Description of document: Four National Aeronautics and Space Administration (NASA) Inspector General (OIG) Reports, 1998-1999, 2002

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Source of document: Office of Inspector General
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NASA OFFICE OF INSPECTOR GENERAL

OFFICE OF AUDITS
SUITE 8U71, 300 E ST SW
WASHINGTON, D.C. 20546-0001

JUN 22 2016

Re: Freedom of Information Act (FOIA) Request #16-OIG-F-00627/2016-31

This letter is in response to a May 22, 2016, Freedom of Information Act (FOIA) request that you submitted to NASA, Office of Inspector General (OIG). This FOIA request was assigned tracking #16-OIG-F-00627/2016-31. Specifically, your request sought the following five (5) OIG reports:

1. Barters on the International Space Station Program (September 2002)
2. Verification of Payments to the Russian Space Agency (February 2000)
3. Contractor-Leased Facilities at Marshall Space Flight Center (September 1999)
4. Contractor-Acquired Facilities at Johnson Space Center (February 1999)
5. Final Management Letter on the Survey of the Joint Base Operations and Support Contract (J-BOSC) at Kennedy Space Center (September 1998)

Reports #1 & 3-5, identified above, are partially releasable under the provisions of the FOIA and are enclosed. Unfortunately, Report #2 could not be located.

Some portions of the enclosed reports are not releasable based upon FOIA Exemption Four, 5 U.S.C. § 552 (b)(4). This exemption protects trade secrets and commercial or financial information obtained from a person that is privileged or confidential. The exemption encourages submitters of information to voluntarily furnish commercial or financial information to the government, and also provides the government with an assurance that required submissions will be reliable. Additionally, the Exemption affords protection to those submitters who are required to furnish commercial or financial information to the government by safeguarding them from the competitive disadvantages that could result from disclosure.

For your information, Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA. See 5 U.S.C. § 552(c) (2006 & Supp. IV 2010). This response is limited to those records that are subject to the requirements of the FOIA. This is a standard notification that is given to all our requesters and should be taken as an indication that excluded records do, or do not, exist.

You also have the right to appeal this initial determination to the Deputy Inspector General. Pursuant to 14 CFR §1206.700(b), the appeal must (1) be in writing; (2) be addressed to the following:

NASA, Office of Inspector General
Headquarters
300 E Street SW, Suite 8V39
Washington, DC 20546-0001
Attn: Gail A. Robinson, Deputy Inspector General;

(3) be identified clearly on the envelope and in the letter as "Freedom of Information Act Appeal"; (4) include a copy of the request for the Agency record and a copy of the adverse initial determination; (5) to the extent possible, state the reasons why the requester believes the adverse initial determination should be reversed; and (6) must be postmarked and sent to the Deputy Inspector General within 30 calendar days of the date of receipt of the initial determination.

Sincerely,

Jim Morrison

James L. Morrison
Assistant Inspector General for Audits
OIG FOIA Officer – Audits

Enclosures

National Aeronautics and Space Administration

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S B U

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IG-02-024

AUDIT REPORT

BARTERS ON THE INTERNATIONAL SPACE STATION PROGRAM

September 6, 2002

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Please complete the reader survey at the end of this report or at http://www.hq.nasa.gov/office/oig/hq/audits.html.

Acronyms

FMM	Financial Management Manual
ISS	International Space Station
MPLM	Multi-Purpose Logistic Module
NPD	NASA Policy Directive
OMB	Office of Management and Budget

National Aeronautics and
Space Administration

Headquarters
Washington, DC 20546-0001

SEP - 6 2002

Reply to Attn of: W

TO: B/Acting Deputy Chief Financial Officer
I/Assistant Administrator for External Relations
M/Associate Administrator for Space Flight

FROM: W/Assistant Inspector General for Audits

SUBJECT: Final Report on Audit of Barters on the International Space Station Program
Assignment Number A-01-024-00
Report Number IG-02-024

The subject final report is provided for your information and use. Please refer to the Executive Summary for the overall audit results. Our evaluation of your response has been incorporated into the body of the report. We consider management's proposed, corrective actions responsive for the recommendations. The recommendations will remain open for reporting purposes until corrective actions are complete. Please notify us when actions have been completed on the recommendations, including the extent of testing performed to ensure corrective actions are effective.

We appreciate the courtesies extended to the audit staff. If you have questions concerning the report, please contact Mr. Dennis E. Coldren, Program Director, Space Flight Audits, at (281) 483-4773, or Ms. Esther A. Judd, Audit Program Manager, at (301) 286-3359. The final report distribution is in Appendix E.

Alan J. Lamoreaux

Enclosure

cc:
HQ/AA/Chief of Staff
HQ/AI/Associate Deputy Administrator
HQ/B/Comptroller
HQ/BF/Director, Financial Management Division
HQ/G/General Counsel
HQ/JM/Director, Management Assessment Division
JSC/AA/Director, Lyndon B. Johnson Space Center

Contents

NASA Office of Inspector General

IG-02-024 **September 6, 2002**
A-01-024-00

Barters on the International Space Station Program

Executive Summary

Background. NASA barters with other space agencies[1] to obtain International Space Station (ISS) hardware elements in exchange for providing goods and services such as Space Shuttle transportation[2] and a share of NASA's ISS utilization rights[3] (Appendix B contains details on the barters).[4] NASA estimated the total value of the ISS barters at about $1.5 billion. To date, the major elements NASA has received are three Multi-Purpose Logistic Modules (MPLM's)[5] built by the Italian Space Agency and the Super Guppy Transport Aircraft[6] provided by the European Space Agency.[7]

Objectives. The overall audit objective was to evaluate NASA's management of barters on the ISS Program. Specifically, we determined whether NASA will receive adequate consideration for the goods and services it will provide and whether NASA properly accounted for offset transactions and complied with bartering agreements. Appendix A contains further details of our objectives, scope, and methodology.

Results of Audit. To date, NASA has complied with the bartering agreements but did not maintain adequate documentation to support its estimates of bartered item values. As a result, we could not determine whether NASA would receive adequate consideration for the estimated $1.5 billion of goods and services the Agency would provide (Finding A).

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[1]NASA has International Space Station bartering agreements with the European Space Agency, the Italian Space Agency, the National Space Development Agency of Japan, the Canadian Space Agency, and the Brazilian Space Agency.
[2] NASA funds all Space Shuttle transportation through the Space Shuttle Program.
[3]Utilization rights are established in the memorandums of understanding between the ISS international partners and address accommodations and resources on the ISS. The accommodations include NASA's laboratory module and sites for external payloads, the European pressurized laboratory, and the Japanese experimental module. The resources include items such as power, user servicing capacity, heat rejection capacity, crew time, and data handling capacity. NASA's user accommodation rights are 97.7 percent of NASA's laboratory module and external payload sites, 46.7 percent of the European pressurized laboratory, and 46.7 percent of the Japanese experimental laboratory. NASA's allocation of utilization resources is 76.6 percent of non-Russian resources.
[4]NASA has two types of ISS agreements that this report refers to as bartering agreements. The two types are (1) cooperative barters in which a participant provides NASA with an element, system, or function, in exchange for consideration such as NASA's utilization and (2) offset barters in which NASA or the partner receives goods and services to offset a financial obligation.
[5]The pressurized MPLM's can accommodate 16 perimeter racks and 2 aisle storage containers for transporting user payloads and resupply items to and from the ISS.
[6]The Super Guppy Transport Aircraft is used for, but is not limited to, transporting ISS elements.
[7]The ISS agreement with the European Space Agency includes 11 member states: Belgium, Denmark, France, Germany, Italy, the Netherlands, Norway, Spain, Sweden, Switzerland, and the United Kingdom.

Additionally, NASA did not properly account for bartered property. As a result, NASA's liabilities are understated by as much as $335 million and the Agency could improperly account for an additional $1.2 billion of bartered property (Finding B).

Other Matters of Interest. The National Aeronautics and Space Administration Authorization Act for fiscal year 2000 (Public Law 106-391) required that NASA obligate not more than $25 billion for ISS development. Because projected costs exceeded the mandated limit, NASA's budget required significant reductions for the ISS. As a result, NASA deferred certain elements considered high risk, such as the habitation module and the crew return vehicle. If no alternatives are provided, the absence of the deferred elements will limit the permanent ISS crew to three. NASA and the international space agencies negotiated two ISS bartering agreements based on a percentage of utilization rights contemplated with a seven-person crew configuration. To the extent that the two bartering agreements may be affected by a reduction in planned on-orbit resources, NASA should coordinate with the affected partner.

Recommendations. NASA should establish procedures for developing documented cost and value estimates for ISS barters and should establish accounting policies and procedures for barter transactions.

Management's Response. Management concurred with the recommendations. NASA will establish procedures for documenting and maintaining the value estimates developed during barter negotiations. The Agency will also establish accounting policies and procedures for barter transactions. The complete text of the response is in Appendix D.

Evaluation of Management's Response. We consider management's planned actions responsive.

Introduction

The ISS is a cooperative international program that began in 1984 with the United States, Canada, nine member states of the European Space Agency, and Japan. In 1988, those countries signed an intergovernmental agreement, which was superceded by a 1998 agreement that included Russia and two additional member states of the European Space Agency.[8] To implement the provisions of the intergovernmental agreement, NASA signed bilateral memorandums of understanding with the Canadian Space Agency, the European Space Agency, the Russian Space Agency, and the Government of Japan.

The intergovernmental agreement and the memorandums of understanding established, among other things, the contributions of the partners and their financial obligations. Additionally, the agreements state that the parties will seek to minimize the exchange of funds in the cooperative program, including the use of barters to provide goods and services.

Pursuant to the agreements discussed above, NASA negotiated seven ISS bartering agreements[9] with the Canadian Space Agency, the European Space Agency, the Italian Space Agency, the National Space Development Agency of Japan, and the Brazilian Space Agency.[10] NASA will provide Space Shuttle transportation services and/or a share of NASA's ISS utilization rights in exchange for hardware elements that NASA would otherwise be required to provide. NASA provides its required hardware under the ISS prime contract with The Boeing Company (Boeing).[11] The ISS Program's International Partners Office estimated that NASA would receive NASA-required elements valued at about $1.5 billion in exchange for NASA-provided services valued at about $1.5 billion with no exchange of funds.

NASA originally planned to contract with Boeing for the Agency's required hardware elements but instead bartered for some of the items. NASA had not contracted for the hardware elements included in the seven bartering agreements except for three elements included in Boeing's prime contract.[12]

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[8]The two additional member states of the European Space Agency were Sweden and Switzerland.
[9]Two of the bartering agreements were cooperative barters (Italian Space Agency and Brazilian Space Agency) and five were offset barters.
[10]Brazil is not an ISS international partner and, therefore, was not part of the intergovernmental agreement or memorandums of understanding.
[11]The prime contract (NAS15-10000), awarded by Johnson Space Center, is for the delivery and support of the U.S. On-Orbit Segment of the ISS and related ground support equipment.
[12]The three elements were the Node 2 (pressurized berthing/docking port), crew freezers, and unpressurized logistic carriers/dry cargo carriers.

Findings and Recommendations

Finding A. Valuing Barters

NASA's ISS International Partners Office did not maintain adequate documentation to support the estimated $1.5 billion in goods and services (consideration) that NASA would receive for goods and services (bartered items) it would provide under bartering agreements, and the documentation that was available contained inaccuracies. For example, the ISS International Partners Office could not adequately support its estimate for the three hardware items NASA would receive as consideration under bartering agreements. The estimate was more than double the amount the ISS Program Office deleted from the prime contract for the same three items. Adequate documentation for the estimate was not maintained because NASA had not established procedures for developing and documenting support. Consequently, we could not determine whether NASA would receive adequate consideration in exchange for the estimated $1.5 billion in goods and services it would provide on seven bartering agreements.

Guidance on Developing Value Estimates and Documenting Transactions

ISS bartering agreements are implementing arrangements for Space Act agreements, specifically, they are memorandums of understanding between NASA and the other space agencies. NASA considers the bartering agreements as nonreimbursable.

Nonreimbursable Agreement Guidance. NASA Policy Directive (NPD) 1050.1F, "Authority to Enter Into Space Act Agreements," November 13, 1998, requires that before executing a nonreimbursable agreement, NASA must prepare a cost accounting estimate of the value of the Agency resource to be committed so that an authorizing official has a basis for determining that the proposed contribution of the non-NASA party is adequate compared to NASA's contribution.

