

# OFFICE OF THE INSPECTOR GENERAL

SOURCE APPROVAL PROCESS FOR F404 ENGINE CRITICAL SAFETY ITEMS AND OTHER PROCUREMENT PRACTICES AT THE NAVAL AVIATION SUPPLY OFFICE

Report No. 95-288

August 7, 1995

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# **Department of Defense**

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Acronyms

ASO BOSS CFA NADEP NAVAIR Naval Aviation Supply Office Buy Our Spares Smart Cognizant Field Activity Naval Aviation Depot Naval Air Systems Command



INSPECTOR GENERAL DEPARTMENT OF DEFENSE 400 ARMY NAVY DRIVE ARLINGTON, VIRGINIA 22202-2884



August 7, 1995

#### MEMORANDUM FOR ASSISTANT SECRETARY OF THE NAVY (FINANCIAL MANAGEMENT AND COMPTROLLER)

#### SUBJECT: Audit Report on the Source Approval Process for F404 Engine Critical Safety Items and Other Procurement Practices at the Naval Aviation Supply Office (Report No. 95-288)

We are providing this audit report for review and comment. This is the first of two reports from our audit of allegations to the Defense Hotline involving spare parts procurements. Management comments on a draft of this report were considered in preparing the final report.

DoD Directive 7650.3 requires that all recommendations be resolved promptly. Navy comments on a draft of this report were responsive to all recommendations except Recommendation 1.c., which is unresolved. Therefore, we request that the Navy reconsider its position and provide comments on the unresolved recommendation by October 6, 1995.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Mr. Garold E. Stephenson, Audit Program Director, at (703) 604-9332 (DSN 664-9332) or Mr. Eugene E. Kissner, Audit Project Manager, at (703) 604-9323 (DSN 664-9323). See Appendix H for the report distribution. The audit team members are listed inside the back cover.

David H. Stunsma

David K. Steensma Deputy Assistant Inspector General for Auditing

#### Office of the Inspector General, DoD

Report No. 95-288 (Project No. 4CH-8010) August 7, 1995

#### Source Approval Process for F404 Engine Critical Safety Items and Other Procurement Practices at the Naval Aviation Supply Office

#### **Executive Summary**

**Introduction.** This report is the first of two reports from our audit of allegations to the Defense Hotline concerning spare parts procurements for items such as the F404 engine. The Navy uses the F404 engine in its FA-18 aircraft. The Naval Aviation Supply Office is responsible for procuring the spare parts for the F404 engine.

Audit Objectives. The overall audit objectives were to evaluate the timeliness of the Navy technical qualification process (the source approval process) for contractors requesting approval to supply critical safety items to the Navy for the F404 engine and to evaluate alleged overpricing on selected spare parts procured by the Naval Aviation Supply Office and the Defense Logistics Agency. This report discusses three allegations concerning the timeliness of the source approval process for F404 engine critical safety items. We also expanded our scope to include an additional eight allegations to the Defense Hotline on procurement practices. We evaluated the adequacy of the Naval Aviation Supply Office management control program as it related to the source approval process. The second report will discuss allegations concerning the reasonableness of prices for selected spare parts procured by the Naval Aviation Supply Office and the Defense Logistics Agency.

Audit Results. Of the 11 allegations to the Defense Hotline, 5 had merit and 6 did not have merit. See Appendix C for a discussion of each of the 11 allegations.

o Three allegations concerned the timeliness of the Navy source approval process. All three had merit. Officials at the Naval Aviation Supply Office, the Naval Aviation Depot Jacksonville, and the Naval Air Systems Command did not evaluate, within established performance goals for timeliness, requests from contractors to become approved sources for critical safety items. The Navy had decreased the time needed for source approval from 517 days in 1991 to 322 days, but is still short of the 180 day performance goal. Consequently, the Navy had a backlog of requests, which hindered competitive procurement of critical safety items for the F404 engine. The management control program could be improved because we identified material weaknesses applicable to the source approval process for critical safety items (Appendix A). See the finding in Part I for details.

o Eight allegations concerned alleged inappropriate procurement practices by the Naval Aviation Supply Office. Two of the eight allegations had merit.

The Naval Aviation Supply Office failed to provide to the complainant the results of production lot testing of the primary flap for the F404 engine within 30 days as required by the contract. The Naval Aviation Supply Office did not forward the authorization for the test until 64 days after the sample arrived at the testing site. We believe that the delay was a one-time oversight and not indicative of a systemic problem at the Naval Aviation Supply Office.

The postaward announcement of a procurement described the item procured only by its national item identification number. The Naval Aviation Supply Office recognized the discrepancy and revised the computer program used to generate the announcements to include in future announcements a physical description of the item procured.

The other six allegations concerned cancellations of contracts and requests for proposals. The allegations did not have merit (Appendix C).

The recommendations in this report, if implemented, will improve management controls, help improve the timely processing of source approval requests, and increase competitive procurements of critical safety items for the Navy. If processing is expedited for the source approval requests for four critical safety items with pending procurement requirements and if the items are competitively procured, the Navy will have about \$1.4 million to put to better use during FY 1995 and FY 1996. Appendix F summarizes the potential benefits of the audit.

Summary of Recommendations. We recommend that the Navy promptly complete the evaluation of source approval requests for the four critical safety items that have pending procurements, implement performance measurement systems for the source approval process, and, at each activity involved in the source approval process, designate an official that has responsibility for controlling the source approval program. We recommend training on the source approval process and reconciliation of management information systems.

Management Comments. The Navy concurred with the recommendations and with potential monetary benefits of \$1.4 million. See Part I for a summary of management comments and Part III for the complete text of management comments.

Audit Response. As a result of the Navy comments, we reduced the potential monetary benefits from \$3.5 million to \$1.4 million. We also deleted the additional costs to noncompetitively procure critical safety items while requests for source approval were being processed. The Navy comments were responsive to all recommendations except the recommendation to designate officials that have the responsibility and the authority to control the source approval program. The Navy stated that it has officials at each site to oversee the source approval process, but that the officials do not enforce processing requirements because of limited resources. We believe that, until the Navy clearly states in writing the responsibility and the authority of officials designated to control the source approval program, little progress will be made toward meeting established performance goals for processing source approval We request that the Navy reconsider its position on the unresolved requests. recommendation and provide comments by October 6, 1995, in response to the final report.

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# **Part I - Audit Results**

## Audit Background

This audit resulted from allegations to the Defense Hotline involving spare parts procurements. The audit evaluated allegations concerning the source approval process for F404 engine critical safety items and other procurement practices at the Naval Aviation Supply Office (ASO). Appendix B summarizes prior audits of the Navy's source approval process.

**F404 Engine Parts.** The Navy uses the F404 engine in the FA-18 aircraft. General Electric Company designed and built the engine in 1976. Pratt and Whitney Aircraft Company is a secondary source manufacturer of the F404 engine. From 1976 through 1993, the Navy procured 2,125 F404 engines, valued at \$3.7 billion. The F404 engines consisted of 1,910 engines from General Electric and 215 engines from Pratt and Whitney Aircraft Company. The F404 engine has 1,884 parts. As of September 30, 1994, 624 (about 33 percent) of the 1,884 parts in the F404 engine were procured competitively; 445 parts (about 24 percent) were procured from the actual manufacturer, and 815 parts (about 43 percent) were procured from the engine prime contractor, or the design control agent for the part.

**Critical Safety Items.** The Navy requires that critical safety items be procured only from qualified sources. A critical safety item (which the Navy formerly called a flight critical part) is a part, assembly, installation, or production system with one or more critical characteristics that, if not conforming to design data or quality requirements, would result in an unsafe condition. Of the 1,884 parts in the F404 engine, 1,482 (about 79 percent) are critical safety items that must be procured from the engine prime contractor, from the design control agent for the item identified by the prime contractor, or from other qualified sources approved by the Navy.

Qualification Requirements. Public Law 98-525, "Department of Defense Authorization Act, 1985," October 19, 1984, contains the Defense Procurement Reform Act of 1984 that requires DoD to promote and provide for competitive procurement of supplies and services whenever feasible. The statute recognizes that certain items can only be procured from qualified sources. However, the statute stipulates that only essential qualification requirements (testing or other quality assurance demonstration) must be completed by a prospective contractor to become an approved source for the item. The statute also requires an open, fair, and orderly process that encourages and enables new supply sources to demonstrate their qualifications in the least costly and time-consuming manner. An agency imposing a qualification requirement must promptly inform a contractor when its qualification has been approved, and, if not approved, provide specific information on the reasons that the contractor was not determined to be a qualified source. The applicable portions of Public Law 98-525 are codified at United States Code, title 10, section 2319, and are implemented in Federal Acquisition Regulation subpart 9.2, "Qualification Requirements."

Approving New Sources For Critical Safety Items. The Naval Air Systems Command (NAVAIR) has technical oversight responsibility for aircraft spare parts procurement and is responsible for approving new sources for critical safety items. NAVAIR has delegated to ASO the authority to approve as new sources contractors who have manufactured the critical safety items for the prime contractor or who have been approved by NAVAIR to provide similar critical safety items within the past 2 years. The cognizant field activity (CFA) is the activity or depot that is assigned primary support responsibility for the weapon system. NAVAIR delegated to the CFA the authority to approve new sources for critical safety items except those items that are life-limited or fatigue-sensitive. Life-limited parts require scheduled periodic replacement. Fatigue-sensitive parts are subject to failure because they operate in a hot section of the engine. The Naval Aviation Depot (NADEP) Jacksonville was designated the CFA for the F404 engine in September 1992. Before September 1992, NADEP North Island was the CFA for the F404 engine.

