainment performance history and costs. Pratt & Whitney, as the OEM, retained rights to all F117 repair manuals, technical data, supply chain management data, and processes. Pratt & Whitney has chosen not to share this information with the Air Force, which makes baselining F117 engine sustainment challenging.

In addition, Pratt & Whitney viewed the Air Force as its competitor and was reluctant to share information with the Air Force. As noted in a December 10, 2014, letter to us from Pratt & Whitney's legal representative, Pratt & Whitney expressed concerns that sharing F117 engine sustainment information with the Air Force would harm Pratt & Whitney. The representative stated that the Air Force would greatly benefit from the intellectual property in Pratt & Whitney's technical publications, as these publications would allow the Air Force to start maintaining

³³ The April 2011 PSM Guidebook section 4.2.3, "Baseline the System," defines a baseline as the information needed to assess and analyze support decisions, including the cost and performance objectives of a system.

³⁴ The April 2011 PSM Guidebook section 4, "Developing a Product Support Strategy," contains a process model with steps for defining and implementing product support strategies in an effective and affordable manner. The 2014 PBL Guidebook follows this process model to facilitate effective PBL development and execution.

³⁵ The April 2011 PSM Guidebook section 2.1.7, "Technical Data," defines technical data as information to operate, install, maintain, and train on equipment to maximize its effectiveness and availability. Technical data could exist in the form of manuals, engineering data, or specifications.

F117 engines without Pratt & Whitney's assistance. In addition, the legal representative stated that because of the commercial nature of the program, Pratt & Whitney does not maintain its cost data in the same, readily-accessible manner that it would for a typical negotiated procurement with the Government.

According to the PSM Guidebook,³⁶ when developing the system baseline, it is necessary to know all available information about the system or subsystem, including data on performance, reliability, maintainability, and cost. Developing a system's cost baseline in a competitive, commercial market may be achieved through comparing prices of similar services. However, in a sole-source commercial environment, baselining becomes more difficult when comparable pricing data do not exist. Therefore, the Air Force should have obtained uncertified cost data to develop a cost baseline associated with the technical effort required to sustain the F117 engine fleet. In addition, a baseline of the F117 engine sustainment services would allow the Air Force to measure any of Pratt & Whitney's performance process improvements and cost savings throughout the life of the PBL contract. Without the technical and cost data, the Air Force did not identify, plan, or develop an effective foundation for the sustainment of the F117 engine fleet and should not have entered into a PBL contract.

The Air Force should obtain technical and cost data and establish a sound baseline for performance and cost before entering into any future PBL contract with Pratt & Whitney for the sustainment of the F117 engine fleet.

Air Force Did Not Monitor or Realize Cost Efficiencies

The Air Force did not establish an effective approach to monitor the F117 engine sustainment or realize any cost efficiencies in the GISP base contract or its predecessor GSP contract. The PSM Guidebook states that the PSM is responsible for monitoring a system's performance and assessing the effectiveness and affordability of the product support strategy.

Air Force Did Not Monitor Contractor Performance Effectively

The Air Force only monitored Pratt & Whitney's performance to sustain F117 engines based on the availability of engines for its C-17 users. According to the PSM Guidebook, PBL contracts should include performance metrics defined so that achievement of outcomes can be tracked, measured, assessed, and validated.³⁷ Furthermore, linking key performance metrics to operational availability, reliability, and ownership costs is essential. The PSM Guidebook also indicates that sustainment metrics should be allocated to specific subsystems, as

³⁶ The April 2011 PSM Guidebook section 4.2.3, "Baseline the System."

³⁷ The April 2011 PSM Guidebook section 3.3, "Metrics."

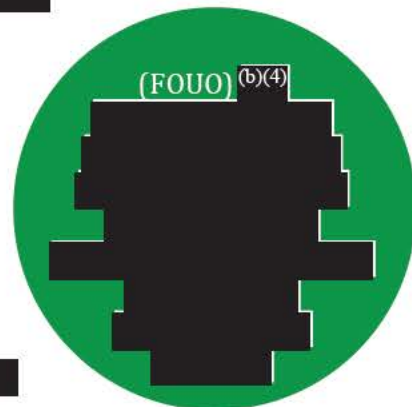
the F117 engine is a subsystem of the C-17 aircraft. In 2003, the Air Force did not include operational availability, reliability, and ownership cost performance metrics for F117 engine sustainment on the GSP contract. For over 10 years, the Air Force has contracted for F117 engine sustainment and has not collected information on ownership costs.

(FOUO) The Air Force first incorporated the engine availability performance metric on the GSP contract in FY 2010 and included a similar metric on the GISP base contract. Before that, the GSP contract did not include specific performance metrics tied to sustaining the F117 engine. The GISP base contract included two metrics relating to spare engine availability. (b)(4)

[REDACTED]

[REDACTED] Without having a clear understanding of any added costs and benefits for exceeding the engine requirements, the Air Force should not have included this incentive structure in the contract. This incentive structure may have added unnecessary costs with unknown benefits for the Air Force. (b)(4)

[REDACTED]



For future PBL F117 engine sustainment contracts, the Air Force should include performance metrics to measure the availability, reliability, and cost of the F117 engine subsystem, as sustaining the engine is a significant portion of the C-17 aircraft sustainment.

³⁸ (FOUO) This metric tracked serviceable propulsion system engines, which are fully built-up propulsion systems that have been transferred to Air Force stock or foreign military sales stock.

³⁹ (FOUO) This metric tracked war readiness engines, which are fully built-up propulsion systems that have been transferred to Air Force stock and documented in its Comprehensive Engine Management System. War readiness engine levels are included within the serviceable propulsion system levels when measuring availability.

⁴⁰ (FOUO) This incentive is related to the serviceable propulsion system engine metric.

⁴¹ (FOUO)(b)(4)

[REDACTED]

Air Force Did Not Realize Cost Efficiencies

(FOUO) The Air Force agreed to firm-fixed-price, long-term PBL contracts for F117 engine sustainment without a method to monitor whether any improvements made during contract performance reduced the engine sustainment cost. PBL guidance⁴² states that the Government should have a plan for how and when it will realize savings from PBL arrangements that incentivize contractors to make investments to improve processes and reliability. In addition, the PBL Guidebook⁴³ states that when awarding a follow-on PBL contract, the Government should benefit by sharing in the cost savings achieved by the contractor. Therefore, when awarding the follow-on GISP contract, the Air Force would expect to share in any cost savings achieved by Pratt & Whitney. Before the award of the GISP contract, Pratt & Whitney reported to the Air Force that it made investments to improve the engine reliability. However, the Air Force has yet to obtain technical or cost data to understand the impact of Pratt & Whitney's product or process improvements on costs. (b)(4)

The negotiated average price for an engine overhaul on the GISP base contract increased significantly from the previous contract period.

The Air Force did not incorporate provisions into the GISP base contract that enabled it to obtain technical or cost data for monitoring the system and minimize its pricing risk. The 2014 PBL Guidebook states that incurred cost reporting is a valuable tool for contract management. It provides the example that Naval Supply Systems Command Weapon System Support requires that actual incurred cost data from the current or previous PBL contracts be used during follow-on negotiations to ensure the best value is negotiated. By evaluating the actual costs to sustain its F117 engine fleet, the Air Force can use this information for determining price reasonableness in future contracts.