Office of Management and Budget (OMB) Guidance. OMB Circular A-123, "Management Accountability and Control," June 21, 1995, requires transactions to be promptly recorded, properly classified, and accounted for in order to prepare reliable management reports. The documentation for transactions, management controls, and other significant events must be clear and readily available for examination.

Value Received and Provided by NASA

With a total value of $1.5 billion, the bartering agreements are significant financial transactions, but documentation to substantiate the estimated values of the bartering agreements was not clear or readily available for our examination, as required by OMB Circular A-123. Further, NASA did not have sufficient documentation, as required by NPD 1050.1F, to show that the consideration received from the non-NASA party was adequate. NASA did sufficiently support the value of consideration provided, which primarily was Space Shuttle transportation.

Value Received. For each of the seven bartering agreements, the ISS International Partners Office prepared a worksheet that showed the estimated value of the consideration NASA would receive and provide for each hardware element. However, two of the worksheets (representing two bartering agreements) contained inadequately supported values and significant inaccuracies.

Support for Values. For two of the bartering agreements, the ISS Program Office initially budgeted, negotiated, and included three of the bartered hardware elements in Boeing's prime contract.[13] When the ISS Program Office decided to barter the three elements, the Program Office deleted them from Boeing's contract. The worksheets showed that NASA would receive $143 million of value for the three hardware elements. Yet, the ISS Program Office deleted only about $68 million from the ISS prime contract for the three elements, which represented the amount the ISS Procurement Office estimated that NASA would have paid Boeing for the elements as contracted.[14] The ISS International Partners Office explained that the $75 million difference represented additional costs that were estimated for anticipated changes in the configuration baseline and for technical issues[15] that were not included in the prime contract. That office could not provide us documentation to support the $75 million difference.

Accuracy and Support for Values. For one of the barters, the worksheet[16] showed that NASA would provide services estimated at $200 million. The worksheet also showed that NASA would receive only $165 million in consideration, a difference of $35 million. Representatives of the ISS International Partners Office explained that $30 million of the difference was for enhancements[17] that NASA would not have included without the barter. Nevertheless, the representatives could not provide documentation to show that the enhancements would add $30 million of value and could not explain the remaining $5 million difference.

Value Provided. The ISS International Partners Office used its value-received estimates to determine the value of consideration (primarily Space Shuttle transportation) NASA would provide as part of the barters. The ISS International Partners Office used NASA's Space Shuttle Pricing Guidelines[18] to calculate the value of the Space Shuttle flights NASA would provide. The pricing guidelines state that a pro-rata share of $400 million would be used for ISS missions that require Space Shuttle cargo bay payloads.[19] The pricing guidelines also state that for Space Shuttle missions that delivered the international partners' elements to the ISS during the

[13]The two barters included other hardware elements in addition to the three elements in Boeing's contract.
[14]The ISS Procurement Office negotiated the contract deletions with Boeing, and the contract files properly documented the negotiations.
[15]Configuration baseline is the plan for the ISS to be built and used. Changes to the configuration baseline could be caused by technical issues that were not foreseen when the baseline was planned.
[16]Because both worksheets contained the same type of inaccuracies and unsupported explanations, only one is discussed in this report. Also, NASA considers specific details relating to negotiation values as sensitive information.
[17]Enhancements are improvements to the ISS that were not included in NASA's original configuration baseline.
[18]OMB reviewed NASA's Space Shuttle Pricing Guidelines, May 30, 1995, in order to cost Space Shuttle services used for the development and operations of the ISS.
[19]The $400 million was for the Space Shuttle's round trip to the ISS -- $200 million for ascent and $200 million for descent. The guideline prices would apply for launches through September 30, 2002.

assembly phase, the price for the return trip would not be applicable. Therefore, for barters, the Space Shuttle rate would be $200 million for delivery of the element to the ISS prorated for the amount of payload used.

Procedures Needed for Assurance of Adequate Consideration

The ISS International Partners Office appropriately used the pricing guidelines for Space Shuttle flight services for its value provided on barters.[20] However, NASA did not have adequate procedures in place to ensure that adequate documentation was maintained to show that commensurate value was received for the $1.5 billion contribution the Agency made. NASA should establish procedures to ensure that value estimates are adequately documented so there is a basis for determining whether the proposed contribution of the non-NASA party is adequate in comparison to NASA's contribution.

Recommendation, Management's Response, and Evaluation of Response

1. **The Associate Administrator for Space Flight should establish procedures for developing documented cost and value estimates for ISS bartering agreements.**

Management's Response. Concur. The Office of Space Flight plans to establish procedures for documenting and maintaining cost and value estimates by September 30, 2002. Management also stated that steps were taken in the most recent barter negotiation to maintain all documents created during the valuation process. The complete text of management's response is in Appendix D.

Evaluation of Management's Response. Management's planned actions are responsive to the recommendation. The recommendation is resolved but will remain undispositioned and open until agreed-to corrective actions are completed.

[20]In "Space Shuttle Payloads," IG-01-003, December 21, 2000, we reported that NASA's average cost was $447.8 million, based on seven Space Shuttle flights per year (see Appendix C).

Finding B. Accounting for Barters

NASA did not properly account for bartered property. Specifically, for three MPLM's received from the Italian Space Agency, NASA did not record a liability[21] when the property was received, did not record the property consistently, and did not use the proper methodology to value the assets. Property accountability was inadequate because current Agency policy does not address accounting for barter transactions. As a result, NASA understated its liabilities by as much as $335 million and the Agency could improperly account for an additional $1.2 billion of bartered property NASA expects to receive.[22]

Agency Policies and Procedures

NASA has established policies and procedures on accounting for program costs and for property, plant, and equipment. For example, NASA's Financial Management Manual (FMM) defines liabilities and provides policy and procedures on how property should be valued and recorded. Also, a NASA Policy Directive specifically establishes requirements for International Space Act Agreements. Yet, the FMM and the NPD, as discussed below, do not provide policies and procedures that address accounting for transactions that pertain to ISS bartering agreements.

Financial Management Manual. FMM 9020, "Definitions and Financial Management Terms," defines accounting terms NASA uses so that Agency personnel have a common understanding of recorded and reported NASA financial operations. Specifically, FMM 9021-4, "Definitions," defines liabilities and when they will be recognized (recorded). FMM 9021-4 defines a contingent liability as a potential liability based on a past transaction or event that may become an actual liability. The FMM requires that a contingent liability be recorded when the transaction or event has occurred and the future outflow of resources is measurable. FMM 9021-4 also defines a liability as the amount owed by NASA for items received, services rendered, expenses incurred, assets acquired, construction performed (regardless of whether invoices have been received), and as amounts received but as yet unearned.

NASA Policy Directive. NPD 1050.1F, "Authority to Enter Into Space Act Agreements," November 13, 1998, assigns responsibility to the NASA Chief Financial Officer and the Centers' Chief Financial Officers for developing guidelines consistent with the Agency's cost accounting system and budget development procedures to ensure fiscal integrity.[23]

[21]The liability could be actual, contingent, or a combination thereof. Liabilities are defined in the FMM and are discussed in the finding paragraph entitled, "Financial Management Manual."
[22]We calculated the $1.2 billion (rounded from $1.165 billion) by subtracting $335 million for the MPLM's from the estimated $1.5 billion value of services the Agency must provide for all seven barters.
[23]The ISS bartering agreements are not Space Act Agreements. Nonetheless, the bartering agreements are international agreements that implement Space Act Agreements.

Accounting for Multi-Purpose Logistic Modules

NASA received three MPLM's valued at $208 million[24] as part of a 1997 cooperative barter between NASA and the Italian Space Agency. The agreement required the Italian Space Agency to design, fabricate, test, and deliver three MPLM flight elements complete with subsystems, ground support equipment, and associated software required to operate the elements. The agreement also required NASA to provide the Italian Space Agency with a share of NASA's utilization rights on the ISS, Space Shuttle launch and return services, and data transmission services.[25]

Disclosure of Liability. The Italian Space Agency delivered the first MPLM to NASA in 1998, the second in 1999, and the third in 2001. NASA recorded the MPLM's as assets valued at $137 million, $39 million, and $32 million, respectively,[26] but did not record a corresponding liability as required by FMM 9020. Based on the ISS International Partners Office's value estimate, NASA is required to provide the Italian Space Agency services valued at $335 million in exchange for the MPLM's and the associated support. The Italian Space Agency delivered the MPLM's, but NASA had not yet provided the services. Therefore, NASA should recognize an actual liability of as much as $335 million.

Recording Bartered Property. Kennedy Space Center (Kennedy) and Lyndon B. Johnson Space Center (Johnson) recorded the MPLM's incorrectly and inconsistently. Property accounting representatives at Kennedy and Johnson stated they had recorded the MPLM's in accordance with the FMM based on the documentation available. As stated earlier, the FMM does not address bartering agreements. Yet neither representative contacted the Office of the Chief Financial Officer at NASA Headquarters for guidance on how to account for the property to ensure that each Center would consistently record the assets.

Kennedy Space Center. When the Italian Space Agency delivered the first two MPLM's, Kennedy should have recorded them as Government-owned and held property before Kennedy transferred the property to Boeing as Government-furnished equipment.[27] Instead, Kennedy recorded the MPLM's as Government-owned and contractor-held property. Because Kennedy did not record the receipt of the property as Government-owned and held property, there was no record to show how NASA acquired the MPLM's and subsequently provided them to Boeing. The accounting method Kennedy used incorrectly implied that the Italian Space Agency provided the MPLM's to Boeing as Government-furnished equipment at no charge.

[24]The $208 million was the amount NASA capitalized (recognized and recorded) as an asset for the MPLM's flight elements. The amount capitalized did not include values estimated for ground support equipment, associated software, and sustaining engineering required for the maintenance and operation of the MPLM's.

[25]NASA will provide .85 percent of NASA's utilization rights on the ISS, Space Shuttle launch and return transportation services for the Italian Space Agency's .85-percent utilization allocation, one crew rotation every 5 years with a minimum of three rotations, and data transmission services from NASA's Tracking and Data Relay Satellite System (TDRSS). The TDRSS is NASA's space and ground communications network for command, control, and operations of ISS elements and payloads.

[26]NASA recorded the MPLM's based on the amount the Italian Space Agency estimated as its acquisition costs. For additional information, see paragraph entitled "Valuation of Bartered Property."

[27]Kennedy transferred the property to Boeing under Kennedy's Payload Ground Operations Contract.

In fact, NASA agreed to compensate the Italian Space Agency by providing launch services, utilization, and crew rotations.

Johnson Space Center. Unlike Kennedy, Johnson properly recorded the third MPLM as Government-owned and held property before Johnson transferred the element to Kennedy. Therefore, an accounting record existed to show how NASA obtained the MPLM. Still, Johnson incorrectly recorded the third MPLM as donated property. Similar to Kennedy's method, the accounting method Johnson used incorrectly implied that the Italian Space Agency provided the MPLM at no charge. Johnson's property accounting representative stated that he did not know NASA was required to provide services to the partner in exchange for the MPLM. The representative explained that neither Johnson's Legal Office nor the ISS Program Office indicated there was a contingent liability as a result of the cooperative barter.[28]

Valuation of Bartered Property. NASA did not value the individual MPLM's equally. Kennedy improperly included all of Italy's nonrecurring engineering and development costs in the $137 million recorded for the first MPLM instead of allocating the nonrecurring costs to each of the three MPLM's. As a result of this accounting treatment, NASA overvalued the first MPLM and undervalued the second and third MPLM's. The unequal valuation should not affect NASA's accounts as long as all three MPLM's remain on the books. On the other hand, if NASA were to remove one or two of the MPLM's from its accounting records, the remaining assets would not be correctly valued, either individually or in total.

Need for Guidance on Accounting Treatment of Barter Transaction

The ISS bartering agreements are unique transactions because there is no exchange of funds, and they involve international entities that are not required to follow NASA guidance. Therefore, NASA should review the adequacy of its accounting method, and the method should be approved by NASA's Office of the Chief Financial Officer. To ensure complete, proper, and consistent valuation and recordation of barter transactions, NASA should establish policies and procedures for barters. At a minimum, NASA should revise current financial management policy and procedures to include specific reference to barter-type transactions.