Guidance on Qualifying Contractors To Supply Flight Critical Items. The ASO brochure, "Source Approval Information," revised January 1995, provides guidance to contractors on procedures for submitting source approval requests. The Source Development Division at ASO is the focal point for receipt and evaluation of requests from contractors to become qualified sources for aircraft engine spare parts. Contractors seeking to become qualified sources are required to submit requests in writing to ASO, along with drawings, specifications, and other evidence to show that they are capable of manufacturing the parts. The Navy "Buy Our Spares Smart [BOSS] Desktop Reference Manual" (the BOSS manual), published in June 1991 and revised in January 1995, deals with technical reviews for new sources of critical safety items. It provides guidance to personnel at ASO, CFAs, and NAVAIR on the process for qualifying contractors to supply critical safety items to the Navy. The BOSS manual establishes procedures, including performance goals, for processing source approval requests.

Reducing Cycle Times. A September 14, 1994, memorandum from the Secretary of Defense challenges the Military Departments and Defense agencies to establish performance agreements that will reduce DoD cycle times by at least 50 percent by the year 2000. Cycle time is a term used to describe the period of time to accomplish a repetitive process. Processing source approval requests from contractors is an example of cycle time. The Secretary of Defense states that, by reducing cycle times, the Government can achieve the goals of the Vice President's National Performance Review, which are to reduce infrastructure cost, to streamline processes, and to improve customer service. In his memorandum, the Secretary of Defense states that reducing cycle time is important because time is money. By consuming personnel's time with lengthy processes, the Government pays enormous and unnecessary infrastructure costs that limit the Government's ability to fund warfighting requirements.

## **Audit Objectives**

The overall audit objectives were to evaluate the timeliness of the Navy's technical qualification process (the source approval process) for contractors requesting approval to supply critical safety items to the Navy for the F404 engine and to evaluate alleged overpricing on selected spare parts procured by ASO and the Defense Logistics Agency. This report discusses three allegations concerning the timeliness of the source approval process for F404 engine critical safety items, and we expanded our scope to include an additional eight allegations to the Defense Hotline on procurement practices. We also evaluated the adequacy of the ASO management control program applicable to the source approval process. The objective concerning overpricing on selected spare parts will be discussed in a subsequent report.

# **Approving New Sources for Flight Critical Parts**

The Navy did not evaluate, within established performance goals for timeliness, requests from contractors to become qualified sources of supply for critical safety items for the F404 engine. The Navy did not promptly evaluate the requests because of the following:

o The Navy has not implemented performance measurement systems to determine whether the Navy is meeting performance goals established for evaluating source approval requests from contractors.

o The guidance that ASO provided to contractors needed improvement to help ensure that the contractors submitted adequate technical data with their source approval requests and ASO officials did not promptly obtain from the contractors the data needed to evaluate the requests.

o The management information systems at ASO, NADEP Jacksonville, and NAVAIR did not provide accurate information needed by management to monitor and control the processing of source approval requests.

As a result, the Navy had a backlog of source approval requests, which restricted competitive procurement of critical safety items for the F404 engine. We calculated that approval of the backlogged source approval requests could result in competitive procurements of the parts and \$1.4 million made available for better use.

#### Source Approval Program

**Prioritizing Source Approval Requests.** A contractor desiring to become a new source of supply for a critical safety item must obtain engineering source approval before ASO can procure the item from the new source. The BOSS manual requires that ASO prioritize source approval requests upon receipt according to Navy requirements and according to the dollar value of the procurements. ASO is required to update the priorities monthly. The priorities are as follows:

o Priority 1 - Active procurement requirements greater than \$500,000,

o Priority 2 - Active procurement requirements greater than \$55,000 but less than \$500,000,

o Priority 3 - Projected annual requirements greater than \$500,000, and

o Priority 4 - Projected annual requirements greater than \$55,000 but less than \$500,000.

An active procurement requirement means that a procurement has been initiated. Projected annual requirements mean that procurements will be required, but have not yet been initiated.

ASO is required to advise the contractor of the approval or disapproval of a priority 1 or 2 source approval request within 180 days of receipt of the request. If additional time is required to process the request, ASO must advise the contractor of the date on which approval or disapproval will be provided.

**Processing Source Approval Requests.** The Navy's performance goal is to evaluate priority 1 and 2 source approval requests for critical safety items within 180 days of receipt. The source approval process for critical safety items consists of four phases.

o Phase I - ASO checks source approval requests and obtains missing information from the contractors. ASO also checks with the Defense Plant Representative Office to find out whether items are "pass through" and, if so, who the actual manufacturers are.

o Phase II - ASO engineers and technical personnel analyze the technical data submitted with the requests. ASO may approve the request if the new source has manufactured the critical safety item for the prime contractor within the previous three years or if the new source has been approved by NAVAIR to supply a similar critical safety item within the previous two years. Before approving the request, ASO must confirm with the CFA responsible for the item that the item is not life-limited or fatigue-sensitive, and that no design changes are pending. ASO must also confirm that the new source will use subcontractors for critical processes that have been approved by the prime contractor, and must require first article tests on the items provided by the new source.

o Phase III - ASO forwards source approval requests that it cannot approve to the CFA responsible for the particular aircraft. Engineers at the CFA perform an in-depth analysis of the request. The CFA may approve source approval requests for critical safety items that are not life-limited or fatigue-sensitive.

o Phase IV - NAVAIR engineers analyze source approval requests that ASO or the CFA have not approved. NAVAIR evaluates, among other things, design stability, critical performance characteristics, testing requirements, manufacturing methods, and quality assurance issues for the requests. If additional information is needed by the CFA or by the NAVAIR to evaluate a source approval request, ASO acts as an intermediary between the contractor and the CFA or the NAVAIR to obtain the needed information from the contractor. Appendix D shows an overview of the source approval process.

## Meeting Performance Goals for Evaluating Source Approval Requests

Average Time to Evaluate Source Approval Requests. Because the Navy's management information systems contained limited information on source approval processing dates, we could only determine the average evaluation time from prioritization date to completion date for 19 requests evaluated by ASO before June 1991 and 21 requests evaluated by ASO after June 1991. Of the 21 requests completed by ASO after June 1991, 13 requests were approved, and 8 requests were forwarded to NADEP Jacksonville for further processing. The average time to complete the 21 requests at ASO was 309 days. The average time to complete the 13 approved requests was 322 days. The average time to complete the 8 requests forwarded to NADEP Jacksonville was 288 days. The information shows that the average time that the Navy spent to approve the 13 requests processed after performance goals were established by the BOSS manual in June 1991 decreased to 322 days from the 517 days it took to approve the 19 requests processed before the performance goals were established. That decrease resulted from the efforts of ASO and NAVAIR to improve the source approval process. However, the Navy needs additional improvement to achieve completion within the 180-day performance goal.

**Establishing Performance Goals.** Before NAVAIR issued the BOSS manual in June 1991, the Navy had no official performance goals for evaluating source approval requests. The BOSS manual established a 180-day performance goal to evaluate source approval requests for critical safety items. ASO has 90 of the days, and the combined evaluation time at the CFA and NAVAIR is 90 days.

Number of Source Approval Requests Received. According to the ASO management information system, the Navy received 230 source approval requests for F404 engine critical safety items from July 19, 1984, through June 16, 1991 (before the BOSS manual was issued on June 17, 1991), and received 116 requests from June 17, 1991, through March 31, 1994. As of March 31, 1994, 199 of the 346 requests received were evaluated, 87 requests were in the process of being evaluated, and 60 requests were not evaluated because no demand for the items existed or was forecasted.

ASO records do not show the date that the evaluation process started (the prioritization date) for 202 of the 230 requests received before June 17, 1991, and for 39 of the 116 requests received after June 17, 1991. Consequently, we calculated processing time for ASO for only the 28 requests received before June 1991 and the 77 requests received after June 1991 that had a prioritization

date. Processing times for NADEP Jacksonville and NAVAIR were calculated using the dates on which the requests were received and the dates on which processing was completed. We did not calculate processing time for NADEP North Island because processing dates were not available. The average (arithmetic mean) processing times are shown in the following table.

#### Navy Activities Are Making Progress Toward Achieving Their Goal of Processing Source Approval Requests for F404 Engine Parts Within 180 Days

	Before June 1991	<u>After June 1991</u>
ASO Completed In Process Average Days to Complete Average Days in Process	19 9 517 657	21 <sup>1</sup> 56 309 326
NADEP Jacksonville Completed In Process Average Days to Complete Average Days in Process	$egin{array}{c} 0^2 \ 0^2 \ 0^2 \ 0^2 \end{array}$	20 2 76 74
NAVAIR Completed In Process Average Days to Complete Average Days in Process	85 0 203 0	32 11 205 49

<sup>1</sup>Of the 21 completed requests, ASO approved 13 and forwarded 8 to NADEP Jacksonville for further processing. The average times to complete were 322 days for the 13 approved requests and 288 days for the 8 requests forwarded to NADEP Jacksonville.

<sup>2</sup>NADEP Jacksonville was designated the CFA for the F404 engine in 1992.

Because of insufficient information in source approval files, we were unable to determine specific reasons for delays at ASO, NADEP Jacksonville, and NAVAIR in evaluating the source approval requests. In general, delays at ASO were attributed to the volume of requests received and the need to obtain additional information from contractors before the requests could be evaluated. Delays at NADEP Jacksonville were attributed to higher priority work. Delays at NAVAIR were attributable to the need to obtain additional information from contractors, the amount of coordination required within NAVAIR and its field activities, and higher priority work. Officials at NADEP Jacksonville and at NAVAIR told us that evaluation of source approval requests has a lower priority than does most other work that must be accomplished.

# The Navy Needs Performance Measures To Assess Program Results

Public Law 103-62 "Government Performance Results Act of 1993," August 3, 1993, establishes strategic planning and performance measurement in the Federal Government. Program goals must be established and adequate program performance information must be available to improve program efficiency and effectiveness.