For future PBL F117 engine sustainment contracts, the Air Force should collect cost data throughout the contract to monitor ownership costs. The cost data do not need to be certified. Additionally, the Air Force should use actual cost data from the GISP contract for negotiations of a future PBL F117 engine sustainment contract to ensure a fair and reasonable price is negotiated.

⁴² The Tenets of PBL Second Edition, "A Guidebook to the Best Practices Elements in Performance-Based Life Cycle Product Support Management," June 2012, "Pricing Model" section.

⁴³ The 2014 PBL Guidebook section 1.5, "Aligning the Interests of Government and Industry" and November 2011 PBL "Proof Point Project – A Study to Determine the Impact of Performance Based Logistics (PBL) on Life Cycle Costs."

Air Force Needs to Know F117 Engine Sustainment Costs

(FOUO) Using a PBL contract arrangement before the Air Force understood the F117 engine sustainment services it was buying and the associated costs undermines the fundamental intent of a PBL contract, which is to maximize performance and share in cost savings. For over 10 years, the Air Force has been ineffective at obtaining insight into its F117 engine sustainment requirements and prices. The Air Force never baselined the fleet management services and associated costs for sustaining the F117 engine. In addition, Pratt & Whitney was unwilling to share its engine data with the Air Force. The Air Force did not monitor whether any improvements during GISP contract performance reduced the F117 engine sustainment cost. As a result, the Air Force did not know whether the \$1.57 billion spent on F117 engine sustainment services for the GISP base contract was a fair and reasonable price. The Air Force gave up control over managing the sustainment of its F117 engine fleet and has become dependent on Pratt & Whitney, which views the Air Force as its competitor. Under the current approach, the Air Force will continue without any viable options for F117 engine sustainment except to rely on Pratt & Whitney. The Air Force has little leverage to negotiate better prices on the new contract than it is receiving on the current GISP contract or to promote future competition without Pratt & Whitney providing the necessary technical and uncensored cost or pricing data.

(FOUO) The Air Force plans to acquire future F117 engine sustainment services through a sole-source, PBL arrangement directly awarded to Pratt & Whitney. See Appendix D for Air Force attempts over the past 6 years to contract directly for F117 engine sustainment. If the planned F117 engine sustainment contract is not awarded, the Air Force would continue using the GISP contract, even though it has already spent billions on F117 engine sustainment services without knowing what a fair and reasonable price was. By establishing a baseline for the F117 engine sustainment services and including data requirements for technical and cost information in future contracts, the Air Force would position itself to negotiate a fair and reasonable price, with the option to compete these services in the future.

Management Comments on the Finding

The Acting Assistant Secretary of the Air Force (Acquisition) (Acting SAF/AQ) stated that the Air Force has been working with the Director, Defense Pricing and Director, Defense Procurement and Acquisition Policy (DPAP), to establish and implement new business processes and policies to improve fidelity of commercial pricing and fiduciary oversight. The Acting SAF/AQ further explained that the

Air Force has been collaborating with DPAP and the Defense Contract Management Agency (DCMA) to aid in pricing decisions on commercial items. He also stated that the Air Force has collaborated with DCMA, DCAA, NPF, and Air Force Negotiation Teams to improve fidelity in commercial pricing and industry practices.

Our Response

We commend the Air Force for working with DPAP to establish and implement new business processes and policies and for collaborating with DCMA, DCAA, and NPF to support pricing decisions on commercial items. However, pricing officials continue to face challenges in obtaining sufficient data to assess whether the prices offered in a sole-source commercial environment are fair and reasonable.

Recommendations, Management Comments, and Our Response

We considered management comments to the recommendations on a draft of this report. The Acting SAF/AQ responded. A summary of the comments from the Acting SAF/AQ, along with our response, follows. The complete text of the comments can be found in the Management Comments section at the end of the report.

Recommendation 1

We recommend that the Assistant Secretary of the Air Force (Acquisition):

- a. Establish a baseline for the performance and costs of the F117 engine sustainment services before it awards any future performance-based logistics F117 engine sustainment contracts.**

Assistant Secretary of the Air Force (Acquisition) Comments

(FOUO) The Acting SAF/AQ agreed with our recommendation. The Acting SAF/AQ explained that the GISP Air Force Negotiation Team viewed various data sources to develop a price objective for the FY 2015 through FY 2017 GISP contract option. The Acting SAF/AQ stated this information included terms and conditions for the PW2000 in the commercial marketplace, commercial contracts for the PW4000, overhaul⁴⁴ invoice summaries and competition results for the C-32 PW2040 engine efforts, historical GSP/GISP engine induction prices, a rough order of magnitude from Delta TechOps, and market studies on the PW2000 engine for price comparison purposes. The Acting SAF/AQ stated that through these reviews and assistance from outside sources, the GISP program has ensured the negotiated prices are fair and reasonable.

⁴⁴ The terms "overhaul," "induction," and "removal" are used interchangeably throughout the comments and our responses pertaining to maintenance of the F117 engine.

(FOUO) Regarding the Air Force's future F117 engine sustainment plans, the Acting SAF/AQ stated that the F117 engine sustainment support (ESS) contract will use data from the FY 2015 through FY 2017 GISP contract option to establish a performance and price baseline. The Acting SAF/AQ stated the ESS contract will continue to refine the price baseline and build on the performance baseline through key metrics that allow the Government to make data-driven decisions for F117 engine sustainment, and to include the potential for competition.

Our Response

Comments from the Acting SAF/AQ did not address the specifics of the recommendation. The intent of our recommendation was for the Air Force to establish a performance and cost baseline for the F117 engine sustainment services. However, the Acting SAF/AQ explained the Air Force's approach to developing a price objective for the GISP contract option. A price objective is different than a system baseline. A price objective establishes the Government's initial negotiation position to assist the contracting officer's determination of a fair and reasonable price before contract award. In contrast, establishing a system baseline is one of the foundations for a strong product support strategy. A baseline is the "as-is" performance and costs of a system, and is used as a starting point when measuring progress. To develop a baseline, program officials need to identify, collect, and analyze all the information known about the system, including the sustainment and readiness performance history and associated operations and support costs.⁴⁵ Baselining the performance and costs associated with sustaining the F117 engines would also be useful for developing price objectives for future engine sustainment contracts and for monitoring the system.

In a mature, firm-fixed-price PBL arrangement, the Government should understand the services it is buying, as well as the performance requirements and costs. For example, the Air Force should understand the specific activities involved in sustaining its F117 engines, including supply chain management, and extent and frequency of maintenance, repair, and overhauls. However, the Air Force has been acquiring F117 engine sustainment services from Pratt & Whitney for over 10 years, and has not established performance and cost baselines in its PBL contracts.

⁴⁵ More specifically, baselining includes analyzing data on reliability, maintainability, availability, diagnostic predictions, failures, level of repairs, and maintenance tasks.

(~~FOUO~~) The Air Force is planning to award a new sole-source commercial, firm-fixed-price PBL contract for F117 engine sustainment directly to Pratt & Whitney. As part of its planned ESS contract, the Air Force expects to obtain the F117 engine fleet data to establish a performance and price baseline. However, the Air Force should establish these baselines before awarding a firm-fixed-price PBL arrangement. A baseline of the F117 engine sustainment services would allow the Air Force to measure any of Pratt & Whitney's performance process improvements and cost savings throughout the life of the PBL contract. Planning a sole-source, firm-fixed-price PBL contract without the system's sustainment and readiness performance history and cost information is not prudent. We request that the Acting SAF/AQ provide comments to the final report explaining how the Air Force intends to develop performance and cost baselines before it awards another PBL contract for F117 engine sustainment.