Recommendation, Management's Response, and Evaluation of Response

2. **The NASA Chief Financial Officer, in conjunction with the Centers' Chief Financial Officers, should establish accounting policies and procedures for barter transactions.**

Management's Response. Concur. The NASA Chief Financial Officer, in conjunction with the Centers' Chief Financial Officers will establish accounting policies and procedures for barter transactions by September 30, 2002 (see Appendix D).

[28]Each year, NASA's Centers submit a "Commitments and Contingencies Report" for the Center's Legal Office and Program Offices to respond to and report any contingent liabilities to property management.

Evaluation of Management's Response. Management's planned actions are responsive to the recommendation. The recommendation is resolved but will remain undispositioned and open until the agreed-to corrective actions are completed.

Appendix A. Objectives, Scope, and Methodology

Objectives

The overall objective was to evaluate NASA's management of barters on the International Space Station (ISS) Program. Specifically, we determined whether NASA will receive adequate consideration for the goods and services it will provide and whether NASA properly accounted for offset transactions and complied with bartering agreements with the ISS partners.

Scope and Methodology

To meet our objectives, we reviewed the intergovernmental agreement, memorandums of understanding, ISS bartering agreements,[29] and the U.S. Department of State Supplementary Handbook on the C-175 Process.[30] We also reviewed the National Aeronautics and Space Administration Authorization Act of 2000, ISS budgets, ISS prime contract, ISS Management and Cost Evaluation Report, and The Boeing Company's (the ISS prime contractor) Performance Measurement System Reports. We interviewed personnel in the ISS Program Office, Space Shuttle Program Office, Lyndon B. Johnson Space Center (Johnson) Legal Office, and Johnson's Accounting and Budget Office. We also interviewed personnel in the NASA Headquarters Office of External Relations, Human Space Flight, and Office of the Chief Financial Officer. We verified the C-175 process with personnel at the Department of State. We reviewed applicable regulations including Office of Management and Budget (OMB) Circulars, NASA policy directives, NASA Management Instruction, NASA Financial Management Manual, and Federal Acquisition Regulation. We did not assess the reliability of computer-processed data, because we did not rely on it to achieve our objectives.

Management Controls Reviewed

We reviewed management controls relative to proposal analysis, negotiation, and documentation. We also reviewed OMB Circular A-123, "Management Accountability and Control." Management controls need to be strengthened to ensure that NASA maintains adequate documented valuation support (Finding A) and properly accounts for barters (Finding B).

Audit Field Work

We performed the audit field work from April 2001 through March 2002 at Johnson and NASA Headquarters. We performed the audit in accordance with generally accepted government auditing standards.

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[29] See footnote 1 for a listing of space agencies involved in ISS barters.

[30] The supplementary handbook streamlined and expedited the C-175 process for routine international science and technology agreements. The C-175 process involves interagency review and clearance of proposed international agreements.

Appendix A

Prior Audits and Other Reviews

The NASA Office of Inspector General and the General Accounting Office have issued numerous reports on the ISS Program. Related reports are summarized in Appendix C of this report.

Appendix B. Cooperative and Offset Bartering Agreements[1]

Partner	Bartering Agreement States that NASA Receives the Following	Bartering Agreement States that NASA Provides the Following
Italian Space Agency	Three Multi-Purpose Logistics Modules[2]	Space Shuttle flight, 0.85 percent NASA payload accommodations and utilization resources, and one crew opportunity every 5 years
European Space Agency	Super Guppy Transport Aircraft[3]	450 kilograms of payload delivered by the Space Shuttle
European Space Agency	Cupolas 1 and 2[4]	Space Shuttle launch of payloads, window glass, and cupola outfitting hardware
Canadian Space Agency	Special Purpose Dexterous Manipulator System, software upgrades, Science Power Platform Analysis support, portion of Canada's utilization rights, and Canada's Micro-gravity Isolation Mount. One rack year or one adapter site year.	Common Operations Cost Offset for 5.25 rack-years, 6 external adaptor site-years and associated 2 percent utilization resources. 800 pounds payload transport, $5 million Tracking and Data Relay Satellite System credit for Canada payloads and some training for their astronauts.
National Space Development Agency of Japan	Centrifuge Accommodations Module, Centrifuge Rotor, Life Sciences Glovebox, and one HII-A launch	Space Shuttle launches for Japanese Experiment Module, Pressurized Module, Exposed Facility, Logistics Module, and Unpressurized Logistics Module
European Space Agency	Nodes 2 and 3,[4] refrigerator/freezers, cryogenic freezer/outfitting, sustaining engineering, spares for the laboratory freezers, micro gravity science glove box	Outfitting for Node 3, Space Shuttle flight for the Columbus Orbital Facility
Brazilian Space Agency	4-Express Pallets, 4-Unpressurized Logistics Carriers, Cargo Handling Interface Assembly, Window Observational Research Facility, Technology Experiment Facility, and Z1-Unpressurized Logistics Carriers-Attach System	Space Shuttle flight, express locker, Window Observational Research Facility time, 2-50 kilograms Technical Experiment Facility trays, 0.45 percent of NASA's utilization resources, and 1 crew opportunity during life of the ISS

[1]The agreements with the Italian Space Agency and the Brazilian Space Agency are cooperative bartering agreements. The agreements with the European Space Agency, the Canadian Space Agency, and the National Space Agency of Japan are offset bartering agreements.
[2]NASA received the Multi-Purpose Logistic Modules from the Italian Space Agency but had not yet provided the services required by the bartering agreement.
[3]NASA received the Supper Guppy Transport Aircraft from the European Space Agency and has delivered the 450 kilograms of Space Shuttle payload to the International Space Station as required by the barter agreement.
[4]NASA deleted Cupola 2 and negotiated a small credit as part of the Node 2 and Node 3 barter with the European Space Agency. Nodes 2 and 3 are pressurized berthing/docking ports that accommodate the passage of the crew and equipment and are used for storage.

Appendix C. Prior Audits and Other Reviews

Office of Inspector General Reports

The NASA Office of Inspector General (OIG) and the General Accounting Office have issued reports relating to Space Shuttle payloads and international agreements. The reports are summarized below. See www.hq.nasa.gov/office/oig/hq/issuedaudits.html for copies of the NASA OIG reports.

"Space Shuttle Payloads," IG-01-003, December 21, 2000. NASA's budget for the Space Shuttle is based on a rate of seven flights a year. More than seven flights in a year require additional funding (which is referred to as the marginal cost of an added flight). An added flight would normally be a reimbursable flight, that is, the entity and primary payload necessitating the Space Shuttle flight would pay the user charge. As part of the budget process, NASA calculates the Space Shuttle average cost per flight and the marginal cost of an added flight. NASA's fiscal year (FY) 2001 budget submission reported the FY 2002 average cost per flight as $447.8 million and the marginal cost of an added flight as $83.7 million. However, the Agency had not established a pricing system and had not established a methodology for determining additive cost as required by 42 USC § 2466. NASA had not taken these actions because it believed that it was charging the Air Force fair value and that, due to considerations such as commercialization and national security, the Agency has broad statutory authority to set prices on a case-by-case basis. As a result, NASA could not show that its pricing represented reasonable customer incentives and, therefore, may have offered the two Space Shuttle flights at prices that are less than those intended by 42 USC § 2466. NASA did not agree with our report, and we have referred it to the NASA Follow-up Official.

"Assessment of the Crew Medical Transport Barter Arrangement," Inspections and Assessments Letter, G-00-015, October 6, 2000. Negotiations were under way for NASA to acquire a Boeing Business Jet for use as a dedicated crew medical transport for the ISS. NASA planned to receive the aircraft in a bartering agreement involving the Government of Japan and Mitsubishi, Inc. NASA determined that the acquisition of a dedicated crew medical transport aircraft was the most effective approach to meeting crew medical needs. However, NASA's analyses supporting this determination did not consider all reasonable alternatives. NASA subsequently cancelled the negotiations for the barter.

"Management and Administration of International Agreements," IG-00-004, January 14, 2000. The NASA Office of External Relations is responsible for developing and implementing Agency international policies, including drafting, coordinating, negotiating, and maintaining records on all international agreements. That office is also responsible for ensuring that Agency programs are conducted in accordance with Administration and Agency international policies. Documentation and information related to the international agreements were not complete or accurate. As a result, the Agency is relying on incomplete and inaccurate information when drafting new international agreements or responding to inquiries.

General Accounting Office (GAO) Reports

"Cost to Operate After Assembly Is Uncertain," GAO-99-177, August 1999. In sharing operating responsibilities for the ISS, NASA and the Russian Space Agency agreed to exchange services rather than funds, but the agencies may not be able to achieve a balance in the services provided to each other. The cost of operating the ISS is also supposed to be shared with NASA's other international partners. NASA's share of common operating costs has increased slightly as partners have reduced their participation. Allowing the other partners to provide services to reimburse NASA for their shares of common cost may not offset NASA funding requirements. The partners may also reimburse NASA for Space Shuttle and communication services, but the amount and form of reimbursement cannot be accurately estimated at this time. The complexity, long life, and international nature of the Space Station program make it extremely challenging to accurately forecast future operating costs. Also unknown is the degree to which agreements with international partners for sharing cost and reimbursable services will offset NASA funding requirements.

National Aeronautics and
Space Administration
Headquarters
Washington, DC 20546-0001

August 9, 2002

Reply to Attn of: I

TO: W/Assistant Inspector General for Audits

FROM: B/Chief Financial Officer
I/Assistant Administrator for External Relations
M/Associate Administrator for Space Flight

SUBJECT: Response to the May 24, 2002, Draft Report on Audit of Barters on the International Space Station Program, Assignment Number A-01-024-00

The following memorandum provides a joint response from the Office of the Chief Financial Officer, the Office of External Relations, and the Office of Space Flight to the subject audit report. This response has been coordinated with the Office of the General Counsel, the Johnson Space Center, and the International Space Station (ISS) Program Office. Because the report contains information that is negotiation-sensitive, including specific dollar values assigned to barter elements by NASA for ongoing valuation purposes, we request that the report remain administratively controlled.

1. Response to Finding A:

We concur with the recommendation of the Office of the Inspector General (OIG) that NASA should improve the process for documenting the ISS barters. A more standardized system or process for filing and archiving those records created during the valuation and negotiation of barters would facilitate future audits of NASA's ISS barter arrangements. NASA currently creates such records as a part of the process in place for international agreements. This process is contained in NASA Policy Directive (NPD) 1050.1F and NPD 1360.2. This process directs that all barters are properly developed, approved, and negotiated, in order to provide NASA a fair exchange while minimizing the exchange of funds and furthering NASA and U.S. Government goals.

Although the process that NASA had been following for developing and negotiating ISS barters is consistent with the guidance contained in the NPD's noted above, we have taken steps to improve the process consistent with the OIG's initial expression of concern. NASA took steps in the most recent barter negotiation with the European Space Agency to maintain all documents created during the barter valuation process. We documented our initial value estimates, the evolution of the series of proposals that were addressed through negotiation, and the final barter rebalance agreed to by the Parties. These records will be maintained as part of the permanent negotiation and barter files. The Office of Space Flight will establish procedures for documenting and maintaining the value estimates developed during barter negotiations by September 30, 2002.

Despite a lack of sufficient contemporaneous documentation, the barters are effective arrangements for which NASA received returns appropriate for its investment while minimizing the exchange of funds. The OIG notes that the barters together represent a significant financial transaction for NASA. NASA also judged these agreements to be "significant" and thus subject to the Case-Zablocki Act (1 U.S.C. section 112 (b)). As a result, the barters were subject to review by NASA management and were circulated by the Department of State for interagency approval to the appropriate U.S. Government entities, including the Departments of State, Defense, and Commerce, and the Office of Management and Budget. This process provides program, agency, and interagency level review of the proposed barter arrangements.

We also wish to note the distinction between two types of barters: cooperative agreements, such as the bilateral agreement with the Italian Space Agency for the provision of three Multipurpose Logistics Modules, and offsets, such as the agreement with the European Space Agency for the launch of their Columbus Laboratory. Cooperative agreements are non-reimbursable agreements developed based on mutual benefit. Offsets are developed based on an accepted monetary value, such as the cost of launching payloads on the Space Shuttle, for which equal return is provided in kind. We recognize that in both cases, NASA needs to maintain the documentation created to support the values established in the barters.