The Navy has not implemented performance measurement systems to oversee the performance goals that it established for processing source approval requests. Although NADEP Jacksonville and NAVAIR officials are aware of the performance goals established in the BOSS manual for processing source approval requests, they do not perceive a need, nor do they receive pressure from their superiors, to set aside other work to process the requests. The sections at ASO and NADEP Jacksonville involved in evaluating source approval requests for F404 engine critical safety items had no performance measurement system for monitoring completion of the evaluation of source approval requests. NAVAIR developed a flow chart with processing times listed for each section involved in evaluating the requests. However, no one complied with or enforced the time limits. We could not identify anyone at ASO, NADEP Jacksonville, and NAVAIR with the responsibility and authority to require that source approval requests be evaluated within the performance goals established in the BOSS manual.

The Navy should implement performance measurements for each key process involved in evaluating source approval requests at ASO, NADEP Jacksonville, and NAVAIR. The Navy should also designate at each command an official who is responsible for controlling the source approval program. The official should be given the responsibility and authority to enforce compliance with the guidance on processing source approval requests, including performance goals, contained in the BOSS manual.

## ASO Needed To Provide Specific Guidance On Data That Contractors Must Submit With Source Approval Requests

Sufficiency of Guidance. The guidance that ASO provided to contractors was not sufficiently specific concerning the information that contractors must submit with their source approval requests. We examined documents for 25 of the 77 source approval requests for F404 engine critical safety items that ASO evaluated after the BOSS manual was published in June 1991. ASO requested additional information from the contractors for 14 of the 25 source approval requests. ASO requested the additional information because the information that the contractors submitted was incomplete, incorrect, or unintelligible, thus delaying processing of the requests by several months. On average, it took ASO 72 days after receipt of a source approval request to obtain the additional information from the contractors.

Supporting Information for Source Approval Requests. After ASO source development officials determined that sufficient supporting information was included with the source approval requests, ASO forwarded the requests to NAVAIR through the CFA for evaluation and approval. We examined documents for 31 of the 43 source approval requests for F404 engine parts that NAVAIR and either NADEP North Island or NADEP Jacksonville evaluated after June 1991. We did not review documentation on the other 12 items. NADEP North Island and NADEP Jacksonville did not return any of the 31 source approval requests to ASO for additional information. However, NAVAIR returned 13 of the 31 requests because the requests either did not contain key information necessary to evaluate the requests, or the information that was provided was not accurate or legible. NAVAIR officials acknowledged a lack of understanding by ASO and NADEP Jacksonville officials on the type and quality of information required by NAVAIR to support source approval requests. The lack of understanding resulted in the return of the request for Additionally, ASO may have forwarded source additional information. approval requests that had inadequate supporting information in an effort to expedite processing of the requests. NADEP Jacksonville officials stated that NÂDEP Jacksonville officials received no training and no guidance, other than the BOSS manual, on what their responsibilities are in evaluating source approval requests. NAVAIR spent an average of 227 days evaluating the 13 requests before returning them to ASO for the additional information. Also, the other 18 source approval requests were either missing information or NAVAIR approved 12 of the 18 requests contained outdated information. contingent upon ASO obtaining useful information from the contractors, and disapproved 6 of the 18 requests.

Timeliness of the Source Approval Process. The source approval requests that ASO forwarded to NAVAIR probably did not always contain adequate information because of the desire of ASO to expedite the source approval requests; insufficient guidance in the BOSS manual; and differences of opinion between ASO, NADEP Jacksonville, and NAVAIR engineers concerning what constituted adequate data to support individual source approval requests. We believe that the timeliness of the source approval process will improve when contractors and all Navy personnel involved in the process use the improved guidance on processing source approval requests, including the data required to support a source approval request, in the revised BOSS manual dated Because of the improved guidance, we made no January 19, 1995. recommendation to revise the guidance. ASO included the improved guidance in the "Source Approval Information" brochure, revised January 1995, that is provided to interested contractors. Additionally, NAVAIR should train ASO and NADEP Jacksonville personnel on the responsibilities involved in evaluating source approval requests and on the supporting data to be included with source approval requests forwarded to NAVAIR.

## Navy Management Needs Accurate Management Information Systems To Monitor Source Approval Requests

Flight Critical Item Tracking System. The Flight Critical Item Tracking System (the Tracking System) used by the Navy to track and monitor the location and status of each source approval request did not reflect the correct status of source approval requests for F404 engine critical safety items. Of the 128 source approval requests that were recorded in the NAVAIR management information system, 61 were not entered in the Tracking System. The processing status of each of 28 of the 67 requests that were entered in the Tracking System was incorrect. The data base errors resulted from failure to enter source approval requests in the Tracking System when received, failure to enter processing events as they occurred, and failure to reconcile information in the Tracking System data base with information in the separate management information systems maintained by ASO, NADEP Jacksonville, and NAVAIR to record the status of source approval requests.

Information Systems Maintained Bv ASO and Management NAVAIR. Additionally, discrepancies existed between information in the management information systems maintained by ASO and NAVAIR. Mismatches in processing and approval dates existed, receipts of source approval requests were recorded in one system but not the other, and approved sources were shown in one system but not the other. Of particular significance, the ASO management information system showed approved sources for six F404 engine critical safety items while the NAVAIR system showed that NAVAIR had not approved the sources. ASO procured two of the items, a primary exhaust flap and a secondary exhaust seal, from the sources shown in the NAVAIR management information system as not approved. ASO had not procured the other four items. NAVAIR officials assured us that failure of any of the six parts would not cause instant nonrecoverable engine shutdown or loss of aircraft. The most likely result of a failure would be a reduction of the life of surrounding components as well as a performance reduction. The officials stated that they are working with ASO to reconcile what appears to be a disconnect between NAVAIR and ASO regarding the status of source approval requests and that no additional errors have been identified by NAVAIR on F404 engine critical safety items.

The inaccuracies in the Tracking System and the management information systems maintained by ASO and NAVAIR detract from their usefulness as management tools to monitor and control the processing of source approval requests. To prevent procurement of critical safety items from unapproved sources and to effectively manage the source approval process, ASO and NAVAIR should correct the management information system data bases as soon as possible and establish procedures to reconcile the data bases on a regular basis. ASO should also establish procedures to periodically verify the evaluation status of source approval requests in the Tracking System data base accessed by ASO, the CFAs, and NAVAIR. **Approving New Sources for Flight Critical Parts** 

#### **Effects of Delays In Processing Source Approval Requests**

As a result of delays in the processing of source approval requests, the Navy rarely completes evaluations of contractor requests to become approved sources for F404 engine critical safety items within the 180-day performance goal established in the BOSS manual. Approval of the source approval requests for the four F404 engine critical safety items identified in Appendix E that were in process for more than 180 days as of September 30, 1994, could result in competitive procurements of the parts and cost avoidance of \$1.4 million. applying the 25-percent breakout savings factor in Appendix E of the Defense Federal Acquisition Regulation Supplement to the value of the pending To achieve the potential cost avoidances, the Navy should procurements. expedite completion of the four source approval requests with pending To avoid paying additional costs on future noncompetitive requirements. procurements, the Navy should implement performance measurement systems and designate at each command involved in the source approval process an official who is responsible for controlling the source approval program.

#### Summary

The Navy did not effectively process source approval requests for F404 engine critical safety items. The need to obtain additional supporting information from contractors and delays in processing the source approval requests resulted in a backlog of source approval requests. Source approval requests for four F404 engine critical safety items with pending procurement requirements have been in the source approval process for more than 180 days, and the delay may result in noncompetitive procurements at higher prices than could be achieved if the requests were approved and the items procured competitively.

## Recommendations, Management Comments, and Audit Response

1. We recommend that the Commander, Naval Air Systems Command; the Commanding Officer, Naval Aviation Supply Office; and the Commanding Officer, Naval Aviation Depot Jacksonville:

a. Expedite their evaluations of the source approval requests that have been in the evaluation process for more than 180 days for the F404 engine critical safety items with pending requirements (Appendix E). Navy Comments. The Navy concurred, stating that it will make reasonable efforts to expedite the source approval process on items where success is probable. The four source approval requests with potential monetary benefits of \$1.4 million were being processed as of July 17, 1995.

b. Implement, at their respective commands, a performance measurement system for the source approval program that:

(1) Establishes realistic goals for completion of key processes of the source approval program.

(2) Monitors actual time used by key processes to assess program results.

Navy Comments. The Navy concurred, stating that realistic goals have been established in ASO Instruction 4200.43, "Processing Requests for Source Approval to Supply Flight Critical Spare Parts," December 17, 1987, and the "BOSS Desktop Reference Manual," January 19, 1995. The Navy anticipates significant improvements in source approval request processing time by October 31, 1995, based on actions of the BOSS Streamlining Team. Additionally, the Navy is adding data elements to the tracking system for flight critical items that will permit monitoring of processing times at each review site. The Navy intends to complete the addition of the data elements by December 31, 1995.

c. Designate a responsible official for controlling the source approval program at their respective commands. The official should be given, in writing, the responsibility and the authority to enforce compliance with the source approval processing requirements of the "Buy Our Spares Smart Desktop Reference Manual," including performance goals.

Navy Comments. The Navy concurred, stating that the Navy has officials at each site to oversee the source approval process. However, the officials do not enforce compliance with source approval processing requirements because of limited technical and engineering resources.

Audit Response. The Navy comments are not responsive to the recommendation. The recommendation was made because officials involved in evaluating source approval requests at ASO, NADEP Jacksonville, and NAVAIR stated that no one was enforcing the goals for processing source approval requests and that they did not receive guidance to set aside other work to process the requests. None of the officials stated that limited technical and engineering resources was the reason for not meeting the goals. Until the Navy clearly states in writing the responsibility and the authority of the officials designated to control the source approval program, the officials will have problems implementing program requirements and little progress will be made towards meeting the performance goals established for processing source approval requests. We request that the Navy reconsider its position on the recommendation and provide comments in response to the final report.

2. We recommend that the Commander, Naval Air Systems Command, provide training to personnel involved in the source approval process at the Naval Aviation Supply Office and the Naval Aviation Depot Jacksonville concerning their specific responsibilities in evaluating source approval requests and concerning the types and quality of supporting information that must be included in source approval requests forwarded to the Naval Air Systems Command.