- b. Include a reporting requirement in all future sole-source, commercial, performance-based logistics contracts for F117 engine sustainment services so that data other than certified cost or pricing data is collected that would permit future re-baselining of the F117 engine sustainment services.**

Assistant Secretary of the Air Force (Acquisition) Comments

(~~FOUO~~) The Acting SAF/AQ agreed with our recommendation. The Acting SAF/AQ stated that the FY 2016 through FY 2017 GISP contract options will include a clause to allow the contract price to be reconciled every 6 months based on actual engine inductions. The Acting SAF/AQ also stated that Pratt & Whitney agreed to provide commercial pricing and performance data for the planned F117 ESS contract. Specifically, the Acting SAF/AQ stated that the ESS contract will allow the Air Force to collect 3 to 5 years' worth of supply chain management data, which market research has shown is needed to compete the engine sustainment efforts. The Acting SAF/AQ explained that the ESS contract will allow collection of necessary supply chain data and has been structured with potential off-ramps for competition after a 5-year base period and every 2 years thereafter. The Acting SAF/AQ stated that as pricing and technical data are acquired, the Government's leverage over Pratt & Whitney will grow. In addition, the Acting SAF/AQ stated that the Government's ability to compete the F117 engine sustainment services will incentivize Pratt & Whitney to implement cost savings measures.

Our Response

(FOUO) Comments from the Acting SAF/AQ partially addressed the recommendation. The Air Force's plans to include a clause to reconcile contract pricing in the FY 2016 through FY 2017 GISP contract options based on actual engine inductions is a positive first step in reducing risk of paying for inductions that never occur. However, the price per induction does not provide insight on which parts are being repaired or replaced, or the level of work required to repair engines to a serviceable status. Even if the Air Force is adjusting the number of inductions based on actuals, if the average price per induction has been overestimated, then the Air Force is paying too much for its F117 engine sustainment.

This recommendation builds upon our previous Recommendation 1.a. The Air Force should incorporate a clause in its FY 2016 through FY 2017 GISP contract option to collect uncertified cost or pricing data needed to establish and update the F117 engine sustainment cost baseline. We request the Acting SAF/AQ provide comments to the final report describing how the Air Force intends to collect this information during the FY 2016 through FY 2017 GISP contract option periods.

- c. Include metrics in any future performance-based logistics contracts for F117 engine sustainment services that would allow the Air Force to monitor the availability, reliability, and affordability of the F117 engine sustainment.**

Assistant Secretary of the Air Force (Acquisition) Comments

The Acting SAF/AQ agreed with our recommendation. The Acting SAF/AQ discussed metrics on both the current GISP contract and planned F117 ESS contract. Specifically, he stated that the GISP contract currently monitors serviceable propulsion systems and war readiness engines. The Acting SAF/AQ explained these metrics focus on engine availability and readiness and are similar to metrics monitored in the commercial market. For the future F117 ESS contract, the Acting SAF/AQ explained that the contract will contain key metrics to allow the Government to assess F117 engine sustainment program performance. The Acting SAF/AQ explained that the Air Force plans to measure engine availability through the number of serviceable propulsion systems and engine reliability through the mean time between engine removal metrics.

The Acting SAF/AQ further stated that establishing a quality baseline, focusing on component repair instead of replacement and repairing engines commensurate with system availability requirements, will help ensure system affordability. Finally, the Acting SAF/AQ stated that Air Force Life Cycle Management Center

engineering studies will ensure a reliable, affordable, and available engine is provided to the warfighter. For example, he mentioned the Engine Mission Usage Study that measures life-limited parts⁴⁶ and develops processes to safely extend the life of these parts. He stated these studies have an impact on mean time between removal, the number of overhauls required, and system sustainment costs.

Our Response

Comments from the Acting SAF/AQ partially addressed the recommendation. The Acting Assistant Secretary described the Air Force's plans to include metrics for measuring the availability and reliability of the F117 engines in the future F117 ESS contract. Although the Acting SAF/AQ stated his plan is to obtain data on component repair instead of replacement in the ESS contract, the Acting SAF/AQ did not discuss including a metric for affordability. Metrics are needed to monitor contractor performance in PBL contracts and incentivize contractors to achieve improvements in processes or products. We request that the Acting SAF/AQ clarify the specific metrics that will be included in the ESS contract to measure and monitor affordability and a planned date of completion.

- d. Obtain and use actual cost data from the Globemaster III Integrated Sustainment Program contract to support negotiations of a future sole-source, performance-based logistics contract for F117 engine sustainment to ensure a fair and reasonable price is negotiated.**

Assistant Secretary of the Air Force (Acquisition) Comments

(~~FOUO~~) The Acting Assistant SAF/AQ agreed with our recommendation. The Acting SAF/AQ explained the Air Force's plans for its future ESS contract negotiations, stating that the ESS Air Force Negotiation Team will remain in contact with the negotiation team for the FY 2015 through FY 2017 GISP contract option. The Acting SAF/AQ explained that the F117 ESS negotiation team has already received the GISP technical evaluation to support negotiations, which focused on price versus cost analysis because the F117 engine sustainment has historically been acquired as a commercial service and the contractor is not required to provide actual cost data. He stated that the ESS negotiation team also participated in the GISP contract clearance and peer review briefings. The Acting SAF/AQ further stated that the ESS negotiation team will receive all data made available to the GISP negotiation team. The Acting SAF/AQ explained that the Air Force plans to use commercial pricing data provided with the ESS proposal and historic pricing data from the GISP contract to support a negotiation baseline for the ESS contract.

⁴⁶ Life-limited parts have a service life limited to a specific number of engine cycles to avoid failure. The determination of part life is approved by the Federal Aviation Administration.

Our Response

(FOUO) Comments from the Acting SAF/AQ did not address the specifics of the recommendation. The intent of the recommendation was for the Air Force to collect data during contract performance to position itself for more effective negotiations on future F117 engine sustainment contracts. Although the FAR prohibits obtaining certified cost or pricing data to support negotiations for commercial contracts, it does not preclude collecting uncertified cost or pricing data during contract performance. According to the Acting SAF/AQ, the Air Force is planning to obtain pricing and performance data in the future ESS contract for use in determining a fair and reasonable price. However, the Air Force would benefit sooner from collecting uncertified cost or pricing data during performance of the GISP contract options to support future F117 engine sustainment contracts. According to the 2014 PBL Guidebook, actual cost data from current or previous PBL contracts are useful during negotiations of follow-on contracts to ensure the best value is negotiated. We would expect the Air Force to incorporate requirements in the current GISP contract options to collect cost information on the details of each F117 engine repair and overhaul. We request that the Acting SAF/AQ provide comments to the final report to describe what kind of data the Air Force plans to collect from the GISP contract to position itself for more effective negotiations in future F117 engine sustainment contracts.

Appendix A

Scope and Methodology

We conducted this performance audit from October 2014 through October 2015 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.

This report is the second in a series addressing the Air Force's acquisition of F117 engine sustainment services. Our objective was to determine whether the Air Force is purchasing sole-source F117 engine sustainment services at fair and reasonable prices through the GISP contract. We considered management comments from the Acting Assistant Secretary of the Air Force on a draft of this report. In addition, we met with Boeing and Pratt & Whitney officials, shared portions of the draft report, considered their comments, and made changes to the final report where appropriate.