Response to Finding B:

1. We concur with recommendation 2. The NASA Chief Financial Officer, in conjunction with the Centers' Chief Financial Officers, will establish accounting policies and procedures for barter transactions by September 30, 2002.

Appendix D

Should you have questions concerning this response, please contact Ms. Donna Shortz at (202) 358-1406. Ms. Shortz will coordinate any follow-up necessary to ensure an appropriate and timely response. We appreciate the opportunity to provide comments prior to the issuance of the final report.

for William R Readdy
Frederick Gregory

Lynn F. H. Cline for
John D. Schumacher

Steven J. Varholy

cc:
AA/Chief of Staff
BF/Director, Financial Management Division
G/General Counsel
JM/Director/Management Assessment Division

Appendix E. Report Distribution

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NASA Assistant Inspector General for Audits
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Report Title: Audit of Barters on the International Space Station Program

Report Number: ____________________ **Report Date:** ____________________

Circle the appropriate rating for the following statements.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A
1. The report was clear, readable, and logically organized.	5	4	3	2	1	N/A
2. The report was concise and to the point.	5	4	3	2	1	N/A
3. We effectively communicated the audit objectives, scope, and methodology.	5	4	3	2	1	N/A
4. The report contained sufficient information to support the finding(s) in a balanced and objective manner.	5	4	3	2	1	N/A

Overall, how would you rate the report?

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If you have any additional comments or wish to elaborate on any of the above responses, please write them here. Use additional paper if necessary. ______________

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May we contact you about your comments?

Yes: ______ **No:** ______

Name: _________________________

Telephone: _________________________

Thank you for your cooperation in completing this survey.

Major Contributors to the Report

Dennis E. Coldren, Program Director, Space Flight Audits

Esther A. Judd, Program Manager

Jim J. Griggs, Auditor-in-Charge

Barbara A. Moody, Auditor

Nancy Cipolla, Report Process Manager

June C. Glisan, Program Assistant

National Aeronautics and Space Administration

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W

September 27, 1999

TO: M/Associate Administrator for Space Flight
AA/Director, Marshall Space Flight Center

FROM: W/Assistant Inspector General for Auditing

SUBJECT: Final Report on the Audit of Contractor-Leased Facilities at Marshall Space Flight Center
Assignment No. A9903700
Report Number IG-99-053

The subject final report is provided for your use and comment. Please refer to the Executive Summary for the overall audit results. Our evaluation of your response is incorporated into the body of the report. Management concurred with all the recommendations, but could not provide the completion dates of corrective actions for recommendations 3, 4, and 5 because management has to request reviews of the leases in question by the Defense Contract Audit Agency. Management also did not comment on the $617,000 in potential monetary benefits related to recommendation 2 or the $8.6 million in potential monetary benefits related to recommendation 5 due to the need to complete reviews of the questioned costs. Once action is completed on the two recommendations, please provide us the actual savings achieved. All recommendations are resolved but will remain open until the agreed-to actions are completed.

If you have questions concerning the report or would like to schedule an exit conference, please contact Mr. Lorne A. Dear, Program Director for Procurement Audits, at (818) 354-5634; Ms. Nora Thompson, Audit Program Manager, at (757) 864-3268; or Ms. Bobbie Wells, Auditor-in-Charge, at (216) 433-8980. We appreciate the courtesies extended to the audit staff. The final report distribution is in Appendix I.

[original signed by]

Russell A. Rau

Enclosure

cc:
AO/Chief Information Officer
B/Chief Financial Officer
B/Comptroller
BF/Director, Financial Management Division
G/General Counsel
H/Associate Administrator for Procurement
JM/Director, Management Assessment Division

bcc:
JPL/W/Director, Procurement Audits
MSFC/Audit Liaison Representative
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LaRC/W/Program Manager, Procurement
MSFC/W/Staff Auditor
SSC/W/Staff Auditor

IG-99-053

AUDIT REPORT

CONTRACTOR-LEASED FACILITIES AT MARSHALL SPACE FLIGHT CENTER

September 27, 1999

National Aeronautics and Space Administration

OFFICE OF INSPECTOR GENERAL

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Acronyms

DCAA	Defense Contract Audit Agency
DCMC	Defense Contract Management Command
FAR	Federal Acquisition Regulation
FAS	Financial Accounting Standard
GSA	General Services Administration

Contents

NASA Office of Inspector General

IG-99-053
A9903700

September 27, 1999

Contractor-Leased Facilities at Marshall Space Flight Center

Executive Summary

Background. NASA contractors may lease facilities to perform the work required in their contracts. NASA's Office of Procurement and installation procurement divisions are responsible for carrying out the acquisition process, which includes complying with applicable contract regulations and evaluating contractor facility costs.

Federal Acquisition Regulation (FAR) 31.205-11 and 31.205-36 state that lease costs for facilities are allowable costs, but must be reasonable. The FAR implements requirements of Financial Accounting Standard 13[1] (FAS 13) for recording the costs of leased facilities. A leased facility can be classified as either a capital lease (treated as a purchased asset and depreciated) or an operating lease (treated as an expense).

Generally, additional costs are incurred when contractors classify leases as operating leases rather than capital leases. For a capital lease, a contractor would depreciate the value of a facility over the life of the lease, and lease costs would be limited to the value of the facility. However, for an operating lease, the contractor may charge monthly lease expenses to the Government, for the life of the lease, in the period the expense occurs, and the costs could exceed the value of the facility.

This audit of the Marshall Space Flight Center (Marshall) is part of our continuing effort to evaluate NASA's management of contractor-facility leasing. The NASA Office of Inspector General has reported weaknesses in leasing at other NASA Centers (see Appendix B).

Objective. The overall audit objective was to determine whether Marshall is adequately managing facility leasing. Additional details on the objectives, scope, and methodology are in Appendix A.

Results of Audit. Marshall's management of facility leasing can be improved. Contractor facilities were not always effectively utilized. Of 24 facilities reviewed, 8 facilities had idle space ranging from 27 to 66 percent of the total space available. NASA could unnecessarily spend more than $617,000 for excess space over the term of the facility leases. Additionally, the Defense Contract Audit Agency (DCAA) identified excess space during an audit of leased

[1] Financial Accounting Standard 13, "Accounting for Leases," June 1, 1992.

facilities at [redacted]).[2] Also, three contractor leases were not correctly classified as capital leases. NASA could save about $8.6 million in excess lease costs over the terms of the facility leases by reclassifying those operating leases to capital leases.

Summary of Recommendations. We recommend that management review the allowability of lease costs, establish procedures to periodically review facility requirements for those contractors with leased facilities, review lease classifications to ensure leases are appropriately classified, and recoup any unallowable costs. Management should also ensure that contracting officers ask DCAA to review facility lease costs.

Summary of Management Response. Management concurred with all recommendations. The complete text of management's response is in Appendix H. We consider management's actions responsive. However, management did not provide completion dates for three recommendations or comment on specific, potential monetary benefits related to two recommendations as discussed in the transmittal memorandum. All recommendations will remain open until agreed-to actions are completed.

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[2] The audit questioned excess space at a subcontractor's leased facility in North Carolina. The subcontractor uses the facility to store material for work on a Marshall contract and charges 100 percent of the facility's cost to NASA. For this leased facility, we deferred further review of excess space and lease classification until DCAA issues its report on [redacted] lease costs. The DCAA final report has not yet been issued as of the date of this report.

Introduction

Marshall management identified 76 contractors that potentially had leased facilities.[3] Leased facilities included office, storage, and production-related space.

Costs associated with facility leases are either direct or indirect costs to the contract. Direct costs are identified specifically with the NASA contract and are charged directly to the contract. For example, direct costs include materials and labor specifically needed to provide a service or product. In contrast, indirect costs are not identified with a single contract, but with two or more contracts. For example, indirect costs include material storage and administrative labor. Indirect costs are included in overhead rate calculations for the applicable contracts.

The NASA FAR Supplement delegates the audit of contractor proposals to DCAA. To determine whether a contractor's proposed facility costs are allowable, the Marshall contracting officer may rely on an audit by DCAA. However, the contracting officer must ask DCAA to review facility lease costs as part of the DCAA audit of the contractor's proposal. Alternatively, the Marshall contracting officer must review the initial lease agreement for space requirements and evaluate the lease classification prior to contract award. DCAA also evaluates the contractor's incurred costs and questions any incurred costs that are unallowable.

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[3] Marshall sent surveys to contractors, requesting lease information and received responses from 53 contractors. In June 1999, we received lease documentation from 28 of the 53 contractors. We selected 24 leased facilities for review in this audit. See Appendix A.

Findings and Recommendations

Finding A. Excess Space in Facilities

Of 24 facilities reviewed, 8 had significant excess space (see Appendixes D and E). Marshall contracting officers were unaware of changes in requirements for space because NASA policy does not require the contracting officers to perform periodic reviews of contractor-leased facilities to identify excess space. As a result, the Agency could unnecessarily spend more than $617,000 by fiscal year 2004, when the last lease expires.

FAR Requirements and Space Utilization Standards

FAR 31.205-17, "Idle facilities and idle capacity costs," contains provisions for the treatment of idle facilities and capacity. The FAR states that idle capacity costs are allowable for a reasonable period, ordinarily not to exceed 1 year, depending on the initiative taken to use, lease, or dispose of the idle facilities (see Appendix C).

FAR 31.201-2, "Determining Allowability," and 31.201-3, "Determining Reasonableness," provide criteria for determining the allowability of contract costs. In determining whether a cost is allowable, the contracting officer must consider the reasonableness of the cost and applicable, generally accepted accounting principles. The NASA FAR Supplement, Part 1815.406, "Documentation," requires the NASA contracting officer to document the negotiation position prior to contract award. The document must discuss the Government investment in facilities and compare contractor and Government cost positions.

To evaluate the reasonableness of leased facility space, the NASA contracting officer can apply space utilization standards established by the General Services Administration (GSA) and International Facilities Management Association (IFMA). GSA establishes space requirements for Federal facilities. The IFMA bases its facility guidelines on surveys at major companies. The IFMA survey enables facility managers to measure and improve space utilization. GSA, Federal Property Management Regulations, Section D-76, provides a standard of 125 square feet per employee. IFMA, 1997 Benchmarks III, Research Report No. 18, provides a standard of 140 square feet per employee.

Excess Space at Eight Contractor Facilities

For the eight facilities with excess space, leased space exceeded an average space of 133[4] square feet per employee. During a DCAA audit of facility lease costs at [redacted], DCAA identified excess space at a subcontractor's leased facility located in [redacted]. Charges for the leased facility in [redacted] are reimbursed to [redacted] under

[4] We calculated a standard of 133 square feet per employee by determining the average between the GSA standard of 125 square feet per employee and the IFMA standard of 140 square feet per employee.

NASA contract NAS8-38100. We deferred further review of excess space and lease classification for this leased facility until DCAA issues its final report on Thiokol lease costs.

Figure 1 identifies the amount of idle space at each of the eight facilities. The details on the excess space are in Appendix E.