Navy Comments. The Navy concurred, stating that a computer-based training program will begin by September 30, 1995.

3. We recommend that the Commanding Officer, Naval Aviation Supply Office, establish procedures to verify, on a regular basis, the information on source approval requests in the Flight Critical Item Tracking System. At a minimum, the procedures should verify that all source approval requests are entered in the data base and that the location and evaluation status of each request is accurate.

Navy Comments. The Navy concurred, stating that improvements in the procedures for verifying information on source approval requests in the tracking system will be implemented by October 31, 1995.

4. We recommend that the Commander, Naval Air Systems Command, and the Commanding Officer, Naval Aviation Supply Office:

a. Correct the discrepancies in the management information system data bases used by the Naval Air Systems Command and the Naval Aviation Supply Office to control the source approval process.

b. Establish procedures to reconcile the two data bases on a regular basis.

Navy Comments. The Navy concurred, stating that action was taken to reconcile the discrepancies in the two data bases and that the data bases will be routinely reconciled until a single data base is implemented. The Navy anticipates that a single data base for controlling the source approval process will be implemented by December 31, 1995.

### Management Comments on the Potential Monetary Benefits and Audit Response

Navy Comments. The Navy stated that only four of the eight backlogged source approval requests listed in Appendix F of the draft of this report are still in process, and that only two of the four requests have been delayed for more than 180 days. The Navy agreed that the potential to save \$1.4 million exists if the four source approval requests that are in process are immediately approved. For the four source approval requests that are no longer in process, the Navy stated that one request was approved, one request is on hold pending receipt of

additional data from the contractor, one request was rejected because the contractor was unable to provide additional data required to process the request, and one request is being withdrawn by the contractor because the contractor is unable to provide data that show that the contractor has rights to the precision master for the item. The Navy also stated that none of the 11 source approval requests listed in Appendix E of the draft of this report could have been approved before the items were noncompetitively procured. Therefore, the estimated additional \$7.9 million spent to procure the 11 items noncompetitively could not have been saved. The Navy stated that the source approval requests were not approved before the noncompetitive procurements because the requests were rejected, incomplete, or not received in time to complete processing.

Audit Response. As a result of the Navy comments, we revised the report to delete the four source approval requests that are no longer in process and reduced the potential monetary benefits from \$3.5 million to \$1.4 million. We do not agree with the Navy statement that only two of the four source approval requests that are still in process have been delayed for more than 180 days. Records obtained from ASO show that the four requests were in process for more than 180 days, as shown in the following table.

#### Number of Days That Source Approval Requests Were in Process as of September 30, 1994

National Stock Number	Received by ASO	Days in Process
2840-01-131-0441	May 25, 1992	858
2840-01-131-0444	May 26, 1992	857
2840-01-144-4288	January 14, 1986	3,181
2840-01-322-9010	October 22, 1990	1,439

Also, as a result of the new information provided by the Navy and the actions taken during the audit by ASO on certain source approval requests, we revised the report to delete the additional costs to noncompetitively procure critical safety items while source approval requests were pending.

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# **Part II - Additional Information**

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# **Appendix A. Scope and Methodology**

## Audit Scope

Limitation to Scope. For the purpose of this report, we are covering only the audit objective concerning the Navy's source approval process for contractors seeking approval to supply critical safety items for the F404 engine to the Navy.

**Expansion of Scope.** In addition to the three complaints to the Defense Hotline concerning the Navy source approval process for critical safety items, we covered eight other allegations concerning procurement practices by ASO.

Universe and Sample. The audit universe consisted of the 346 source approval requests for F404 engine critical safety items shown in the ASO management information system data base as of March 31, 1994. The requests were submitted from July 19, 1984, through February 2, 1994. From the 346 source approval requests, we judgmentally selected 25 source approval requests at ASO, 20 source approval requests at NADEP Jacksonville, and 43 source approval requests at NAVAIR to determine the status of the requests and to evaluate documents for the source approval processing procedures at each command.

### Audit Methodology

At ASO, NADEP Jacksonville, and NAVAIR, we analyzed source approval and source development documents, procurement histories, and computer-processed data concerning source approval requests. We examined the data to determine the steps in the source approval evaluation process, the timeliness of the process, and whether the Navy was accurately tracking the progress of requests throughout the source approval evaluation process. We also interviewed cognizant source development officials, engineers, and technical personnel at ASO, NADEP Jacksonville, and NAVAIR concerning the source approval process. At ASO, we reviewed documents and interviewed cognizant officials concerning the eight allegations to the Defense Hotline regarding procurement practices by ASO.

Use of Computer-Processed Data. We used computer-processed data from the Tracking System and the management information system data bases maintained by ASO, NADEP Jacksonville, and NAVAIR to determine the number of source approval requests for F404 engine parts evaluated and in-process, and the timeliness of the evaluation process. We also used computer-processed procurement histories to determine whether selected procurements were competitive or noncompetitive and to determine quantities and dollar values of the procurements.

**Reliability of Computer-Processed Data**. We assessed the reliability of the data contained in the Tracking System data base and the management information system data bases maintained by ASO, NADEP Jacksonville, and NAVAIR, including relevant general and application controls. The data contained incorrect entries and omission errors. However, when reviewed in context with other available evidence, we believe that the opinions, conclusions, and recommendations in this report are valid.

We also assessed the reliability of data in the ASO procurement history data base concerning the dollar value of contracts and whether or not the contracts were competitively awarded. We determined that the dollar values of the contracts generally agreed with the dollar values in the computer-processed data. We did not find errors in contract values that would preclude use of the computer-processed data to meet audit objectives or that would change the conclusions in the report. We found an error rate in the computer-processed data on whether contracts were awarded competitively or noncompetitively that cast doubt on the data's validity. Because the audit objectives require specific statements based on the data, we used contract file documents and records maintained by the ASO Source Development Division to determine whether the contracts included in the audit were awarded competitively or noncompetitively and adjusted the computer-processed data to reflect the correct information obtained from the contract files and ASO Source Development Division records.

Audit Period, Standards, and Locations. We performed this program audit from March 1994 through January 1995 in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD. Accordingly, we included tests of internal controls considered necessary. Appendix G lists the organizations visited or contacted during the audit.

#### Management Control Program

Our review of the ASO management control program evaluated the adequacy of two areas: the ASO self-evaluation of applicable management controls and the specific management control techniques.

Specifically, we determined the extent to which ASO evaluated its management controls over the source approval process for critical safety items and the results of any self-evaluation. Also, we reviewed ASO management controls over the processing of requests from contractors to become approved sources of supply for F404 engine parts that are critical safety items.

Adequacy of Management Controls. The audit identified material management control weaknesses at ASO as defined by DoD Directive 5010.38, "Internal Management Control Program," April 14, 1987, relating to the source approval process. Procedures were not established or were not effective to ensure that contractor requests were processed in a timely manner and that accurate information was entered into the various data bases used to monitor the

source approval process. The weaknesses are discussed in Part I. Recommendations 1.b., 1.c., 3., and 4., if implemented, will assist in correcting the weaknesses. Potential monetary benefits from implementing the recommendations are undeterminable because the number of source approval requests that contractors will submit in the future and the number and amounts of future procurements are unknown. See Appendix F for all benefits associated with the audit. A copy of the report will be provided to the senior official responsible for management controls for the Department of the Navy.

ASO officials Adequacy of Management's Self-Evaluation Program. identified the breakout and source development function as an assessable unit, of which source approval is a part. In our opinion, the ASO officials correctly identified the risk associated with breakout and source development as high. ASO performed the required evaluation of applicable management controls in June 1994. However, ASO did not identify or report in their annual statement of assurance any material management control weaknesses affecting the source approval process. The ASO evaluation concluded that controls for the source approval process are in place and that the controls provide reasonable assurance that objectives will be met. The ASO management control review report did, as a result of a NAVAIR and ASO Process Action Team meeting, identify the need to perform an in-depth review and reconciliation of the Tracking System. ASO officials did not consider the weakness important enough to report to a higher authority. NAVAIR and ASO officials stated in February 1995 that the review and reconciliation of the Tracking System was in progress.

# **Appendix B. 'Summary of Prior Audits and Other Reviews**

No prior audits specifically discuss the source approval process for critical safety items for the F404 engine. However, the Inspector General, DoD, issued two audit reports that discuss the Navy's contractor qualification process for aircraft engine parts.

Inspector General, DoD, Report No. 90-035, "Report on the Followup Audit of Vendor Technical Qualification Process for Aircraft Engine Spare Parts Procured by the Naval Aviation Supply Office," February 14, 1990, states that the Navy implemented all agreed-to recommendations in Inspector General, DoD, Report No.88-044.

Inspector General, DoD, Report No. 88-044, "Vendor Technical Qualification Process for Aircraft Engine Spare Parts Procured by the Naval Aviation Supply Office," November 3, 1987, states that the process for reviewing and approving requests at ASO and NAVAIR needed improvement to enhance its timeliness and facilitate breakout of spare parts to competition. The Navy agreed to:

o issue specific guidance to contractors concerning the approval process for alternate manufacturing sources of aircraft engine spare parts;

o monitor the processing of requests to determine how effectively and efficiently the contractor qualification process is functioning;

o verify the accuracy of data on requests in the management information system, establish input controls to ensure that the data base remains accurate, and reconcile the ASO and NAVAIR management information systems; and

o promptly qualify the contractors who have pending source qualification requests or advise them of the steps necessary to obtain qualification.

Although ASO and NAVAIR have made improvements in the source approval process since 1987, our audit showed that ASO and NAVAIR are not qualifying new sources for F404 engine critical safety items in a timely manner, and that management information systems used to monitor the source approval process are not accurate.

# Allegations and Audit Results Concerning Source Approval Requests

Allegation 1. ASO repeatedly requested additional information and unreasonably delayed the processing of the complainant's request to become an approved source of supply for the afterburner mixer for the F404 engine, part 6045T46G06, National Stock Number 2840-01-142-8819.