Assessing the Air Force's Fair and Reasonable Price Determination

The Air Force officials awarded the GISP contract (FA8526-12-D-0001) for C-17 aircraft sustainment to Boeing on October 1, 2011. The Air Force determined that the GISP base contract, which included F117 engine sustainment services for FY 2012 to FY 2014, was awarded at a fair and reasonable price. Boeing subcontracted a portion of the GISP contract to Pratt & Whitney for F117 engine sustainment services.

We assessed whether the Air Force determination of fair and reasonable prices for F117 engine sustainment on the GISP base contract was in accordance with FAR, DFARS, and DFARS PGI requirements. For the DFARS PGI sections cited in this report, the DFARS uses directive language, indicating mandatory internal DoD procedures.⁴⁷ FAR subpart 15.4⁴⁸ requires contracting officers to acquire supplies and services at fair and reasonable prices. It also requires price reasonableness of subcontract costs to be established by the prime or subcontractor and analyzed by the contracting officer. FAR subpart 12.2⁴⁹ states that when pricing commercial items, the contracting officer must establish price reasonableness in accordance with FAR subpart 15.4.

⁴⁷ According to DFARS Subpart 202.1, "Definitions," PGI means a companion resource to the DFARS that contains both mandatory internal DoD procedures and non-mandatory internal DoD procedures, guidance and supplemental information. The DFARS uses directive language for mandatory procedures, such as "Follow the procedures at PGI..."

⁴⁸ FAR Subpart 15.4, "Contract Pricing."

⁴⁹ FAR Subpart 12.2, "Special Requirements for the Acquisition of Commercial Items."

To determine whether the Air Force obtained fair and reasonable prices for the GISP base contract's F117 engine sustainment services, we reviewed the sufficiency of the commercial sales data and other uncertified cost or pricing data the Air Force collected and the analysis performed to support its price reasonableness determination for F117 engine sustainment services. The F117 engine sustainment services represented more than 60 percent of the proposed GISP base contract price.

To evaluate whether the Air Force obtained sufficient data to support its analysis of the proposed F117 engine sustainment prices, we considered the circumstances of the acquisition, that is, a sole-source commercial services subcontract, and what data the Federal and Defense acquisition regulations required to support the price reasonableness determination for this type of acquisition. We interviewed the Air Force Life Cycle Management Center contracting officer, price analyst, and program manager regarding the GISP base contract, proposal analysis, and negotiations.

We reviewed the following documentation that the Air Force and Boeing used to support a fair and reasonable price determination for the proposed engine sustainment services for the FY 2012 through FY 2014 GISP base contract:

- GISP Price Negotiation Memorandum, December 21, 2012, and the GISP Price Negotiation Memorandum Revision 1, April 24, 2014;
- DCAA audit report on the GISP contract, October 21, 2011;
- NPF report on the GISP contract, December 20, 2012;
- Revision to NPF report, April 23, 2014;
- Boeing's Price Analysis Report of Pratt & Whitney's proposed prices, July 18, 2011;
- Boeing Technical Evaluation, December 2, 2010, and its Revision A, April 8, 2011;
- Boeing's Fact Finding questions to Pratt & Whitney and responses;
- GISP contract clearance, September 30, 2011;
- Memorandums documenting what occurred at a GISP peer review meeting on August 5, 2011; and
- Documents relating to requests for information to support the FY 2012 through FY 2014 F117 engine sustainment proposed pricing.

In addition, we visited Air Force Life Cycle Management Center officials from Tinker Air Force Base, Oklahoma, to determine the Air Force's plans for future F117 engine sustainment.

Use of Computer-Processed Data

We did not rely on computer-processed data to support our findings and conclusions.

Use of Technical Assistance

We did not use technical assistance in conducting this audit.

Prior Coverage

During the last 5 years, the DoD Inspector General (DoD IG) issued four reports discussing fair and reasonable pricing for sole-source, commercial spare parts, lack of contractor cooperation, and prime contractor's analysis of subcontractor's proposals. However, we included an additional report released 9 years ago because it addressed the predecessor contract, GSP. Unrestricted GAO reports can be accessed at <http://www.gao.gov>. Unrestricted DoD IG reports can be accessed at <http://www.dodig.mil/pubs/index.cfm>.

GAO

Report No. GAO-15-680, "DoD's Requests for Information from Contractors to Assess Prices," August 12, 2015

DoD IG

Report No. DODIG-2015-058,⁵⁰ "U.S. Air Force May Be Paying Too Much for F117 Engine Sustainment," December 22, 2014

Report No. DODIG-2014-088, "Defense Logistics Agency Aviation Potentially Overpaid Bell Helicopter for Sole-Source Commercial Spare Parts," July 3, 2014

Report No. DODIG-2014-077, "Hotline Complaint Regarding the Settlement of the Pratt & Whitney Commercial Engine Cost Accounting Standards Case," May 30, 2014

Report No. DODIG-2014-038, "Air Force Life Cycle Management Center Could Not Identify Actual Cost of F119 Engine Spare Parts Purchased From Pratt and Whitney," February 10, 2014

Report No. D-2006-101, "Procurement Procedures Used for C-17 Globemaster III Sustainment Partnership Total System Support," July 21, 2006

⁵⁰ See Appendix B for more information on this report.

Appendix B

Summary of Report DODIG-2015-058, “U.S. Air Force May Be Paying Too Much for F117 Engine Sustainment”

The DoD IG is performing a series of audits pertaining to the Air Force procurement of sustainment services for the F117 engine. The first audit, announced March 4, 2014, focused on evaluating whether the Air Force’s commerciality determination for F117 engine sustainment services provided by Pratt & Whitney was supported. A commerciality determination is critical because it affects the type of cost or pricing information needed to support contract negotiations and develop the Government’s negotiation position. The first audit produced Report No. DODIG-2015-058, “U.S. Air Force May Be Paying Too Much for F117 Engine Sustainment,” dated December 22, 2014, which discussed the insufficiency of the Air Force’s determination that the F117 engine sustainment services were commercial services.

Report Finding

Air Force contracting officers did not support their determination that the F117 engine sustainment services obtained through the GISP contract were, in fact, commercial services. Specifically, the Air Force acquired the sustainment services as sole-source commercial services; however, the Air Force contracting officers did not assess whether a commercial market existed for those services. This occurred because the contracting officers accepted Boeing’s and Pratt & Whitney’s commerciality claims and Air Force engineers’ opinions on commerciality without evaluating the research and rationale used to conclude that the sustainment services met the FAR commercial item definition. As a result, Pratt & Whitney increased its negotiation leverage by refusing to provide critical information that the Air Force needed to evaluate the prices for the F117 engine sustainment services. Without that information, Air Force contracting officials could not develop an effective bargaining position.

Report Recommendations and Management Comments

The report contained recommendations to the Assistant Secretary of the Air Force (Acquisition) (SAF/AQ); the Director, Defense Pricing; and the Director, Contracting Directorate, Air Force Life Cycle Management Center (AFLCMC). The Principal Deputy, Office of the Assistant Secretary of the Air Force (Acquisition & Logistics), responded for the SAF/AQ and the Director, Contracting Directorate, AFLCMC. Both the Principal Deputy, on behalf of the SAF/AQ and AFLCMC, and the Director, Defense Pricing agreed with our recommendations. A summary of the report’s recommendations and management comments follow.