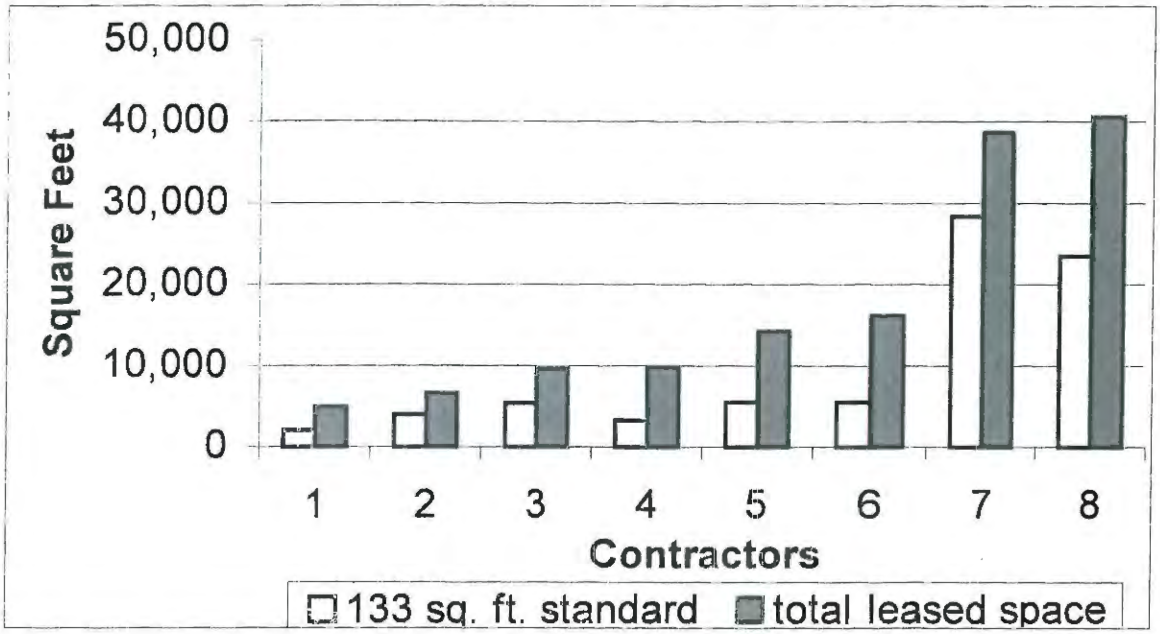

Figure 1. Facilities with Excess Space

Contractors: (1) [redacted], (2) [redacted]; (3) [redacted] (4) [redacted]; (5) [redacted]; (6) [redacted]; (7) [redacted]; (8) [redacted]

Periodic Reviews of Contractor-Leased Facilities

To ensure that facility lease costs are allowable under FAR Part 31, Marshall contracting officers must review the initial lease agreement for space requirements prior to contract award. However, the contracting officer may rely on the DCAA to perform the review. Agency policy does not require the NASA contracting officer to perform a periodic review of leased facilities after a contract has been awarded. Therefore, Marshall contracting officers were not always aware of changes in the contractors' requirements for space. NASA management may also use the DCAA to assist in periodic reviews of leased space. The contracting officers and contractors stated that most of the excess space was the result of relocated staff, downsized Government, and reduced tasks for the contractor.

Cost to NASA

For the eight leased Marshall facilities with excess space, NASA could unnecessarily spend more than $617,000 through year 2004, when the leases expire (see Appendix F).

Although the FAR provision includes excess space as an allowable cost for 1 year, NASA management should take steps to ensure that only necessary space is leased by the contractor and that the contractor takes measures to sublease space that is no longer required.

Recommendations, Management's Response, and Evaluation of Response

The Director, Marshall Space Flight Center, should:

1. **Establish procedures that require contracting officers to periodically reevaluate facility requirements for contractors with leases.**

Management's Response. Concur. Mareshall contracting officers will request DCAA to evaluate the audit identified contractors' leased facilities. Contracting officers will also include a requirement for DCAA program plans to include a periodic evaluation of contractor facilities use. The complete text of the comments is in Appendix H.

Evaluation of Management's Response. In an exit conference on September 21, 1999, the Marshall Procurement Office provided us a copy of the draft memorandum that will be issued to Procurement Department heads and contracting officers. The target date for issuance of the memorandum is September 27, 1999. Management's actions are responsive to the recommendation. The recommendation is resolved but will remain undispositioned and open until the agreed-to actions are completed.

2. **Review the allowability of costs for the leased space at the eight facilities, and recoup any unallowable costs resulting from excess space.**

Management's Response. Concur. Marshall contracting officers will review the allowability of leased costs for the eight facilities identified in this review and will recoup any unallowable costs resulting from excess space (see Appendix H).

Evaluation of Management's Response. At the September 21, 1999, exit conference a Marshall Procurement representative stated that contracting officers will send letters to DCAA, dated October 15, 1999, requesting a review of the allowability of costs for leased space at the eight contractor facilities. Management's actions are responsive to the recommendation. The recommendation is resolved but will remain undispositioned and open until the agreed-to actions are completed.

Finding B. Facility Lease Classification

Of 24 contractor facility leases (see Appendix D) that were classified as operating leases, contractors incorrectly classified 3 leases (see Appendix G) as operating leases that should have been classified as capital leases. The leases were incorrectly classified because Marshall contracting officers did not (1) obtain a FAS 13 analysis to ensure that NASA contractors correctly classified the leases and (2) ensure the delegation letter to DCAA included a request to review facility lease costs. As a result, NASA could pay about $8.6 million in excess lease costs by fiscal year 2003, when the last lease expires.

FAS 13 Requirements

FAS 13 describes the required analysis for determining the appropriate lease classification.[5] FAS 13 states, in part, that leases should be classified as capital leases if the present value of the minimum lease payments equals or exceeds 90 percent of the facility fair market value (see Appendix C for more details). FAS 13 also states that any action (for example, an amended lease agreement) that extends the lease agreement beyond the expiration of the existing lease term shall be considered as a new agreement and should be classified using FAS 13 requirements.

FAR 31.205-11(m) incorporates FAS 13 requirements. Marshall contracting officers are responsible for ensuring that contractors correctly classify facility leases and for approving contractor billings for lease costs incurred. Contracting officers may rely on DCAA to review leases to determine the correct classification and to perform incurred cost audits of contractor billings. Contracting officers should also be aware of amended leases, which usually represent increased lease costs required by the contractor. NASA management may ask DCAA to perform analyses when an amended lease results in a substantial increase to lease payments and/or lease terms.

Lease Classification

Appropriate Classification. The three leases should have been capital leases, as defined by FAS 13, because the present value of the three leases exceeded 90 percent of the facility fair market value. The three leases are listed in Appendix G.

Implementation of FAS 13 and Delegation Letters to DCAA. For the three leases, Marshall did not obtain the required FAS 13 analysis to determine the correct classification. Instead, Marshall accepted the contractor's determination that the lease should be classified as an operating lease. For two of the three leases, the contractor had not performed the required FAS 13 analysis. For the remaining two leases, the contractor incorrectly performed the

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[5] FAS 13 provides the generally accepted accounting principles applicable to lease classification. FAR, Part 31.201-2, requires that an allowable cost must comply with applicable, generally accepted accounting principles. See Appendix A for details on the methodology.

required FAS 13 analysis. The two contractors performed a lease-versus-purchase analysis rather than the FAS 13 analysis.

Introductory and intermediate contracting training courses provide NASA contracting officers an overview of FAS 13 requirements. However, those training courses have not emphasized the need for contracting officers to request a FAS 13 analysis of facility lease cost from DCAA. Consequently, Marshall contracting officers delegated the review of contractor proposals to DCAA, but did not ensure that delegation letters, which delegated contract audit responsibility to DCAA, specifically requested a review of facility lease cost.

NASA Incurs Additional Costs. NASA incurs additional costs when contractors incorrectly classify leases as operating leases rather than capital leases due to the method of accounting. For an operating lease, the contractor may charge the Government in the period the expense occurred. For a capital lease, a contractor would depreciate the value of a facility over the life of the lease. The total lease payments for the three questioned leases will exceed the total fair market value (not just the 90 percent of fair market value as specified in FAS 13) of the facility by about $8.6 million by year 2003, when the leases expire. Figure 2 shows lease costs in excess of fair market value for the three reviewed leases.

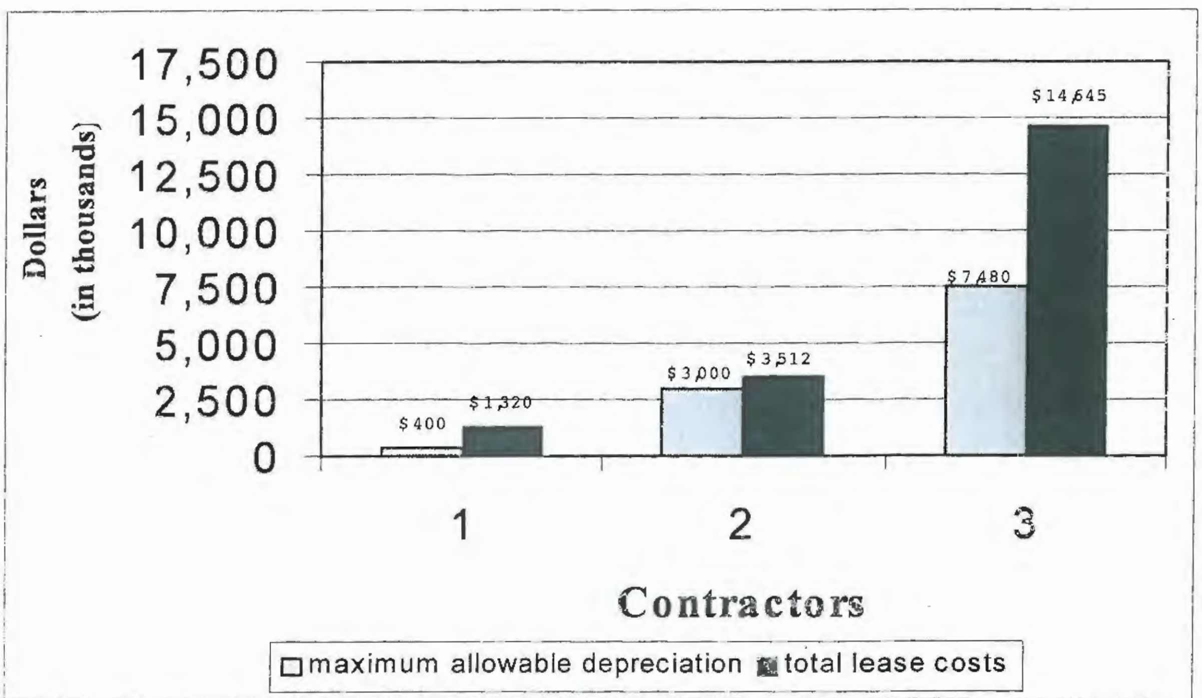

Figure 2. Lease Costs in Excess of Fair Market Value

Contractors: (1) (b)(4) [redacted], (2) (b)(4) [redacted], (3) (b)(4) [redacted].

Management should take steps to ensure that contractors appropriately classify leases as operating or capital leases and to recover any unallowable lease costs.

Recommendations, Management's Response, and Evaluation of Response

The Director, Marshall, should require contracting officers to:

3. **Request DCAA to review the lease classifications for the three questioned leases and to determine any unallowable lease costs.**

Management's Response. Concur. Marshall contracting officers will request DCAA to review the lease classifications for the three leases identified in this review and will recoup any unallowable costs. The complete text of the comments is in Appendix H.

Evaluation of Management's Response. Management's actions are responsive to the recommendation. The recommendation is resolved but will remain undispositioned and open until the agreed-to actions are completed.

4. **Request contracting officers to request in the delegation letter that DCAA review facility lease costs.**

Management's Response. Concur. Marshall contracting officers will request a review of proposed lease costs prior to award of new contracts and will review current contracts with facility lease costs (see Appendix H).

Evaluation of Management's Response. Management's actions are responsive to the recommendation. The recommendation is resolved but will remain undispositioned and open until the agreed-to actions are completed.

5. **Recoup any unallowable costs when recovery makes good business sense.**

Management's Response. Concur. Marshall contracting officers will recoup any unallowable costs when recovery makes good business sense (see Appendix H).

Evaluation of Management's Response. Management's actions are responsive to the recommendation. The recommendation is resolved but will remain undispositioned and open until the agreed-to actions are completed.

Completion Dates for Corrective Actions. Management did not provide completion dates for the corrective actions for recommendations 3 through 5, because the actions require DCAA to complete reviews of the leases in question. Management should, however, notify us when agreed-to actions are completed.

Appendix A. Objectives, Scope, and Methodology

Objectives

The overall audit objective was to determine whether NASA is adequately managing facility leasing. Specifically, we determined whether:

- contractor facilities were effectively utilized and
- contractor facility leases were correctly classified.

During the audit, we discontinued work on a third objective to determine whether contractors accurately billed lease costs to the Government. We discontinued that work because the potential risk related to accurate billing is low, and we put our efforts to better use on the other two, higher risk objectives.