Audit Results. The allegation was valid. We believe that the 380 days that the Navy took to process the complainant's initial request and the 150 days spent on the complainant's second request were excessive and resulted from insufficient guidance to the contractor on the contents of source approval requests and a lack of effective communication between ASO and NAVAIR. The complainant's December 9, 1991, request was received by ASO on December 12, 1991. On April 9, 1992, 120 days after receipt of the request, ASO notified the ASO took 120 days to complainant that additional data were required. determine that a legible drawing, quality assurance information, process and operations sheets, and other miscellaneous documents were needed to evaluate the request. On April 24, 1992, the complainant updated the source approval In June 1992, ASO forwarded the request to NAVAIR through request. NADEP Jacksonville. NAVAIR received the request on August 5, 1992. In January 1993, NAVAIR advised ASO that the source approval request was not approved because the afterburner mixer is unstable in design. On January 29, 1993, ASO informed the complainant of the NAVAIR decision. NAVAIR and ASO officials were unable to adequately explain why it took about 380 days to tell the complainant that the design of the afterburner mixer was unstable. ASO officials stated that they were not aware of the redesign efforts. The ASO officials also stated that, considering the complexity and criticality of the item, the review time to reach the initial decision was not excessive.

On July 21, 1993, the complainant resubmitted the request for source approval, stating that the complainant was capable of coping with any design changes to the afterburner mixer. On December 20, 1993, after two exchanges with the complainant concerning information missing from the request, ASO returned the request to the complainant, stating that the request could be resubmitted after the missing information was obtained. We believe that ASO should have, upon receipt in July 1993, returned the request, advising the complainant that new sources would not be considered until design changes to the afterburner mixer are approved and until the Navy obtains the technical data. NAVAIR

stated that the design changes would be approved in early 1995. ASO officials agreed that the second review, which took 150 days, should not have been undertaken. The review was started by ASO Source Development personnel because they perceived that management agreed to the review based on correspondence and numerous requests from the complainant for status. When management became aware of the review, the review was completed and the complainant was advised of disapproval. See Part I for further information on the source approval process.

Allegation 2. ASO took 5 years to approve the complainant as a source of supply for the F404 engine afterburner liner, part 6066T45, National Stock Number 2840-01-296-5754. That delay occurred even though the complainant previously manufactured the part for Pratt and Whitney Aircraft Company.

Audit Results. We were unable to substantiate that it took 5 years to approve the complainant's source approval request. ASO returned the complainant's February 1987 request in December 1987, advising that part 6045T40 was replaced by part 6066T45. ASO received the complainant's source approval request for part 6066T45 on June 19, 1989, and approved the request on February 11, 1991. ASO officials stated that the configuration of the liner that the complainant manufactured for Pratt and Whitney Aircraft Company was not the same configuration that the Navy required and that the technical data for the configuration changes had to be obtained. The ASO officials also stated that the sample afterburner liner that the complainant submitted for first article testing after contract award did not meet contract requirements. The complainant made process changes after the failure and was eventually approved. Although ASO records indicate that 83 days of review time were lost while ASO obtained a certification of rights and additional technical data from the complainant, we consider excessive the approximately 590 days it took the Navy to evaluate and respond to the complainant's request, especially because the complainant previously manufactured a similar afterburner liner for Pratt and Whitney Aircraft Company, the second source for the F404 engine. See Part I for further information on the source approval process.

Allegation 3. After more than a year of processing, ASO disapproved the complainant's request to become an approved source for the F404 engine afterburner flameholder, part 6046T17G13, National Stock Number 2840-01-142-8818, citing design instability and lack of a master model as reasons. ASO disapproved the request even though the complainant had manufactured a similar item for the Air Force and the complainant's experience and capabilities made the complainant a viable manufacturer of the afterburner flameholder.

Audit Results. The allegation was valid concerning the excessive time taken by ASO to provide a final answer to the request. However, we believe that the Navy was correct in disapproving the request based on the unavailability of the master model. The master model is similar to a template that must be placed on

each component to check the basic contours of nozzle partitions and to check the gas flow paths between partitions. The master model is a necessary part of the production process for the afterburner flameholder. We believe that the Navy should have determined and advised the contractor early in the process, and certainly no later than October 1992, that the complainant's request could not be approved because of the unavailability of the master model. The Navy made at least two attempts to obtain the master model, which extended the time required to process the request. ASO did not give the complainant a final determination until October 1993. The following chronology of key events in the processing of the request shows that the Navy had an opportunity as early as September 1991 and several opportunities thereafter to evaluate the request and determine that the request could not be approved because the master model was not available.

Date	Chronology of Events
May 1991	The complainant submitted source approval request to ASO.
June 1991	An ASO letter to complainant asked complainant to provide missing data, but did not mention the master model. Number of days since request was initially submitted: 39.
August 1991	An ASO letter to complainant advised that the source approval request was returned because the data requested in June 91 was not received. Number of days since request was initially submitted: 94.
September 1991	The complainant resubmitted request. Number of days since request was initially submitted: 118.
October 1991	ASO forwarded the complainant's request to NAVAIR through NADEP North Island for final engineering review. Number of days since request was initially submitted: 150.
February 1992	NADEP North Island forwarded the request to NAVAIR. Number of days since request was initially submitted: 290.
August 1992	NAVAIR returned the complainant's request to ASO because the request did not include the master model. NAVAIR advised ASO that the flameholder is being redesigned and that the complainant should be prepared to

August 1992	manufacture the most recent design. Number of days since request was initially submitted: 460.
September 1992	ASO and the complainant met to discuss the source approval request. Number of days since request was initially submitted: 495.
	An ASO letter to the complainant advised which data were needed, including the master model. ASO did not mention the redesign of the afterburner flameholder. Number of days since request was initially submitted: 496.
	A complainant letter to ASO advised that the complainant did not have the master model, but would obtain by reverse engineering the assembly drawings after contract award. Number of days since request was initially submitted: 501.
	An ASO letter to NAVAIR advised that complainant did not have the master model and that ASO was unable to get the drawings from the F404 engine prime contractor, General Electric. ASO asked NAVAIR whether the complainant could reverse engineer an in-stock afterburner flameholder. Number of days since request was initially submitted: 507.
October 1992	A NAVAIR letter to ASO stated that the master model cannot be obtained by reverse engineering and that new sources cannot be approved unless the master model is available. Number of days since request was initially submitted: 517.
January 1993	ASO requested drawings for the master model from General Electric. Number of days since request was initially submitted: 621.
February 1993	An ASO letter to the complainant advised that the source approval request was returned because the master model was not available and a design change to the flameholder was being processed. ASO requested that the complainant resubmit the request when the design changes are completed and the master model is available. Number of days since request was initially submitted: 635.

February 1993	General Electric refused to release drawings for the master model. Number of days since request was initially submitted: 651.
March 1993	The complainant resubmitted the source approval request because ASO issued a solicitation to procure 1,157 afterburner flameholders. The complainant affirmed the ability to achieve the master model through reverse engineering and to cope with any design changes. Number of days since request was initially submitted: 675.
October 1993	An ASO letter to complainant advised that the request cannot be approved because data held by the Navy and the data forwarded in complainant's source approval request were not sufficient to manufacture an afterburner flameholder that will meet the Navy needs. The ASO letter also stated that the flameholder, part 6056T68G07, was being evaluated for use in the F404 engine instead of part 6046T17G13, the flameholder for which the complainant was seeking source approval. Number of days since request was initially submitted: 894.

See Part I for further information on the source approval process.

## Allegations and Audit Results Concerning Various Procurement Practices

Allegation 4. ASO did not provide the results of production lot testing of the primary flap, part 6045T35, National Stock Number 2840-01-130-2781, for the F404 engine within 30 days as the contract required.

Audit Results. The allegation was valid. On January 4, 1994, the production lot sample submitted by the complainant arrived at NADEP Jacksonville. However, ASO did not forward the work order that authorized the testing of the production lot sample to NADEP Jacksonville until March 9, 1994. Consequently, testing was delayed for approximately 64 days. Testing was completed on April 7, 1994, and ASO notified the complainant of the test results on April 13, 1994. ASO officials told us that they routinely prepare work orders immediately after the parts are received for testing and were unable to explain the delay in sending the work order to NADEP Jacksonville. We believe that the delay was a one-time oversight and not indicative of a systemic problem at ASO. Allegation 5. ASO took too long to respond to a value engineering change proposal to improve the design of the afterburner liner for the F404 engine, part 6066T45, National Stock Number 2840-01-296-5754. The improved design would have resulted in increased durability and service life, easier repairability, and procurement savings. If ASO had not taken 8 months to respond to the relatively straightforward change proposal, perhaps the change proposal could have benefited the F404 engine program and could have applied to the F414 engine.

Audit Results. The allegation was not valid. We believe that the 8 months that the Navy spent processing the complainant's change proposal is reasonable considering the size and circumstances of the change proposal. According to ASO records, the change proposal contained 44 drawings and 41 operation sheets. Additionally, the complainant claimed proprietary rights to the drawings and operation sheets.

The Navy used from 1 week to 48 months to evaluate the 7 value engineering change proposals processed by ASO during fiscal years 1993 and 1994. The average time to process the change proposals was 16 months. Because the unique circumstances of each value engineering change proposal will dictate what is a reasonable processing time for that proposal, the use of average processing time as a performance measure is difficult. However, the average processing time helps place in perspective the 8 months that the Navy spent evaluating the complainant's change proposal.

The following chronology of key events in the processing of the change proposal shows that the Navy processed the change proposal in a timely manner, given the circumstances of the proposal:

Date	Chronology of Events
August 1993	The complainant submitted the value engineering change proposal to ASO.
October 1993	A meeting at ASO between the complainant and ASO representatives discussed first article testing, data rights, and other business aspects of the change proposal. Number of days since the value engineering change proposal was submitted: 72.
November 1993	A complainant letter to ASO proposed the business aspects of the change proposal, including a proposal to transfer the data rights to the Navy for \$12,500. Number of days since the value engineering change proposal was submitted: 105.