DODIG-2015-058 Report Recommendation 1

The report recommended that the SAF/AQ require the contracting officer to:

- a. Obtain the necessary documentation to support the commerciality of the F117 engine sustainment service to be acquired through the FY 2015 through FY 2017 GISP contract option and any future contracts, as defined by FAR 2.101. If adequate support is not obtained, deem the service noncommercial.*
- b. Report Pratt & Whitney's refusal to provide requested information in the Contractor Performance Assessment Reporting System,⁵¹ as required by Air Force FAR Supplement MP5315.4, so it is available for use by contracting officials.*

Assistant Secretary of the Air Force (Acquisition) Comments

Regarding Recommendation 1.a, the Principal Deputy stated that a team composed of representatives from the Air Force, Navy Price Fighters, and Defense Contract Management Agency began collaborating in October 2014 to assess the commerciality and price reasonableness of the F117 engine sustainment services to be purchased in the FY 2015 through FY 2017 GISP contract option. The Principal Deputy stated that the contracting officer will use the team's recommendations, along with Boeing's updated GISP contract option proposal and other additional documentation Boeing or Pratt & Whitney provide to determine whether the F117 engine sustainment services are commercial. The Principal Deputy stated that if the definition of commerciality set forth in the FAR is not met, the contracting officer will deem the services noncommercial.

Regarding Recommendation 1.b, the Principal Deputy stated that the Contractor Performance Assessment Reporting System is used to report performance of the prime contractor, so reporting Pratt & Whitney's refusal within a Boeing report would not necessarily be visible to contracting officials working with Pratt & Whitney. However, the Principal Deputy explained that Boeing's failure to adequately document and assess commerciality determinations submitted in support of Pratt & Whitney's subcontractor proposals could be documented. An official from the Office of SAF/AQ further stated that the Air Force plans to report Boeing's management of Pratt & Whitney in the Contractor Performance Assessment System.

⁵¹ The Contractor Performance Assessment Reporting System is a web-enabled application that DoD uses to collect information on a contractor's performance to provide a record, both positive and negative, on a given contractor.

DODIG-2015-058 Report Recommendation 2

The report recommended that the SAF/AQ prepare a written plan that allows for the development of a competitive market for F117 engine sustainment.

Assistant Secretary of the Air Force (Acquisition) Comments

Regarding Recommendation 2, the Principal Deputy stated that a new F117 engine sustainment acquisition strategy was presented to the SAF/AQ in July 2014 and approved in October 2014. The Principal Deputy stated that an objective of the new strategy is to acquire technical and supply chain management data from Pratt & Whitney through a sole-source contract with Pratt & Whitney for F117 engine sustainment. The Principal Deputy explained that potential competitors for F117 engine sustainment would require 3 to 5 years of technical and supply chain management data to effectively compete and manage F117 engine sustainment. The Principal Deputy stated that the Air Force would assess the sole-source contract and management data obtained 3 years after contract award to determine whether it would continue the sole-source arrangement.

DODIG-2015-058 Report Recommendation 3

The report recommended that the Director, Defense Pricing:

- a. Establish policy for oversight of future Air Force contracts or subcontracts with Pratt & Whitney to ensure the Air Force has the necessary information to support commerciality and fair and reasonable price determinations before contract award.*
- b. Not allow the Air Force to contract with or consent to subcontract with Pratt & Whitney for F117 engine sustainment services unless Pratt & Whitney provides the necessary information to support commerciality and fair and reasonable price determinations.*
- c. Establish policy to instruct contracting officials as to what circumstances a contractor's redacted invoices would be acceptable as support for commerciality or fair and reasonable price determinations.*

Defense Pricing Comments

Regarding Recommendation 3.a, the Director, Defense Pricing stated that he and the Director, Defense Procurement and Acquisition Policy, will use the existing peer review process to ensure the Air Force has the necessary information to support commerciality and fair and reasonable price determinations before contract award.

Regarding Recommendation 3.b, the Director stated that the Air Force should not award or consent to a subcontract for F117 engine sustainment services unless Pratt & Whitney provides the necessary information to support commerciality and fair and reasonable price determinations. The Director explained that he acts as an adviser through the peer review process and oversight is the responsibility of the Service Acquisition Executive.⁵² The Director agreed to advise the Air Force Service Acquisition Executive accordingly. The Director also agreed to work with the Air Force to obtain the necessary information from Pratt & Whitney to support commerciality and fair and reasonable price determinations for F117 engine sustainment services during the review and approval of the acquisition plan in 2015. On November 25, 2014, the Director recommended to the SAF/AQ that he not enter into a contract with Pratt & Whitney for the sustainment, maintenance, repair, and overhaul of the F117 engine until the Air Force has obtained sufficient cost information from the contractor to determine that the Air Force is paying a fair and reasonable price.

Regarding Recommendation 3.c, the Director agreed to establish guidance. He stated that the March 2015 revision of the Commercial Item Handbook will describe when a contractor's redacted invoices would be acceptable for contracting officials to use as support for fair and reasonable price determinations.

DODIG-2015-058 Report Recommendation 4

The report recommended that the Director, Contracting Directorate, AFLCMC, perform a quality review of AFLCMC contracting officials' compliance with Federal and Defense acquisition regulations for commerciality determinations and, based on that review, consider corrective actions as appropriate.

Air Force Life Cycle Management Center Comments

The Principal Deputy responding for the Director, Contracting Directorate, AFLCMC, stated that the Contracting Director, Air Force Materiel Command, will perform the recommended review to ensure compliance both within AFLCMC and across the other Centers within Air Force Materiel Command. Based on that review, the Principal Deputy stated that the Contracting Director will consider corrective actions as appropriate. Additionally, the Principal Deputy stated that the Contracting Director will review internal control concerns addressed in the report, and, based on that review, will consider corrective actions as appropriate.

⁵² The Air Force Service Acquisition Executive is the SAF/AQ.

Appendix C

Commercial Acquisition Pricing Guidance

General Contract Type and Pricing Guidance

The FAR, DFARS, and DFARS PGI provide guidance on contract type selection and pricing. Specifically, FAR Subpart 16.1, “Selecting Contract Types” states that negotiating the contract type and negotiating prices are closely related and should be considered together, with the objective to negotiate a contract type and price that will result in reasonable contractor risk and provide the contractor with the greatest incentive for efficient and economical performance.

The Air Force acquired the F117 engine sustainment services through the GISP contract with Boeing, which subcontracted performance using a sole-source commercial, PBL arrangement with Pratt & Whitney. The circumstances of the F117 engine sustainment acquisition affect the contract type selection and pricing.

Contract Type

FAR subpart 16.1 states that contract types are grouped into two broad categories: fixed-price contracts and cost-reimbursement contracts. It explains that the contract types range from firm-fixed-price, in which the contractor has full responsibility for performance costs and profit or loss, to cost-plus-fixed-fee, in which the contractor has minimal responsibility for the performance costs and the negotiated profit is fixed. It further states that the firm-fixed-price contract best uses the basic profit motive of business enterprise, and should be used when the risk involved is minimal or can be predicted with an acceptable degree of certainty. FAR Subpart 16.2, “Fixed-Price Contracts,” specifies that a firm-fixed-price contract is suitable when acquiring commercial items or other items with reasonably definite functional details or specifications when the contracting officer can establish fair and reasonable prices at the outset. The FAR provides examples, such as when competition exists, there are reasonable price comparisons with prior purchases of the same or similar items/services, or when available cost or pricing data allows reasonable estimates of probable costs of performance. However, it states that when a reasonable basis for firm pricing does not exist, other contract types should be considered, and negotiations should be directed toward selecting a contract type (or combination of types) that will appropriately tie profit to contractor performance.