Scope

Marshall management identified 76 Marshall cost-type contractors that potentially had leased facilities. The contractors did not include universities with cost-type contracts. Marshall sent written surveys, requesting information about the leased facilities, to the 76 contractors. Of the 76 contractors, only 53 responded. The remaining 23 contractors either failed to respond or provided insufficient information. In June 1999, we received lease documentation from 28 of the 53 contractors. The 28 contractors reported a total of 51 leases (45 indirect and 6 direct). We selected 24 leased facilities for this review. We will review the 48 contractors that either failed to respond or provided insufficient information as a separate part of this audit.

Methodology

To determine whether contractor facilities were effectively utilized, we determined the total amount of space being leased, identified the number of staff and the amount of space being used, and performed a walk-through at each leased facility. We also obtained space standards and the percentage to be used for determining space for support employees from GSA and IMFA. We averaged the GSA and IFMA standards to obtain an average standard of 133 square feet per employee. Wc used the average standard to evaluate excess space.

To evaluate excess space, we calculated total usable space, space for support personnel, gross office space, and excess space. For total usable space, we multiplied the number of office employees by the standard number of square feet per employee. For space for support personnel, we multiplied total usable space by a standard rate for support employees. For gross office space, we added total usable space and support space. For excess space, we subtracted gross office space from contractor-leased space. See Appendix E for details on excess space calculations.

To determine NASA's cost for excess space, we multiplied the amount of excess space by the monthly cost per square foot. Also, we adjusted the monthly cost of excess space for the percentage of NASA work in the facility. Finally, we multiplied the monthly NASA cost by the number of months remaining on the contract (The number of months did not include unexercised contract option years). See Appendix F for additional details on the costs to NASA for excess space.

To determine whether the contractor facility leases were correctly classified, we reviewed applicable laws, regulations, and guidelines for classifying facility leases. We then interviewed
contractor and NASA personnel to develop a list of potential contractor facility leases and to obtain copies of active contractor facility lease agreements. We reviewed NASA contract files to verify justifications for approving lease agreements and to analyze comparative cost analyses performed by Marshall and/or contractors. We also reviewed DCAA incurred cost audits and recommendations. To perform the capital lease calculations and analyses, we used the FAS 13 software package DCAA provided to us, and we subsequently relied on the DCAA validation of the software package. In our analyses, we did not include unexercised option years. Also, we adjusted lease costs for operating costs included in annual rent payments (executory costs). We did not perform our own validation of the software.

We verified that the contractor was approved for facilities reimbursement.

Management Controls Reviewed

We reviewed management policies, procedures, and guidelines to evaluate NASA's management of contractor-facility leasing. As discussed in the findings, management policies and procedures for contracting officers should be strengthened to improve the management of facility leasing at Marshall.

Computer-Processed Data

We obtained computer-processed data on cost-type contracts at Marshall from Marshall and the NASA Office of Procurement. We compared data on the two listings and reconciled differences. We used the reconciled cost-type contract listing to identify Marshall contracts that may have leased facilities. Our calculations of excess space and facility lease classification did not rely on computer-processed data.

Appendix A

Audit Field Work

We conducted field work from April through July 1999 at Marshall Space Flight Center and contractor locations in (b)(4) [redacted], and (b)(4) [redacted]. The audit was performed in accordance with generally accepted government auditing standards.

Appendix B. Prior Office of Inspector General Reviews

"Contractor Facility Leases, Lewis Research Center," Audit Report No. IG-97-009, November 22, 1996

"Contractor Facility Leases, Lockheed Credit Union Occupancy Costs," Audit Report No. IG-97-037, September 10, 1997

"Contractor Facility Leases," Audit Report No. IG-98-007, March 5, 1998

"Contractor-Acquired Facilities at Johnson Space Center," Audit Report No. IG-99-008, February 17, 1999

Appendix C. Definitions, Guidelines, and Regulations Governing Contractor-Leased Facilities

Idle Facilities

FAR 31.205-17 (Idle facilities and idle capacity costs)

Idle capacities are defined as the unused capacity of partially used facilities. Idle facilities are completely unused facilities that are excess to the contractor's current needs. The cost of idle facilities are unallowable unless the facilities (1) are necessary to meet fluctuations in workload or (2) were necessary when acquired and are now idle because of changes in requirements, production economies, reorganization, or termination or are idle for other reasons that could not have been reasonably foreseen. Costs of idle facilities are allowable for a reasonable period, ordinarily not to exceed 1 year, depending on the initiative taken to use, lease, or dispose of the idle facilities.

NASA FAR Supplement 1815.406 (Documentation)

The contracting officer must prepare a memorandum documenting the negotiation position prior to contract award. The memorandum must discuss the Government's investment in facilities and compare the contractor and Government cost positions.

GSA and IFMA Space Standards (Excess space)

GSA, Federal Property Management Regulations, D-76, provides a standard of 125 square feet per employee. IFMA, 1997 Benchmarks III, Research Report No. 18, provides a standard of 140 square feet per employee.

Lease Classification

FAR 31.201-2 (Allowability)

The factors to consider in determining whether a cost is allowable include (1) reasonableness and (2) generally accepted accounting principles and practices. A contractor must account for costs appropriately and maintain adequate records to demonstrate that costs comply with applicable cost principles in FAR, Part 31, and agency supplements. The contracting officer may disallow all or part of a claimed cost that is inadequately supported.

FAR 31.201-3 (Reasonableness)

A cost is reasonable if, in its nature and amount, it does not exceed that which would be incurred by a prudent person in the conduct of competitive business. The contracting officer must examine the reasonableness of specific costs more closely when competition is not a factor.

FAR 31.205-11(m) (Depreciation)

Capitalization of Tangible Assets, 48 Code of Federal Regulations (CFR) 9904.404, applies to assets acquired by a "capital lease" as defined in Statement of Financial Accounting Standard No. 13 (FAS 13), "Accounting for Leases," issued by the Financial Accounting Standards Board. Compliance with 48 CFR 9904.404 and FAS 13 requires that such leased assets (capital leases) be treated as purchased assets, that is, the assets should be capitalized and the capitalized value of such assets should be distributed over their leased life as amortization charges, as appropriate.

FAR 31.205-36(b)(1) (Rental costs)
Rental costs are allowable costs under operating leases, to the extent that the rates are reasonable at the time of the lease decision, after consideration of (1) rental costs of comparable property, if any; (2) market conditions in the area; (3) the type, life expectancy, condition, and value of the property leased; (4) alternatives available; and (5) other provisions of the agreement.

FAS 13 (Capital versus Operating Leases)
The Financial Accounting Standards Board issued FAS 13, establishing the generally accepted accounting principles and practices of financial accounting and reporting for leases by lessees and lessors. FAR 31.205-11(m) incorporates the analyses prescribed by FAS 13. FAS 13 defines a lease as an agreement conveying the right to use property, plant, or equipment (land and/or depreciable assets) usually for a stated period of time. FAS 13 also classifies a lease as either (1) a capital lease for which the lease obligation is treated similar to that of a purchased asset acquired with borrowed funds or (2) an operating lease for which all payments are treated as an expense of the accounting period during which they are incurred. FAS 13 lists four criteria for a capital lease:

- lease transfers ownership (title) to lessee during lease term,
- lease contains a bargain purchase option,
- lease term is 75 percent or more of the estimated economic life of the leased property, and
- present value of minimum lease payments equals or exceeds 90 percent or more of fair market value of the leased property less any lessor investment tax credit.

If a lease, at its inception, meets any one of the above criteria, FAS 13 states that the lease shall be classified as a capital lease. A lease not meeting any of the criteria shall be classified as an operating lease.

Appendix D. Contractor Facilities Reviewed

Contractor	Location	Number of Leases
(b)(4) [redacted]	(b)(4) [redacted]	1
(b)(4) [redacted]	(b)(4) [redacted]	1
(b)(4) [redacted]	(b)(4) [redacted]	2
(b)(4) [redacted] (b)(4) [redacted]	(b)(4) [redacted]	2
(b)(4) [redacted]	(b)(4) [redacted]	1
(b)(4) [redacted]	(b)(4) [redacted]	1
(b)(4) [redacted] (b)(4) [redacted]	(b)(4) [redacted]	1
(b)(4) [redacted]	(b)(4) [redacted]	1
(b)(4) [redacted]	(b)(4) [redacted]	1
(b)(4) [redacted]	(b)(4) [redacted]	1
(b)(4) [redacted] (b)(4) [redacted]	(b)(4) [redacted]	1
(b)(4) [redacted]	(b)(4) [redacted]	2
(b)(4) [redacted]	(b)(4) [redacted]	1
(b)(4) [redacted]	(b)(4) [redacted]	1
(b)(4) [redacted]	(b)(4) [redacted]	5
(b)(4) [redacted]	(b)(4) [redacted]	1
(b)(4) [redacted]	(b)(4) [redacted]	1
Total		**24**

Appendix E. Facilities With Excess Space

Contractor	Leased Space Standard (sq. ft.) (a)	Total Space Leased by Contractor (sq. ft.) (b)	Excess Space (sq. ft.) (c) (b-a)	Percent of Idle Space (d) (c/b)
[redacted]	2,040.2	4,951.0	2,910.8	59
[redacted]	3,923.5	6,580.0	2,656.5	40
[redacted]	5,336.0	9,594.0	4,258.0	44
[redacted]	3,295.7	9,778.0	6,482.3	66
[redacted]	5,492.9	14,242.0	8,749.1	61
[redacted]	5,492.9	16,282.0	10,789.1	66
[redacted]	28,406.1	38,781.0	10,374.9	27
[redacted]	23,541.0	40,602.0	17,061.0	42

* [redacted] has several leased facilities. The report discusses two facilities at [redacted]

Appendix F. Cost Impact of Facilities with Excess Space

Contractor	Excess Space (sq. ft.) (a)	Monthly Cost for Excess Space (b)	Months Remaining in NASA Contract (c)	Total Cost for Excess Space (d) (b x c)	Percent of NASA Work[1] (e)	Total NASA Costs for Excess Space (f) (d x e)
[redacted]	2,910.8	$ 2,748.26	14	$ 38,476		$ 37,706
[redacted]	2,656.5	1,771.00	13	23,023	100%	23,023
[redacted]	4,258.0	5,074.14	43	218,189	24%	52,365
[redacted]	6,482.3	5,474.35	15	82,115	98%	80,473
[redacted]	8,749.1	6,882.62	13	89,474	100%	89,474
[redacted]	10,789.1	5,106.84	15	76,603	90%	68,303
[redacted]	10,374.9	7,737.92	14	108,331	100%	108,331
[redacted]	17,061.0	12,113.31	13	157,473	100%	157,473
Total						$ 617,788

[1]Indicates the percentage of NASA work performed at the leased facility.
[redacted] has several leased facilities. The report questions excess space at two [redacted]

Appendix G. Capital Leases[1] with Questioned Costs

Contractor Location	Maximum Allowable Depreciation (a)	Lease Costs (b)	Questioned Costs (c) (b-a)
[redacted]	$3,000,000	$3,512,350	$512,350
[redacted]	$400,000	$1,320,000	$920,000
[redacted]	$7,480,000	$14,645,384	$7,165,384
Total			**$8,597,734**

[1]For each of these leases, we performed a FAS 13 analysis using the basic lease term and excluding the option years.
[redacted] has several leased facilities. We reviewed five of the leased facilities and questioned lease classifications at one facility, [redacted]

Appendix H. Management's Response

National Aeronautics and
Space Administration
George C. Marshall Space Flight Center
Marshall Space Flight Center AL 35812

Reply to Attn of: DE01

September 21, 1999

TO: NASA Headquarters
Attn: W/Russell A. Rau

FROM: DE01/Sidney P. Saucier

SUBJECT: OIG Draft Report on the Audit of Contractor-Leased Facilities at Marshall Space Flight Center, Assignment No. A9903700

We have reviewed the subject report and our detailed comments are enclosed. If you have any questions or need additional information regarding our comments, please contact RS40/Andy McMillan at 256-544-9273.

Sidney P. Saucier

Sidney P. Saucier
Associate Director

Enclosure

MSFC RESPONSE TO THE OIG DRAFT REPORT ON THE AUDIT OF CONTRACTOR-LEASED FACILITIES AT MARSHALL SPACE FLIGHT CENTER
ASSIGNMENT NO. A9903700

GENERAL COMMENTS:

Regarding excess space, there are a number of issues (typical market conditions of location, escalation of lease costs, lease periods, etc.) that would have to be considered prior to determining that space in excess of 133 square feet per employee after one year is unreasonable and therefore unallowable.