December 1993 NADEP Jacksonville determined that General Electric needed to evaluate the change proposal. ASO requested permission from the complainant to share proprietary data with General Electric. The complainant approved sharing of proprietary data with General Electric for the purpose of evaluating the change proposal. Number of days since the value engineering change proposal was submitted: 114.

January 1994 A complainant letter to ASO advised that NADEP Jacksonville had not completed the evaluation of the change proposal, and that the current contract for afterburner liners was nearing completion. Number of days since the value engineering change proposal was submitted: 161.

February 1994 An ASO letter to the complainant advised that the Navy is not yet able to conclude whether or not the best interest of the Government would be served by producing one or two units under the current contract for change proposal test articles. Number of days since the value engineering change proposal was submitted: 182.

March 1994 A NAVAIR letter advised ASO that NAVAIR and NADEP Jacksonville concluded that the change proposal would not benefit the F404 engine program. Number of days since the value engineering change proposal was submitted: 226.

April 1994

An ASO letter to the complainant advised that the change proposal was disapproved. Number of days since the value engineering change proposal was submitted: 238.

NAVAIR and NADEP Jacksonville disapproved the change proposal because the change would require extensive testing and substantial initial cost to the F404 engine program. Because the change would not occur until at least 1996, the number of units affected by the change would be minimal. Also, the Navy was considering retrofitting the F414 engine afterburner into F404 engines, which would further reduce any benefit from the proposed change.

Allegation 6. In October 1993, in response to the request for proposals (N00383-92-X-A294), ASO accepted offers for 663 afterburner nozzle segments, part 2180080, National Stock Number 2840-01-135-8372. ASO canceled the proposed procurement 6 weeks later. (The implied allegation is that ASO improperly canceled the procurement.)

Audit Results. The allegation has no merit. ASO canceled the proposed procurement because ASO obtained 900 of the afterburner nozzle segments from Tinker Air Force Base for \$1,289 each. A proposed unit price of \$9,949.94 was received in response to the request for proposals for 663 afterburner nozzle segments. The Navy saved about \$5.7 million by procuring the afterburner nozzle segments from Tinker Air Force Base.

Allegation 7. In October 1993, in response to a request for proposals (N00383-93-R-0453), ASO accepted offers for more than 6,000 primary flaps for the F404 engine, part 6045T35, National Stock Number 2840-01-130-2781. ASO canceled the request for proposals on March 1, 1994. (The implied allegation is that ASO improperly canceled the request for proposals.)

Audit Results. The allegation has no merit. The request for proposals was issued to generate a long-term contract. However, ASO subsequently determined that a long-term contract was not needed and that future contracts for the primary flaps would be competitively awarded as required. The cancellation of the request for proposals did not affect existing contracts. On March 1, 1994, ASO had a contract with the complainant for 1,367 primary flaps, and a contract with General Electric for 4,369 primary flaps.

Allegation 8. ASO canceled contract N00383-93-C-M108 for 21 afterburner liners for the F404 engine, part 6066T45, National Stock Number 2840-01-296-5754, in November 1993. (The implied allegation is that ASO improperly canceled the contract.)

Audit Results. The allegation has no merit. ASO canceled the contract because the ASO October 1993 stratification review showed a decrease in demand for the afterburner liner. ASO determined that the quantities of afterburner liners on hand and on order were sufficient to satisfy known requirements, and that the additional 21 afterburner liners were not needed.

Allegation 9. ASO made no competitive procurements of the afterburner flameholder, part 6046T17G13, National Stock Number 2840-01-142-8818, for the F404 engine in more than 2 years. The afterburner flameholder is a high-usage item.

Audit Results. The allegation was not valid. Contracts N00383-92-C-E364 and N00383-93-D-031M were competitively awarded on September 25, 1992, and September 15, 1993, respectively.

ASO received five bids for contract N00383-92-C-E364. Only two of the five bids were from approved sources. The other three sources were referred to the ASO source development unit for potential source approval. Contract N00383-92-C-E364 was awarded to Danville Metal Stamping for 386 afterburner flameholders at \$11,260 each to be delivered at the rate of

30 each month. Total contract value was \$4.3 million. On September 23, 1992, before contract N00383-92-C-E364 was awarded, ASO determined that the wear-out rate for the afterburner flameholder increased from 56 percent to 86 percent and that the increased demand required that the delivery rate be increased to 70 afterburner flameholders each month beginning in January 1993. ASO asked Danville Metal Stamping to increase the delivery rate. Danville Metal Stamping stated that, because of shop capacity, the maximum quantity that it could deliver was 40 each month. Because General Electric was the only other approved source, ASO noncompetitively awarded to General Electric order F34601-92-G-0010-GB42 for 386 afterburner flameholders at \$13,844 each to be delivered at the rate of 35 each month beginning February 1993. Total contract value was \$5.4 million.

For contract N00383-93-D-031M, ASO received bids from the same five contractors that bid on contract N00383-92-C-E364. General Electric and Danville Metal Stamping were still the only approved sources. ASO stated that any source that was not approved would require first article, production lot, engine, and flight testing. ASO calculated that the required testing would take a minimum of 975 days. Contract N00383-93-D-031M was awarded to General Electric, the low bidder. The contract is a one-year requirements contract with two one-year options. Quantities required are 293 afterburner flameholders in 233 afterburner flameholders in year 2, and 238 afterburner year 1. The unit price is \$9,899 for all 3 years. flameholders in year 3. As of November 23, 1994, 2 orders were awarded under the contract. Order N00383-93-D-031M-0001 was awarded on March 18, 1994, for 205 afterburner flameholders at \$9,899 each to be delivered at the rate of 40 each month beginning 170 days after receipt of the order. Order N00383-93-D-031M-0002 was awarded on August 28, 1994, for 376 afterburner flameholders at \$9,899 each.

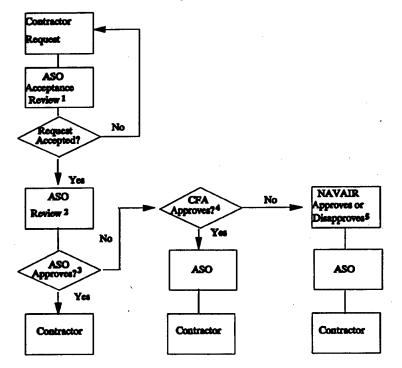
Allegation 10. On contract N00383-93-D-031M-0002, ASO procured 376 afterburner flameholders, part 6046T17G13, National Stock Number 2840-01-142-8818, that were allegedly undergoing a design change by the F404 engine prime contractor. (The implied allegation is that ASO improperly procured the 376 afterburner liners.)

Audit Results. The allegation has no merit. ASO purchased the afterburner flameholders on an order issued under a competitively awarded requirements contract to fill valid stock replenishment requirements. The afterburner liners were needed to keep the FA-18 aircraft operational.

Allegation 11. ASO did not advertise the procurement of 100 combustion support assemblies, part 2184559, National Stock Number 2840-01-374-4687, for the TF30 engine (contract N00383-91-G-B310-7213). Additionally, the postaward announcement did not adequately describe the item procured. At the time of the procurement, the complainant was settling with the Air Force the termination of a contract for similar combustion support assemblies, part 2186053, for the TF30 engine. Had the procurement been advertised, the Government could have saved over \$600,000 in contract termination charges and one-half of the \$2.3 million value of N00383-91-G-B310-7213.

Audit Results. The allegation was partially valid. ASO waived the preaward synopsis for the procurement because of unusual and compelling urgency. The fleet was in serious jeopardy, engine lines were down, and inventory diminished because of the increased wear-out rate of the item. Approval of an alternate source required engineering source approval before contract award and the contractor who was awarded the contract was the only source capable of meeting the required delivery schedule. The contracting officer determined that the cost to the Government was fair and reasonable under the circumstances. The postaward "Commerce Business Daily" notice should have contained a more detailed description of the item procured. The "Commerce Business Daily" notice identified the item only by its national item identification number. ASO officials recognized the lack of an adequate item description in postaward "Commerce Business Daily" notices and, in 1994, changed the computer program that generates the notification to the "Commerce Business Daily" to include the physical description of the item. We could not determine whether the price paid for the item was twice the price that the complainant would have charged because the complainant was not solicited and did not submit an offer for the contract award.

## **Appendix D. Overview of Source Approval Process for Critical Safety Items**



1ASO reviews supporting data for completeness and accuracy. ASO requests missing data from contractor if required. ASO requests additional data from Government sources.

2The ASO review includes evaluating additional data from the original equipment manufacturer, from the contract administrator, and from the Defense Plant Representative Office at the prime contractor facility.

3ASO may approve the request if the item is not life-limited or fatigue-sensitive, if no design changes are pending, and if the contractor satisfactorily manufactured the item within the past 3 years or was approved by NAVAIR for similar items within the past 2 years.

4CFA does a complete and thorough technical review of the source approval package. CFA may approve new sources if the CFA has basic design engineering responsibility for the item and if the item is not life-limited or fatigue-sensitive.

<sup>5</sup>The NAVAIR review includes an evaluation of drawings and technical data by the Naval Air Technical Service Facility; an evaluation of the contractor's manufacturing history; a configuration status check; tailoring of first article testing, production lot testing, and quality assurance provisions; and a comprehensive review by the cognizant engineer of the source approval package, including comments by previous reviewing activities.

## **Appendix E. Items with Source Approval Requests in Process and Pending Requirements**

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Total		•	\$5,646,036	\$1,411,508
2840-01-322-9010	3,197	1,210	3,868,370	967,092
2840-01-144-4288	26	13,347	347,022	86,755
2840-01-131-0444	4,232	269	1,138,408	284,602
2840-01-131-0441	1,372	\$ 213	\$ 292,236	\$ 73,059
National Stock <u>Number</u>	Estimated Quantity	Price	Total Price	Potential <u>Benefits</u> *

\*Calculated using the 25-percent breakout savings factor in Appendix E of the Defense Federal Acquisition Regulation Supplement.