Contract Pricing

FAR Subpart 15.4, "Contract Pricing," describes the cost and price negotiation policies and procedures for pricing negotiated prime contracts, including commercial contracts. It also includes guidance for subcontract pricing. FAR subpart 15.4 states that contracting officers should purchase supplies and services from responsible sources at fair and reasonable prices. The FAR also requires price reasonableness of subcontract costs to be established by the prime or subcontractor and analyzed by the contracting officer. Therefore, the F117 engine sustainment commercial subcontract between Boeing and Pratt & Whitney performed through the GISP contract is required to be determined fair and reasonable by the contracting officer and is subject to the special acquisition requirements for commercial items.

Commercial Acquisition Guidance

Supplies and services that meet the FAR definition of a commercial item require use of the FAR Part 12, "Acquisition of Commercial Items." FAR part 12 prescribes the policies and procedures unique to the acquisition of commercial items, and implements the Federal Government's preference for the acquisition of commercial items by establishing policies more closely resembling those of the commercial marketplace and encouraging the acquisition of commercial items and components. FAR Subpart 12.1, "Acquisition of Commercial Items-General" requires that agencies conduct market research to determine whether commercial items are available that could meet the agency's requirements; acquire commercial items when they are available; and require prime contractors and subcontractors to incorporate commercial items supplied to the agency to the maximum extent practicable. FAR Subpart 12.2, "Special Requirements for the Acquisition of Commercial Items," generally states that agencies shall use firm-fixed-price contracts or fixed-price contracts with economic price adjustment for the acquisition of commercial items. The FAR further states that when pricing commercial items, the contracting officer must establish price reasonableness in accordance with FAR subpart 15.4 and should be aware of customary commercial terms and conditions.

Commercial Acquisition Pricing

To establish a fair and reasonable contract price, FAR subpart 15.4 states that contracting officers shall obtain certified cost or pricing data, when required. However, the FAR prohibits obtaining certified cost or pricing data when a commercial item is being acquired. Therefore, when certified cost or pricing data are not required, the FAR states that the contracting officer should obtain "data other than certified cost or pricing data" (uncertified cost or pricing data) as necessary to establish a fair and reasonable price. The FAR lists an order

of preference when determining what type of uncertified cost or pricing data are required to establish a fair and reasonable price. Specifically, it states that no additional data are required if the price is based on adequate competition; otherwise, data related to prices⁵³ or cost data are required to determine a fair and reasonable price. Because the F117 engine sustainment service was a commercial, sole-source acquisition, the FAR required the GISP contracting officer to obtain uncertified cost or pricing data to establish a fair and reasonable price.

DFARS Subpart 215.4, "Contract Pricing," states to follow the procedures at DFARS PGI 215.403-1, "Prohibition on Obtaining Certified Cost or Pricing Data (10 U.S.C. 2306a and 41 U.S.C. Chapter 35)," for pricing commercial items. This section of the PGI explains that "contracting officers must exercise care when pricing a commercial item, especially in sole-source situations." It further states that for commercial items, some form of prior non-Government sales data must be obtained, or the fact that the item was sold, leased, licensed, or offered for sale (either the specific product or service, or the product or service from which the item evolved). Commercial items are further discussed in FAR 15.403-3, "Requiring Data Other Than Certified Cost or Pricing Data." Specifically, the FAR states that when acquiring commercial items, at a minimum, the contracting officer must use price analysis to determine whether the price is fair and reasonable. It states that "the fact that a price is included in a catalog does not, in and of itself, make it fair and reasonable" and further refers to FAR 15.404-1, "Proposal Analysis Techniques." FAR 15.404-1 requires that at a minimum, the contracting officer shall obtain appropriate data, without certification, on the prices at which the same or similar items have previously been sold and determine if the data are adequate for evaluating the reasonableness of the price.

FAR 15.403-3 explains that if the contracting officer cannot make a determination as to whether the offered price is fair and reasonable using price analysis, even after obtaining additional data from sources other than the offerer, then the contracting officer shall require the offerer to submit uncertified cost or pricing data to support further analysis, to include history of sales to non-governmental and governmental entities, cost data, or any other information the contracting officer requires to determine the price is fair and reasonable. The FAR also requires that the data include prices at which the same or similar items have been previously sold, adequate for determining the reasonableness of the price. Additionally, DFARS PGI 215.403-3, "Requiring Data Other Than Certified Cost or Pricing Data," states that sales data must be comparable to the quantities, capabilities, specifications, and so on, of the product or service proposed and

⁵³ Data related to prices can be established through catalog or market price. The FAR further specifies that the contracting officer should rely first on data available within the Government, second on data from other sources, and third on data from the offerer.

sufficient steps must be taken to verify the integrity of the sales data. It further states that before relying on a prior price paid by the Government, the contracting officer must verify and document that sufficient analysis was performed to determine that the prior price was fair and reasonable and that the prices previously paid were for quantities consistent with the current solicitation.

Sole-Source Commercial Acquisition Pricing

DFARS subpart 215.4 and its PGI include specific requirements for sole-source, commercial item acquisitions. Specifically, DFARS 215.402, "Pricing Policy" states to follow the procedures at PGI 215.402 when conducting cost or price analysis, particularly with regard to acquisitions for sole-source commercial items. DFARS PGI 215.402 states that when an item is determined to meet the definition of a commercial item and the contract is being awarded on a sole-source basis, it is critical to obtain sufficient data or information from the offerer. This includes commercial sales information of items sold in similar quantities, as well as cost data to support the proposed price if sales information is insufficient. DFARS PGI 215.403-3 adds that,

sole-source commercial items require extra attention to verify that previous prices paid on Government contracts were sufficiently analyzed and determined to be fair and reasonable. At a minimum, a contracting officer reviewing price history shall discuss the basis of previous prices paid with the contracting organization that previously bought the item. These discussions shall be documented in the contract file.

Furthermore, DFARS PGI 215.404-1, "Proposal Analysis Techniques" states that "particular attention should be paid to sole source commercial supplies or services." It states that if the contracting officer cannot determine price reasonableness without obtaining uncertified cost or pricing data from the offerer, at a minimum, the contracting officer must obtain appropriate information on the prices at which the same or similar items have been sold previously. The DFARS PGI further states that if previous sales information is not sufficient to determine price reasonableness, the contracting officer must obtain uncertified cost or pricing data and perform a cost analysis, if necessary. It also states the following:

in some cases, commercial sales are not available and there is no other market information for determining fair and reasonable prices. This is especially true when buying supplies or services that have been determined to be commercial, but have only been "offered for sale" or purchased on a sole source basis with no prior commercial sales upon which to rely. In such cases, the contracting officer must require the offeror to submit whatever cost information is needed to determine price reasonableness.

DFARS PGI 215.404-1 further states that when purchasing sole-source commercial items, the contracting officer must request non-Government sales data for quantities comparable to those in the solicitation. In addition, if there have not been any non-Government sales, the contracting officer should obtain uncertified cost or pricing data and perform a price or cost analysis, as required.