The contractor's leasing arrangement (operating leases) may not be renegotiable with the leasing company, subleases may be impractical, inadvisable, or otherwise prohibited by the leasing entity. If the leasing company is unwilling to renegotiate the lease terms, it could be impracticable to terminate and re-locate to a facility with the optimum amount of space.

Another consideration would be the relative reasonableness of the monthly lease costs. In other words, while there may be a considerable amount of excess space in a contractor's leased facility, the total cost of that leased space may actually cost the contractor less than leasing an optimum amount of space (133 square feet/employee) elsewhere.

SPECIFIC COMMENTS TO THE CONTENT OF THE REPORT:

The OIG confirmed an error in the updated Appendix F provided September 14, 1999. The monthly cost for excess space should have been changed to $5,074.16. This is the number the auditor used to compute the cost of excess space.

Page 7, Recommendation 4, states "The Director, Marshall Space Flight Center, should require contracting officers to request contracting officers to request in the delegation letter that DCAA review facility lease costs." We suggest deleting redundant wording "to request contracting officers".

RESPONSES TO THE RECOMMENDATIONS:

OIG Recommendation 1: The Director, Marshall Space Flight Center, should establish procedures that require contracting officers to periodically reevaluate facility requirements for contractors with leases.

MSFC Response: Concur. MSFC Contracting Officers will request DCAA to evaluate the OIG identified contractors leased facilities. In addition, MSFC Contracting Officers will include in their DCAA delegation of contracts with significant lease costs, a requirement for DCAA to include in their program plan a periodic evaluation of contractor facilities use.

OIG Recommendation 2: The Director, Marshall Space Flight Center, should review the allowability of costs for the leased space at the eight facilities, and recoup any unallowable costs resulting from excess space.

MSFC Response: Concur. MSFC Contracting Officers will review the allowability of costs for the leased space at the eight facilities, and recoup any unallowable costs resulting from excess space.

OIG Recommendation 3: The Director, Marshall Space Flight Center, should require contracting officers to request DCAA to review the lease classifications for the four questioned leases and to determine any unallowable lease costs.

MSFC Response: Concur. MSFC Contracting Officers will request DCAA to review the lease classifications for the four questioned leases and to determine any unallowable lease costs.

OIG Recommendation 4: The Director, Marshall Space Flight Center, should require contracting officers to request contracting officers to request in the delegation letter that DCAA review facility lease costs.

MSFC Response: Concur. MSFC Contracting Officers will request a review of contractor's proposed lease cost prior to award of new contracts, as well as a review of current contracts with facility lease costs.

OIG Recommendation 5: The Director, Marshall Space Flight Center, should require contracting officers to recoup any unallowable costs when recovery makes good business sense.

MSFC Response: Concur. MSFC Contracting Officers will proceed to recoup any unallowable costs when recovery makes good business sense.

2

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House Committee on Government Reform and Oversight
House Subcommittee on National Security, Veterans Affairs, and International Relations
House Committee on Science
House Subcommittee on Space and Aeronautics

Congressional Member

Honorable Pete Sessions, U.S. House of Representatives

Major Contributors to the Report

Lorne A. Dear, Program Director for Procurement Audits

Nora E. Thompson, Audit Program Manager

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Amy Larkin, Team Auditor

Melody C. Coston, Team Auditor

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Nancy C. Cipolla, Report Process Manager

National Aeronautics and Space Administration

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SBU Designation Applied By: Office of Inspector General

Organization: Office of Audits Date: February 17, 1999

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W February 17, 1999

TO: JSC/AA/Director, Lyndon B. Johnson Space Center

FROM: W/Assistant Inspector General for Auditing

SUBJECT: Final Report on the Audit of Contractor-Acquired Facilities at Johnson Space Center
Assignment Number A-HA-97-066
Report Number IG-99-008

The subject final report is provided for your use. Please refer to the executive summary for the overall audit results. Your comments on a draft of this report were responsive to our recommendations. We have incorporated your comments into the final report, as appropriate, and included them in their entirety as an appendix to our report. Management's actions on recommendation 1 are completed and are sufficient to disposition the recommendation, which will be closed for reporting purposes. We request additional information by March 22, 1999, regarding the status of corrective action for recommendation 2. Once action has been completed, we ask that you provide us the actual savings achieved on the remaining leases with four contractors. The recommendation will remain open for reporting purposes.

If you have questions concerning the report, please contact Mr. Lorne A. Dear, Program Director for Procurement Audits at (818) 354-3360, or Ms. Bobbie Wells, Auditor-in-Charge, at (216) 433-8980. We appreciate the courtesies extended to the audit staff. The report distribution is in Appendix G.

[original signed by]

Russell A. Rau

Enclosure

cc:
B/Chief Financial Officer
G/General Counsel
H/Acting Associate Administrator for Procurement
JM/Director, Management Assessment Division

bcc:
AIGA Chron, IG Chron, Reading Chron (w/o Enclosure)
JSC/Audit Liaison
W/JPL/180-300/L. Dear
LeRC/28-1/B. Wells
SSC/M. Coston

IG-99-008

AUDIT REPORT

CONTRACTOR-ACQUIRED FACILITIES AT JOHNSON SPACE CENTER

February 17, 1999

OFFICE OF INSPECTOR GENERAL

National Aeronautics and Space Administration

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NASA Headquarters
Code W
300 E St., SW
Washington, DC 20546

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Acronyms

CFR	Code of Federal Regulations
DCAA	Defense Contract Audit Agency
FAR	Federal Acquisition Regulation
FAS	Financial Accounting Standard
JSC	Lyndon B. Johnson Space Center
NASA	National Aeronautics and Space Administration

TABLE OF CONTENTS

CONTRACTOR-ACQUIRED FACILITIES AT JOHNSON SPACE CENTER

EXECUTIVE SUMMARY

BACKGROUND

NASA contractors may lease facilities to perform the work required in their contracts. NASA's Office of Procurement (Code H) and installation procurement divisions are responsible for carrying out the acquisition process, which includes complying with applicable contract regulations and evaluating contractor facility costs.

Federal Acquisition Regulation (FAR) 31.205-11 and 31.205-36 state that lease costs for facilities are allowable costs, but must be reasonable. The FAR implements requirements of Financial Accounting Standard 13 (FAS 13)[1] for recording the costs of leased facilities. A leased facility can be classified as either a capital lease (treated as a purchased asset and depreciated) or an operating lease (treated as an expense).

Generally, additional costs are incurred when contractors classify leases as operating leases rather than capital leases. For a capital lease, a contractor would depreciate the value of a facility over the life of the lease, and lease costs would be limited to the value of the facility. However, for an operating lease, the contractor may charge monthly lease expenses to the Government, for the life of the lease, in the period the expense occurs, and these costs could exceed the value of the facility.

This audit of the Lyndon B. Johnson Space Center (JSC) is part of our continuing effort to evaluate NASA's management of contractor facility leasing. The NASA Office of Inspector General has reported weaknesses in leasing involving other NASA Centers (see Appendix B). We limited this review to the facility leases in the Houston, Texas, area.

[1] Financial Accounting Standard 13, "Accounting for Leases," June 1, 1992.

OBJECTIVES

The audit objective was to determine whether JSC is adequately managing facility leasing. Specifically, we determined whether:

- contractor facilities were effectively utilized,
- contractor facility leases were correctly classified, and
- contractors accurately billed lease costs to the Government.

Additional information on objectives, scope, and methodology is in Appendix A.

RESULTS OF AUDIT

JSC's management of facility leasing can be improved. The lease costs billed to the Government were accurate; however, contractor facilities were not always effectively utilized. Five of 28 facilities reviewed had idle space exceeding 10 percent of the total leased space. JSC management took action during the audit, and on the lease with the most idle space, negotiated a contract modification for a $4.2 million reduction in cost and fee. Approximately $1.2 million of the reduction can be attributed to idle space we brought to management's attention. For two other facilities leased by one contractor, changes in contractor performance resulted in a significant reduction of idle space identified by this audit. These three facilities represented the majority of idle space identified.

In addition, four contractor leases were not correctly classified as capital leases. NASA could save more than $2.7 million in excess lease costs over the terms of the leases by reclassifying operating leases to capital leases.

REVISIONS TO REPORT

Based on discussions with JSC management personnel and additional input from the Financial Accounting Standards Board on option years in the lease term, we reduced the number of questioned facilities with improperly classified leases from our draft report. We also reduced the potential monetary benefits for idle space from $6.0 million to $1.2 million. The draft report also discussed nine questioned leases for improper classification and potential monetary benefits of

$26.9 million. As stated above in the Results of Audit section, we reduced the number of questioned leases and related potential monetary benefits.

Recommendations

We recommended that management review the allowability of lease costs, establish procedures to periodically review facility requirements for those contractors with leased facilities, and review lease classifications to ensure leases are properly classified. Management should also require contracting officers to obtain proper training on FAS 13 requirements, as they relate to NASA contracts.

Management's Response

Management generally concurred with the recommendations and has planned or taken corrective actions that were responsive to the intent of the recommendations.

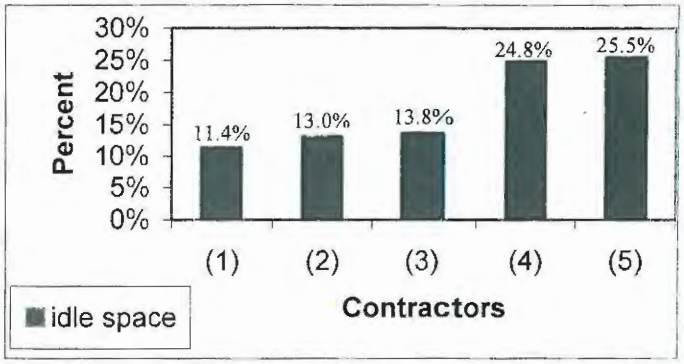
FINDINGS AND RECOMMENDATIONS

IDLE SPACE IN FACILITIES

Of 28 facilities visited, 5 had idle space ranging from 11.4 to 25.5 percent of the total available lease space. The space remains idle because NASA has no procedures requiring periodic reviews of contractor-leased facilities to identify excess space. During the audit, the contracting officer initiated action on idle space at one contractor facility. However, if no action is taken on the remaining four facilities, NASA could unnecessarily spend about $4.8 million by fiscal year 2005, when the last lease expires (see Appendix D).

FAR 31.205-17, "Idle facilities and idle capacity costs," contains provisions for the treatment of idle facilities and capacity. The FAR states that idle capacity costs are allowable for a reasonable period, ordinarily not to exceed 1 year, depending on the initiative taken to use, lease, or dispose of the idle facilities. (See details in Appendix C.)

JSC contracting officers must review the initial lease agreement for space requirements prior to contract award; however, the contracting officer may rely on the Defense Contract Audit Agency (DCAA) to perform the review. NASA has no requirement for a periodic review of leased facilities after a contract has been awarded. Therefore, JSC contracting officers were not always aware of changes in the contractors' requirements for space. Management may also use the DCAA to assist in the periodic reviews. The contracting officers and contractors stated that most of the idle space was the result of relocating staff, downsizing of the Government, and reduced tasks for the contractor. Idle space at the five facilities is summarized in Figure 1 below, and details are in Appendix D.



Note: Contractors may have multiple sites.
(1) [redacted] (2) [redacted] (3) [redacted]; (4) [redacted] (5) [redacted].

Figure 1: Idle Space at Five Contractor Facilities

NASA pays a substantial amount for unused space. For example, JSC management was aware of idle space in a [redacted] of its [redacted], facility. However, we identified more than 25 percent of idle office space (over and above the amount of space JSC management was aware of) that could cost NASA more than $1.2 million. After we brought the additional idle space to JSC's attention, the JSC contracting officer issued a letter, dated April 14, 1998, to [redacted], stating that payment of lease costs would be suspended if an acceptable plan to mitigate future costs is not received. Although the FAR provision includes idle space as an allowable cost for 1 year, management should take reasonable steps to ensure that only necessary space is leased by the contractor and that the contractor takes measures to sublease space that is no longer required.