## **Appendix F. Summary of Potential Benefits Resulting From Audit**

Recommendation Reference	Description of Benefit	Amount or Type of Benefit	
1.a.	Economy and Efficiency. Permits competitive procurements of four critical safety items.	Funds made available for better use. \$1.4 million of FY 1995 and FY 1996 Defense Business Operations funds.	
1.b., 1.c.	Management Controls. Implements performance measurement systems and designates officials with responsibility and authority to control the source approval program. Increases the likelihood that source approval requests will be processed in a timely manner, allowing increased competitive procurements of critical safety items.	Undeterminable. The number of future source approval requests and the number and dollar amount of future procurements are unknown.	
2.	Economy and Efficiency. Increases the likelihood that source approval requests will be processed in a timely manner because Navy personnel will be aware of information needed to support a source approval request and their responsibilities in evaluating the requests.	Undeterminable. The number of future source approval requests and the number and dollar amount of future procurements are unknown.	
3., 4.	Management Controls. Ensures that management information systems provide the accurate information needed to control processing of source approval requests.	Undeterminable. The number of future source approval requests and the number and dollar amounts of future procurements are unknown.	

## **Appendix G. Organizations Visited or Contacted**

## **Department of the Navy**

Assistant Secretary of the Navy (Financial Management), Washington, DC
Assistant Secretary of the Navy (Research, Development, and Acquisition), Washington, DC
Naval Air Systems Command, Arlington, VA Naval Aviation Depot Jacksonville, FL
Naval Supply Systems Command, Arlington, VA Naval Aviation Supply Office, Philadelphia, PA

## **Department of the Air Force**

Oklahoma City Air Logistics Center, Air Force Materiel Command, Tinker Air Force Base, OK

## **Appendix H. Report Distribution**

### Office of the Secretary of Defense

Under Secretary of Defense (Comptroller) Deputy Chief Financial Officer Deputy Comptroller (Program/Budget) Assistant Secretary of Defense (Economic Security) Director, Defense Procurement Assistant to the Secretary of Defense (Public Affairs) Director, Defense Logistics Studies Information Exchange

## **Department of the Army**

Auditor General, Department of the Army

### **Department of the Navy**

Assistant Secretary of the Navy (Financial Management and Comptroller) Assistant Secretary of the Navy (Research, Development, and Acquisition) Commander, Naval Air Systems Command Commander, Naval Supply Systems Command Auditor General, Department of the Navy Commanding Officer, Naval Aviation Depot Jacksonville Commanding Officer, Naval Aviation Supply Office

### **Department of the Air Force**

Assistant Secretary of the Air Force (Financial Management and Comptroller) Auditor General, Department of the Air Force

### **Other Defense Organizations**

Director, Defense Contract Audit Agency Director, Defense Logistics Agency Director, National Security Agency Inspector General, National Security Agency

## **Non-Defense Federal Organizations**

Office of Management and Budget

Technical Information Center, National Security and International Affairs Division, General Accounting Office

Chairman and ranking minority member of each of the following congressional committees and subcommittees:

Senate Committee on Appropriations Senate Subcommittee on Defense, Committee on Appropriations Senate Committee on Armed Services Senate Committee on Governmental Affairs House Committee on Appropriations

House Subcommittee on National Security, Committee on Appropriations

House Committee on Government Reform and Oversight

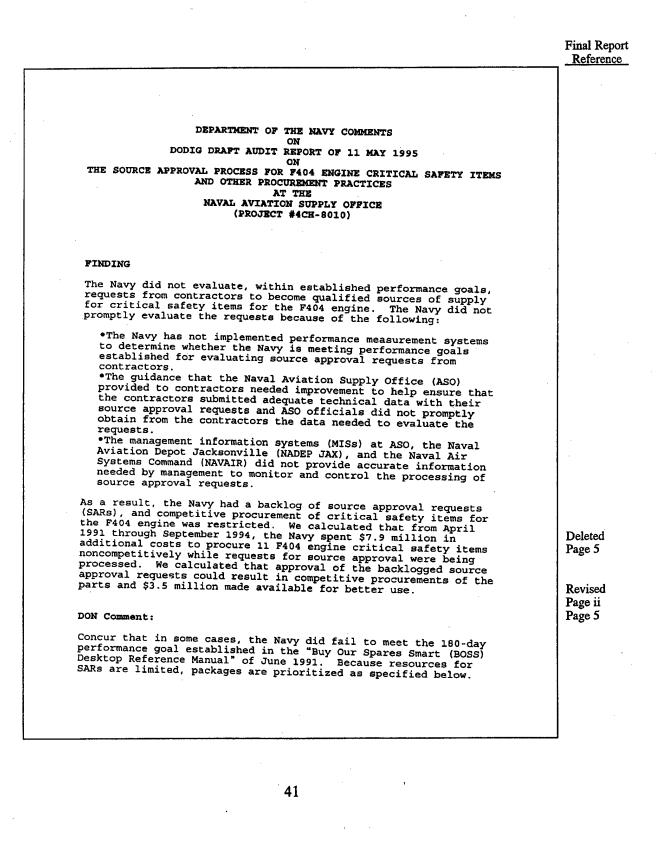
House Subcommittee on National Security, International Affairs, and Criminal Justice, Committee on Government Reform and Oversight

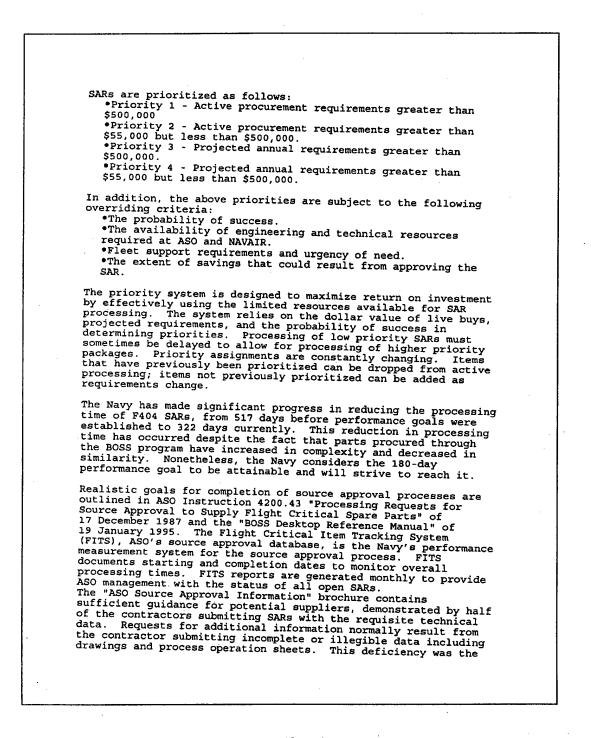
House Committee on National Security

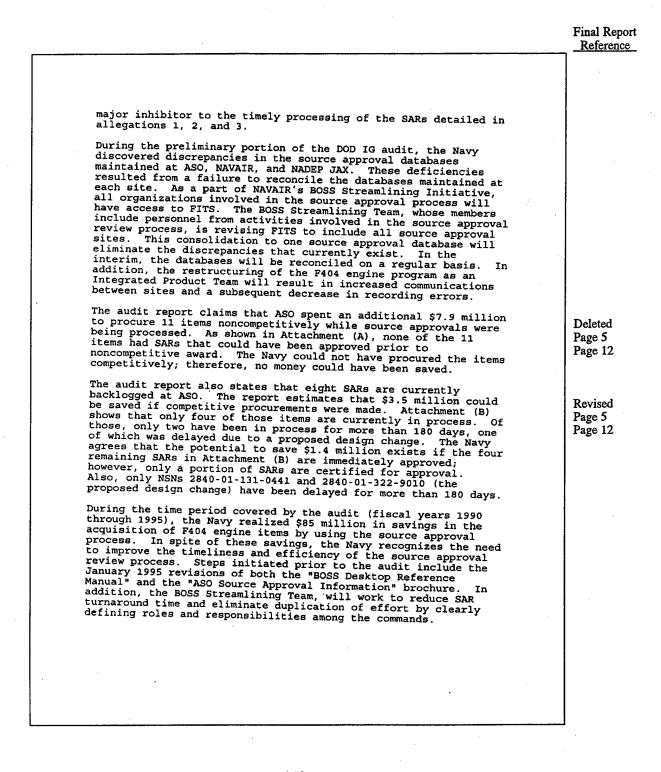
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# **Part III - Management Comments**

DEPARTMENT OF THE NAVY OFFICE OF THE ASSISTANT SECRETARY RESEARCH, DEVELOPMENT AND ACQUISITION 1000 NAVY PENTAGON WASHINGTON DC 20350-1000 JUL 1 7 1995 MEMORANDUM FOR THE DEPARTMENT OF DEFENSE ASSISTANT INSPECTOR GENERAL FOR AUDITING Subj: DODIG DRAFT REPORT ON THE SOURCE APPROVAL PROCESS FOR F404 ENGINE CRITICAL SAFETY ITEMS AND OTHER PROCUREMENT PRACTICES (PROJECT NO. 4CH-8010) Ref: (a) DODIG memo of 11 May 95 Encl: (1) Department of the Navy Comments We have reviewed the finding and recommendations provided by reference (a). We concur that while there has been significant progress made in reducing the processing of F404 Source Approval Requests (SARs), additional improvements can be made. Internal instructions and the information brochure for suppliers have been revised and a Buy Our Spares Smart Streamlining Team is working to make additional improvements to the process. We concur with the recommendations. the recommendations. We concur with monetary benefits of \$1.4 million rather than the \$3.5 million claimed in the report. Detailed comments are in enclosure (1). SMY C. Bowes Vice Admiral, U. S. Navy Principal Deputy Copy to: ASN (FM) (FMO-13) NAVINSGEN







#### RECOMMENDATION 1, a:

We recommend that the Commander, NAVAIR; the Commanding Officer, ASO; and the Commanding Officer, NADEP, JAX:

Expedite their evaluations of the source approval requests that have been in the evaluation process for more than 180 days for the F404 engine critical safety items with pending requirements (Appendix F).