In summary, based on FAR and DFARS requirements for sole-source, commercial items, it is critical to obtain sufficient information from the offerer. At a minimum, this includes the contracting officer obtaining commercial, non-Government sales information of the same or similar items previously sold, in similar quantities. If this information is insufficient to determine price reasonableness or there have not been any non-Government sales, the contracting officer must obtain uncertified cost or pricing data, to include cost data, and perform a price or cost analysis.

Appendix D

Air Force Future Plans for F117 Engine Sustainment

(FOUO) Since 2009, the Air Force has been planning to acquire F117 engine sustainment directly from a contractor, rather than through the GISP contract with Boeing for C-17 sustainment services. [REDACTED]

[REDACTED] While the Air Force has taken steps to improve its planned F117 engine sustainment contract structure over the GISP contract, the Air Force intends to rely solely on Pratt & Whitney to provide technical and cost data needed to effectively compete future F117 engine sustainment. However, over the past 6 years, the Air Force has yet to successfully accomplish removing the F117 engine sustainment from the GISP contract. Listed below are key events relating to Air Force attempts to contract directly for F117 engine sustainment services.

1. 2009—The Secretary of the Air Force directed that the F117 engine sustainment services be removed from the GISP contract to achieve cost savings⁵⁴ and increase competition. The Air Force Life Cycle Management Center Propulsion Sustainment Division at Tinker Air Force Base, Oklahoma, was tasked with developing a new acquisition plan to support this new direction for F117 engine sustainment.
2. (FOUO) 2011—According to Air Force officials, the Air Force developed an initial strategy to competitively acquire the overhaul and repair of the F117 engines. The strategy also included [REDACTED]
[REDACTED] until the Air Force could collect enough technical data to compete those aspects of sustaining its F117 engine fleet. However, Air Force senior leadership stopped the sole-source contract for supply chain management services and directed it be included in the competitive award. This strategy never went any further and was abandoned.
3. (FOUO) 2012—The Air Force updated the initial approach for F117 engine sustainment, which involved awarding two noncommercial contracts. One competitive contract would be for F117 engine overhaul, and depot supply chain management after a 2-year transition period.

[REDACTED] According to a representative from the Office of Defense Pricing,
[REDACTED]

⁵⁴ (FOUO) [REDACTED]

- (FOUO) [REDACTED]
[REDACTED]
[REDACTED] The Air Force later recommended switching to a commercial contract in November 2012 after further discussions with industry.
4. (FOUO) 2013—The SAF/AQ approved the revised strategy for F117 engine sustainment. The revised Air Force acquisition approach included awarding two commercial, PBL contracts. One competitive contract would be for the F117 engine overhaul, and depot supply chain management after a 2-year transition period. [REDACTED]
[REDACTED]
[REDACTED]
 5. (FOUO) April 2013—The Air Force issued a solicitation associated with the revised strategy. According to Air Force officials, no viable offers were received from this solicitation.
 6. (FOUO) November 2013—The Air Force canceled the solicitation and sought industry feedback to understand why no viable offers were received. According to an Air Force survey, industry sources stated that they would be reliant [REDACTED]
[REDACTED]
[REDACTED] Industry sources responded that the solicitation did not promote competition because the industry sources could not use their Federal Aviation Administration-approved, non-OEM sources of supply for parts and repairs. The Air Force has not approved any non-OEM parts for use on the F117 engine. Additionally, industry sources responded that the Air Force lacked sufficient engine data necessary for accurate supply chain management forecasting.
 7. (FOUO) April 2014—The Air Force completed additional market research to support a new acquisition strategy for F117 engine sustainment. The Air Force reported that industry sources lacked technical and supply chain management data necessary to compete for F117 engine sustainment. Some industry sources surveyed were also concerned with the limited availability of historical engine data, including flight data, overhaul data, and access to technical manuals. An Air Force official stated there were no other companies currently approved to manufacture parts for the F117 engine, [REDACTED]
 8. (FOUO) July 2014—The Air Force developed a new sole-source strategy for Pratt & Whitney to provide F117 engine sustainment. This strategy may allow the Air Force to gather engine data to become a more informed customer and to compete the overhaul and supply chain management portion of engine sustainment in the future if deemed beneficial.

9. (FOUO) October 2014—The SAF/AQ approved the new strategy, which included awarding a sole-source, PBL contract directly to [REDACTED]
[REDACTED]
10. (FOUO) February 2015—The Air Force issued the sole-source solicitation
[REDACTED]
[REDACTED]

(FOUO) The planned contract for F117 engine sustainment differs from the GISP contract in that the Air Force is planning to include additional performance metrics to monitor Pratt & Whitney's performance on the contract. The Air Force also plans to include an extensive list of data requirements in the future F117 engine sustainment contract to acquire the technical and supply chain management data needed to allow the Air Force to be a more informed customer and be in the position to compete the F117 engine sustainment services or perform the services itself. According to Air Force officials, market research suggested 3 to 5 years of supply chain management data were needed to successfully compete the Air Force's F117 engine sustainment requirements.

Management Comments

Assistant Secretary of the Air Force (Acquisition)



DEPARTMENT OF THE AIR FORCE
WASHINGTON DC 20330-1060

OFFICE OF THE ASSISTANT SECRETARY

NOV 30 2015

MEMORANDUM FOR Department of Defense Inspector General (DoDIG), ATTN:
Assistant Inspector General Acquisition, Parts and Inventory

SUBJECT: U.S. Air Force Response to DoDIG Project No. D2015-D000AG-0036.000,
October 29, 2015, entitled *U.S. Air Force Spent Billions on F117 Engine
Sustainment Without Knowing What is a Fair Price*

1. The Office of the Assistant Secretary of the Air Force (Acquisition) (SAF/AQ) has reviewed the subject draft report and endorses the attached responses which incorporate inputs from the Air Force Program Executive Officer for Mobility (AFLCMC/WL).

2. My point of contact is (b)(6) and can be reached by phone at (b)(6)
(b)(6) or email at (b)(6)

RICHARD W. LOMBARDI
Acting Assistant Secretary of the Air Force
(Acquisition)

Attachment:
SAF/AQ Response to F117 Engine Sustainment DoDIG Draft Report

Assistant Secretary of the Air Force (Acquisition) (cont'd)



DEPARTMENT OF THE AIR FORCE
AIR FORCE LIFE CYCLE MANAGEMENT CENTER
WRIGHT-PATTERSON AIR FORCE BASE OHIO

20 NOV 2015

MEMORANDUM FOR DoD Inspector General

FROM: AFLCMC/WL

SUBJECT: DoDIG Draft Report U.S. Air Force Spent Billions on F117 Engine Sustainment
Without Knowing What is a Fair Price (Proj No. D2015-D000AG-0036.000)

1. The C-17 Program Office along with AFSC/PK-R and AFLCMC/LPS, reviewed the subject report and provided the attached response to the recommendations. The C-17 Program Office has ensured that negotiated prices were fair and reasonable, and will continue to make the best value and data driven decisions for F117 engine sustainment.

2. My point of contact on this matter is (b)(6)

KEVIN W. BUCKLEY, SES
Program Executive Officer for Mobility

2 Attachments

1. C-17 Response
2. Security Classifications Review Form

Note: Attachment 2, Security Classifications Review Form is not included in the report.

Assistant Secretary of the Air Force (Acquisition) (cont'd)

SAF/AQ Response
U.S. Air Force Spent Billions on
F117 Engine Sustainment Without
Knowing What is a Fair Price
Project no. D2015-D000AG-0036.000

General Response: Commercial Item Determinations and Commercial Item pricing have been a source of concern for DoD for many years. In an effort to have improved fidelity into commercial pricing and improved fiduciary oversight, the Air Force has been working with the Director, Defense Pricing and Director, Defense Procurement Acquisition Policy (DPAP) to establish and implement new business processes/policies. Specifically, the Air Force has been collaborating with DPAP and the Defense Contract Management Agency (DCMA) to create Commercial Pricing Cells to aid in pricing decisions on commercial items for military procurement, to include commercial item determinations and commercial pricing. Based upon this new program we foresee continued progress in this area. Additionally, as was utilized during the current F117 negotiations as well as other acquisitions, a collaboration between DCMA, Defense Contract Audit Agency (DCAA), Navy Price Fighters and the Air Force Negotiation Teams has been implemented to have improved fidelity into the commercial pricing and industry practices as well as to guarantee better pricing in future acquisitions.

The following provides a response to the recommendations in the report.

Recommendation 1. We recommend that the Assistant Secretary of the Air Force (Acquisition):

1.a. Establish a baseline for the performance and costs of the F117 engine sustainment services before it awards any future performance-based logistics F117 engine sustainment contracts.

Response 1.a. Concur

~~(FOUO)~~ The GISP AFNT, comprised of members from the C-17 program office, the Navy Price Fighters, and the Defense Contract Management Agency (DCMA) Commercial Pricing Cell, viewed various sources to develop a price objective for the FY15-FY17 F117 engine sustainment option on the GISP contract. The following data was reviewed: terms and conditions for the PW2000 in the commercial marketplace, commercial contracts for the PW4000, overhaul invoice summaries and competition results for the C-32 PW2040 engine efforts, historical C-17 Globemaster Sustainment Partnership and Globemaster Integrated Sustainment Program (GSP/GISP) induction prices, periods of performance (PoP) and Delta TechOps Rough Order of Magnitude (ROM). Additionally, three independent market studies on the PW2000 assessed for price comparison purposes included the 2007 AeroStrategy Report (provided by Boeing), the 2013 International Bureau of Aviation Engine Book Value and the 2014 Collateral Verifications report (provided by P&W). Moving forward, the F117 Engine Sustainment Support (ESS) Contract will utilize data from the FY15-17 GISP to establish a price/performance baseline. Through extensive reviews and assistance from outside sources, such as those listed above, the GISP program has ensured that negotiated prices are fair and reasonable. The ESS contract will continue to refine the established price baseline and build on the performance baseline from GISP through the utilization of key metrics. This combined data will allow the USG to make best value/data driven decisions for F117 sustainment to include the potential for competition of workload.

1.b. Include a reporting requirement in all future sole-source, commercial, performance-based logistics contracts for F117 engine sustainment services so that data other than certified cost or pricing data is collected that would permit future re-baselining of the F117 engine sustainment services.

Assistant Secretary of the Air Force (Acquisition) (cont'd)

Response 1.b. Concur with Comments

~~(FOUO)~~ The FY16-FY17 GISP options will meet the intent of the recommendation. The contract options contain a clause allowing the contract price to be reconciled every six months to account for actual engine inductions. This prevents the contractor from proposing an excessive amount of risk, prevents the Air Force from paying for inductions that do not occur. Additionally, Pratt and Whitney (P&W) has agreed to provide commercial pricing and performance data for ESS which will ensure continuance of a fair and reasonable price and allow the USG to make best value decisions for F117 sustainment. For example, market research has shown that with 3-5 years' worth of supply chain data, engine sustainment efforts could be competed. Accordingly, ESS will allow the collection of the necessary supply chain data and has been structured with potential off-ramps for competition after a five year base period and every two years thereafter. The USG's ability to compete this workload will incentivize P&W to implement cost savings measures in order to help ensure a long term contract with the USG. Overall, as pricing and technical data is acquired on the F117 ESS contract, the USG's leverage over P&W will continue to grow.

1.c. Include metrics in any future performance-based logistics contracts for F117 engine sustainment services that would allow the Air Force to monitor the availability, reliability, and affordability of the F117 engine sustainment.

Response 1.c. Concur with Comments

The GISP contract currently monitors Serviceable Propulsion System (SPS) and War Readiness Engines (WRE), which focus on engine availability and engine readiness. These metrics are similar to metrics monitored in the commercial market. The F117 ESS contract will contain key metrics to allow the USG to assess the performance of the F117 sustainment program. For example, to measure availability, the F117 ESS contract will measure the number of serviceable spare engines available to meet the wartime needs of the C-17 weapon system. By monitoring metrics such as Mean Time Between Removal (MTBR), the F117 ESS contract will ensure a reliable engine is provided to the warfighter. The establishment of a quality baseline, focusing on component repair vice replacement, and driving whole engine repairs commensurate with system availability requirements (avoiding over production) will help ensure system affordability. Additionally, AFLCMC/LPS engineering evaluation studies such as the Engine Mission Usage Study (EMUS) will ensure a reliable, affordable, and available engine is provided to the warfighter. The EMUS effort measures Life Limited parts on the engine and develops processes to extend the life of these parts with no residual system safety risks. These studies have a direct impact on the Mean Time Between Removals, the number of overhauls required, and system sustainment costs.

1.d. Obtain and use actual cost data from the Globemaster III Integrated Sustainment Program contract to support negotiations of a future sole-source, performance-based logistics contract for F117 engine sustainment to ensure a fair and reasonable price is negotiated.

Response 1.d. Concur with Comments

~~(FOUO)~~ The FY15-FY17 GISP AFNT will remain in contact with Tinker AFB's F117 Engine Sustainment Support (ESS) AFNT. The ESS AFNT has received the GISP technical evaluation to support negotiations, which included input from the C-17 program office, the Navy Price Fighters, and DCMA Commercial Pricing Cell. The ESS AFNT has participated in the GISP AFNT clearance and Peer Review briefings. The ESS AFNT will receive all data made available to the GISP AFNT. Since F117 sustainment under GISP has historically been acquired as a commercial service (FAR 12) and the contractor is not required to furnish actual cost data, the GISP AFNT has focused on price versus cost

Assistant Secretary of the Air Force (Acquisition) (cont'd)

analysis. However, by utilizing commercial pricing data provided with the ESS proposal and historic pricing data from the GISP contract, the F117 ESS contract will have a well-documented/ supported negotiation baseline. This enhanced insight into the pricing and technical aspects of the sustainment program will further strengthen our ability to negotiate a fair and reasonable price.

Acronyms and Abbreviations

DCAA	Defense Contract Audit Agency
DFARS	Defense Federal Acquisition Regulation Supplement
FAR	Federal Acquisition Regulation
GAO	Government Accountability Office
GISP	Globemaster III Integrated Sustainment Program
GSP	Globemaster III Sustainment Partnership
NPF	Navy Price Fighters
OEM	Original Equipment Manufacturer
PBL	Performance-Based Logistics
PGI	Procedures, Guidance, and Information
PSM	Product Support Manager
SAF/AQ	Assistant Secretary of the Air Force (Acquisition)
USD(AT&L)	Under Secretary of Defense for Acquisition, Technology, and Logistics

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