#### DON Comment:

Concur. Navy will make every reasonable effort to expedite the source approval process on those items where success is probable; however, limited resources dictate that SARs must be prioritized. Attachment (B) provides the status of the Appendix F items.

#### RECOMMENDATION 1, b:

Implement, at their respective commands, a performance measurement system for the source approval program that:

(1) Establishes realistic goals for completion of key processes of the source approval program.

(2) Monitors actual time used by key processes to assess program results.

#### DON Comment:

Concur. Realistic goals for completion of source approval key processes already exist in ASO Instruction 4200.43 "Processing Requests for Source Approval to Supply Flight Critical Spare Parts" of 17 December 1987 and the "BOSS Desktop Reference Manual" of 19 January 1995. These documents state that within 180 days of receipt of priority 1 or 2 (live buy) SARs, the Navy will advise the business entity of approval/disapproval or request additional time for processing. Within this 180-day period, the cognizant field activity must return the SAR package to ASO in no more than 90 days. The Navy considers these goals realistic and will continue efforts to achieve them. We anticipate significant improvement in processing time by 31 October 1995 based on the current actions of the BOSS

In response to part b of the recommendation, the FITS system provides management information that includes overall processing times. Reports are generated monthly from the FITS file to provide ASO management with the status of all open SARs. The BOSS Streamlining Team is currently adding data elements required by NAVAIR and NADEP to provide the added capability of monitoring processing times at each review site.

Addition of the data elements will be completed by

31 December 1995.

RECOMMENDATION 1, c:

Designate a responsible official for controlling the source approval program at their respective commands. The official should be given, in writing, the responsibility and the authority to enforce compliance with the source approval processing requirements of the "Buy Our Spares Smart Desktop Reference Manual," including performance goals.

#### DON Comment:

Concur. The Navy does have officials at each site to oversee the source approval process; however, they do not enforce compliance because of limited technical and engineering resources. At ASO the Director of the Source Development Division has the responsibility for the source approval process including SAR processing in accordance with the "BOSS Desktop Reference Manual" as well as ensuring that SAR prioritization achieves maximum benefit to the fleet and taxpayer. At NAVAIR it's the Head, Propulsion and Power Division.

#### **RECOMMENDATION 2:**

We recommend that the Commander, NAVAIR, provide training to personnel involved in the source approval process at ASO and the NADEP JAX concerning their specific responsibilities in evaluating source approval requests and concerning the types and quality of supporting information that must be included in source approval requests forwarded to NAVAIR.

#### DON Comment:

Concur. The BOSS Streamlining Team has initiated a computerbased training program on SAR processing to be conducted at all review sites. Training will begin by 30 September 1995.

#### RECOMMENDATION 3:

We recommend that the Commanding Officer, ASO, establish procedures to verify, on a regular basis, the information on source approval requests in the Flight Critical Item Tracking System (FITS). At a minimum, the procedures should verify that all source approval requests are entered in the database and that the location and evaluation status of each request is accurate.

#### DON Comment:

Concur. The BOSS Streamlining Team is currently reviewing the SAR process. Improvements in these procedures will be implemented at ASO and the Production Support Depots by 31 October 1995.

#### **RECOMMENDATION 4:**

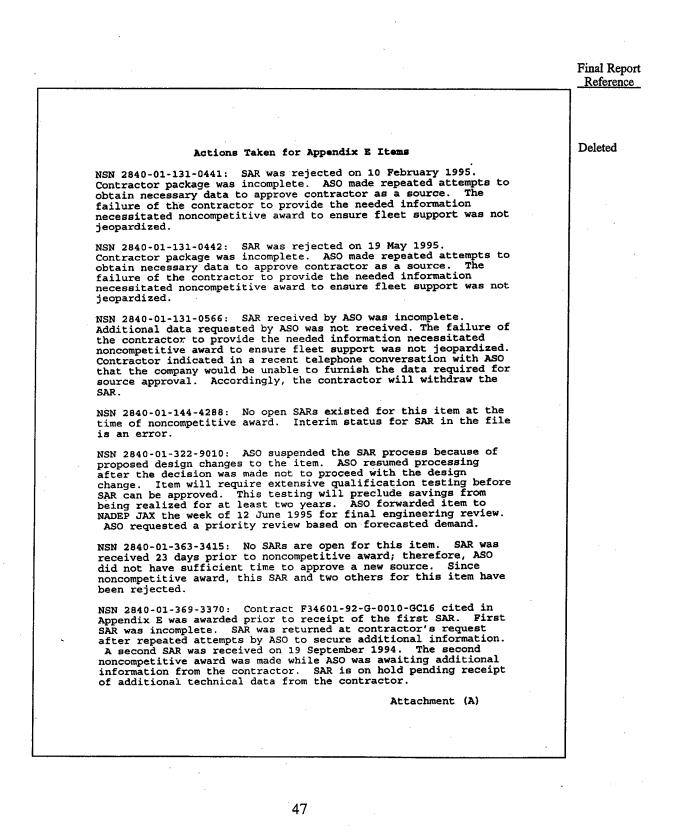
We recommend that the Commander, NAVAIR, and the Commanding Officer, ASO:

a. Correct the discrepancies in the management information system databases used by NAVAIR and the ASO to control the source approval process.

b. Establish procedures to reconcile the two databases on a regular basis.

#### DON Comment:

Concur. As a result of this audit, the Navy recognized that multiple source approval databases are being maintained. Accordingly, ASO and NAVAIR have taken action to reconcile the discrepancies in these databases. In the near future, these databases will be consolidated with the objective of maintaining only one source approval database. ASO's FITS database will probably be adopted as the single database for source approval. To achieve this objective, ASO is currently revising FITS to include data required by NAVAIR and NADEP personnel. We anticipate that a single database will be implemented by 31 December 1995. In the interim, NAVAIR and ASO will routinely reconcile discrepancies among the databases.



NSN 2840-01-396-9574: SAR was received 62 days before the noncompetitive award; therefore, ASO did not have sufficient time to approve a new source. NSN 2840-01-396-9575: SAR was received 62 days before the noncompetitive award: therefore, ASO did not have sufficient time to approve a new source. NSN 2840-01-396-9578: SAR was received 62 days before the noncompetitive award; therefore, ASO did not have sufficient time to approve a new source. NSN 2840-01-398-2181: SAR was received 62 days before the noncompetitive award; therefore, ASO did not have sufficient time to approve a new source. Attachment (A)

	Final Repo
	Revised
Action Taken for Appendix F Items	Page 33
NSN 2840-01-131-0566: Incomplete SAR received by ASO. Contractor must provide data showing they have rights to Precision Master. In a telephone conversation between the company and ASO, the contractor indicated he was unable to furnish this data. Thus, the firm will withdraw the SAR.	Deleted Page 33
NSN 2840-01-150-6734: No open SARs for this item. One open SAR was rejected on 22 May 1995 because the contractor was unable to provide the additional data required to process it.	Deleted Page 33
NSN 2840-01-156-9159: Item is competitive. The SAR was received 24 October 1995, prioritized 4 November 1995 when notice of a live buy was received, and approved 13 April 1995. The item did not warrant a priority prior to this time since no buys were made for this item from 29 July 1990 to 14 March 1995. After the item was prioritized, 160 days were required to process an approval for the SAR. A second SAR is currently in process. We do not believe approval of the additional competitive source will result in significant benefit to the Navy.	Deleted Page 33
NSN 2840-01-369-3370: SAR received on 19 September 1994. SAR is currently on hold pending the receipt of additional data from the contractor.	Deleted Page 33
SARs Currently In Process Projected Savings	
NSN 2840-01-131-0441: SAR received by ASO on \$ 73,059 30 November 1994. Currently in process.	
NSN 2840-01-131-0444: SAR received by ASO on 284,602 7 March 1995. Currently in process.	
NSN 2840-01-144-4288: SAR received by ASO on 86,755 30 March 1995. Currently in process.	
NSN 2840-01-322-9010: ASO suspended SAR process 967,092 because of proposed design changes to the item. ASO resumed processing after the decision was made not to proceed with the design change. Item will require extensive qualification testing before SAR can be approve. This testing will preclude savings from being realized for at least two years. ASO forwarded item to NADEP JAX the week of 12 June 1995 for final engineering review. ASO requested a priority review based on forecasted demand.	
TOTAL \$1,411,508	
Attachment (B)	

## **Audit Team Members**

This report was prepared by the Contract Management Directorate, Office of the Assistant Inspector General for Auditing, DoD

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Paul J. Granetto Garold E. Stephenson Eugene E. Kissner George A. Ford Janice S. Alston

### INTERNET DOCUMENT INFORMATION FORM

A. Report Title: Source Approval Process for F404 Engine Critical Safety Items and Other Procurement Practices at the Naval Aviation Supply Office

**B. DATE Report Downloaded From the Internet: 01/05/99** 

C. Report's Point of Contact: (Name, Organization, Address, Office Symbol, & Ph #): OAIG-AUD (ATTN: AFTS Audit Suggestions) Inspector General, Department of Defense 400 Army Navy Drive (Room 801) Arlington, VA 22202-2884

D. Currently Applicable Classification Level: Unclassified

**E. Distribution Statement A**: Approved for Public Release

F. The foregoing information was compiled and provided by: DTIC-OCA, Initials: \_\_VM\_\_ Preparation Date 01/05/99

The foregoing information should exactly correspond to the Title, Report Number, and the Date on the accompanying report document. If there are mismatches, or other questions, contact the above OCA Representative for resolution.