RECOMMENDATION 1

The Director, JSC, should:

a. Establish procedures that require contracting officers to periodically reevaluate facility requirements for contractors with leases.

b. Review the allowability of costs for the leased space at the five sites identified in this audit, and recoup any unallowable costs resulting from idle space.

Management's General Response

JSC management disagreed with the methodology we used in computing idle space and in defining capital versus operating leases. Management also disagreed with the potential $6.0 million that could be put to better use as a result of reducing idle space. JSC management stated that we did not consider facilities capital cost of money for any of the leases and that the executory cost we estimated for [redacted] (one contractor we reviewed) was low. However, because of our discussions with management at the exit conference and our changes to the report, management concurred with the overall intent of the report and with each recommendation.

Evaluation of Management's General Response

We explained our approach for calculating idle space at the onset of the audit to the JSC contracting officers and contractors, and they raised no objections. We did not calculate idle space based on square footage per person because most contractors did not have policies on space and did not use industry standards for proposing space or assigning space to its personnel. During our walk-through of each facility, we invited the JSC contracting officers to accompany us, but were usually accompanied by only contractor representatives. In cases where contractors were reorganizing and moving personnel, we performed a second walk-through. All idle space we identified was confirmed by the contractor's representatives as space vacated by personnel who either had been moved to another contractor location or were no longer employed by the company. Therefore, we believe that calculating idle space based on staff (initial and current) was reasonable. We were aware of the changed [redacted] contract and its changes in space utilization and did not include more than 250 vacant office spaces in our calculations for idle space. Also, the idle space we identified at the [redacted] was in addition to idle space already identified by JSC management.

The methodology used to define capital versus operating leases is in accordance with the requirements of FAS 13. We intentionally did not include facilities capital cost of money in our calculations. Based on our discussions with DCAA, this calculation is usually performed once the lease classification is agreed upon. We calculated executory costs for [redacted] based on the information provided to us by the contractor.

Management's Response to Recommendation 1(a)

Concur. JSC management believes that periodic evaluation of facilities is part of good contract administration and that adequate procedures currently exist to provide an evaluation of facilities. Rather than adding more procedures, idle facilities could be better handled as part of the annual audit plan that is developed with the DCAA. This would ensure that incurred cost audits review the issue with regard to facilities that are dedicated to specific contracts (direct)[2] and those that support more than one contract and/or overhead or general and administrative activities (indirect).[2] The complete text of management's comments is in Appendix F.

Evaluation of Management's Response

The planned action is responsive to the recommendation. We agree that idle facilities could be handled as part of an audit by DCAA; however, we did not find indications of annual DCAA reviews that included a detailed review of idle space. If JSC intends to rely on DCAA to review facilities, then management should ensure that the DCAA is asked to review space utilization.

Management's Response to Recommendation 1(b)

Concur. JSC stated that periodic reviews of idle space as part of contract administration is important. Instead of calculating idle space based on walk-throughs, calculations of idle capacity should be based on accepted audit standards (square footage per person). Based on the FAR and changed contractor performance, management's updated reviews of space indicate "...that no issue related to idle space currently exists." Also, actions were already under way regarding idle space related to the [redacted]., contract.

---

[2] Costs identified specifically with the contract are direct costs of the contract and are to be charged directly to the contract (that is, direct lease). Costs not directly identified with a single, final cost objective, but identified with two or more final cost objectives, or an intermediate cost objective, are indirect costs and are computed in overhead rates for the applicable contract (that is, indirect lease).

Evaluation of Management's Response

As a result of JSC's updated reviews of space, we consider management's action responsive to the recommendation. JSC performed an analysis of the idle space we identified for [redacted] using JSC Facility Development Division standards for off-site contractors. The analysis showed that at least 15.8 percent of idle space existed at the time of our walk-through. After our walk-through and as a result of changed contractor performance, [redacted] reconfigured its office space, reducing the amount of idle space to 4.2 percent.

After our walk-through and JSC's review of space utilization, [redacted]., reduced its leased space by 45,000 square feet.[3] JSC negotiated a contract modification with [redacted] for a $4.2 million reduction, of which $1.2 million is attributable to the space we identified during the audit.

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[3] The reduction represents an area equivalent to the idle space in the [redacted] facility (23,000 square feet) and other office space (22,000 square feet).

FACILITY LEASE CLASSIFICATION

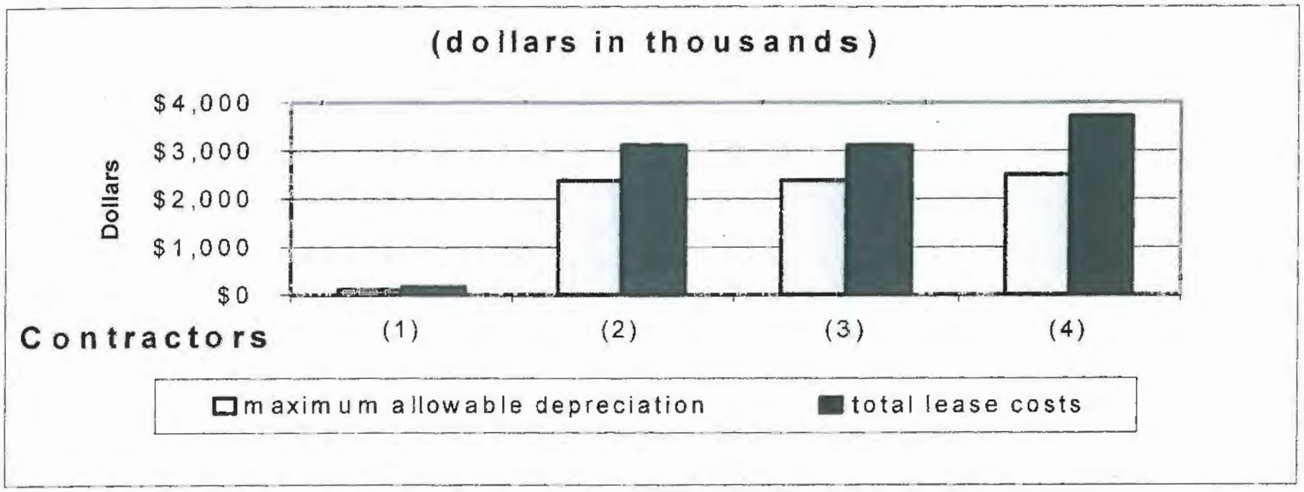
Of 28 contractor facility leases, 4 were incorrectly classified as operating leases. The leases were incorrectly classified because JSC contracting officers (1) did not perform a FAS 13 analysis to ensure that NASA contractors correctly classified the leases and (2) were not trained on FAS 13 requirements. As a result, NASA could pay more than $2.7 million in excess lease costs by fiscal year 2005, when the last lease expires.

The four leases should have been capital leases as defined by FAS 13. FAS 13 states, in part, leases should be classified as capital leases if the present value of the minimum lease payments equals or exceeds 90 percent of the facility fair market value (see Appendix C for more details). FAS 13 also states that any action (for example, an amended lease agreement) that extends the lease agreement beyond the expiration of the existing lease term shall be considered as a new agreement and should be classified using FAS 13 requirements. JSC contracting officers are responsible for ensuring that contractors correctly classify facility leases and for approving contractor billings for lease costs incurred. Contracting officers may rely on DCAA to review leases to determine the correct classification and to perform incurred cost audits of contractor billings. Contracting officers should also be aware of amended leases, which usually represent increased lease costs required by the contractor.

Management may ask DCAA to perform analyses when an amended lease results in a substantial increase to lease payments and/or lease terms. The four leases are listed in Appendix E.

Additional Costs Incurred for Incorrectly Classified Leases

NASA incurs additional costs when contractors classify leases as operating leases rather than capital leases due to the method of accounting. A contractor would depreciate the value of a facility over the life of the lease on a capital lease. For an operating lease, the contractor may charge the Government in the period the expense occurred. For the four leases, the total lease payments will exceed the total fair market value (not just the 90 percent criteria) of the facility by about $2.7 million by the time the leases expire (see Figure 2).



(1) (b)(4) [redacted]; (2) (b)(4) [redacted];
(3) (b)(4) [redacted]; (4) (b)(4) [redacted]

Figure 2: Lease Costs in Excess of Fair Market Value

Implementation of FAS 13 Requirements

JSC's Request for Proposal documents include a requirement for the responsive bidders to submit a FAS 13 analysis if a facility is leased. However, for the four leases, JSC did not perform a FAS 13 analysis to determine the correct classification. Instead, JSC accepted the contractor's determination that the lease should be classified as an operating lease. However, the contractor had not performed the required FAS 13 analysis.

Training on FAS 13 Requirement

JSC management had not ensured that contracting officers received training on FAS 13 requirements in order to determine whether the contractor was in compliance with those requirements. In two cases, JSC contracting officers were not aware of the FAS 13 requirement and did not have the FAS 13 guidance on how to determine the correct classification of a lease.

Consequently, JSC contracting officers could not determine when contractors incorrectly performed FAS 13 analyses.

REVISIONS TO REPORT

The draft of this report discussed nine incorrectly classified leases and excess lease costs of $26.9 million. As a result of information received from the Financial Accounting Standards Board after the draft report was issued and additional information provided by JSC procurement personnel during our exit conference, we recalculated the sampled leases. Based on the recalculation, we reduced the number of questioned leases to four and the amount of questioned cost to $2.7 million (Appendix E). The finding reflects the revised number of leases and questioned cost.

RECOMMENDATION 2

The Director, JSC, should require contracting officers to:

a. Request DCAA to review the lease classifications for the four questioned leases and to determine any unallowable lease costs.

b. Require contractors to perform a FAS 13 analysis, as stated in the JSC Requests for Proposal.

c. Review FAS 13 analyses for the correct lease classification in accordance with the FAR.

d. Complete training on FAS 13 requirements for contractor-acquired facilities.

Management's Response to Recommendation 2(a)

Concur. JSC management periodically reviews leases with the assistance of the DCAA when issues arise. Management worked with the Auditor-in-Charge to clarify and substantiate findings on each lease classification issue. JSC will continue to analyze the audit conclusions on the four leases and will request DCAA reviews if they are determined to be prudent following the analysis. Until the analysis is completed, JSC management cannot substantiate the potential $2.7 million in questioned costs. The complete text of management's response is in Appendix F.

Evaluation of Management's Response

Management's action is responsive to the recommendation.

Management's Response to Recommendation 2(b)	Concur. As stated in the audit report, requirements currently exist to require contractors to perform a FAS 13 analysis.
Evaluation of Management's Response	Although JSC concurred, it must reemphasize the requirement for contractors to perform a FAS 13 analysis when stated in the Requests for Proposal.
Management's Response to Recommendation 2(c)	Concur. Performing a review of FAS 13 to determine the proper classification for leases is reasonable and prudent. JSC ensures that such analyses are done by reviewing the results/analyses with the assistance of the DCAA during periodic reviews.
Evaluation of Management's Response	Management's action is responsive to the recommendation. However, FAS 13 analyses should be performed when the initial lease is signed and when the lease is modified and/or renewed.
Management's Response to Recommendation 2(d)	Concur. JSC agreed that FAS 13 training is important; however, the FAS analysis is best performed by specially trained professionals who remain current on the subject. JSC currently provides general training related to all critical contract administration issues, but will continue to rely on the analysis performed by DCAA and the expertise of the in-house Pricing Office staff.
Evaluation of Management's Response	Management's action is responsive to the recommendation.

Objectives, Scope, and Methodology

Objectives

The overall audit objective was to determine whether NASA is adequately managing facility leasing. Specifically, we determined whether:

- contractor facilities were effectively utilized,
- contractor facility leases were correctly classified, and
- contractors accurately billed lease costs to the Government.

Scope And Methodology

To establish the audit universe, we obtained a list of JSC contractors with facility leases. Also, we identified support service contractors. In addition, we interviewed JSC procurement officials to ensure the accuracy of our list of contractors.

Our audit universe consisted of 15 JSC contracts totaling more than $16.4 billion. These contracts included facility charges of 19 direct and 9 indirect leases.[4] We reviewed all 15 contracts.

Methodology

To determine whether contractor facilities were effectively utilized, we determined the total amount of space being leased, identified the number of staff and the amount of space being used, and performed a walk-through at each leased facility. When the facility was primarily used for storage, we determined the initial requirements and observed the amount of space actually used. We estimated the value of idle space by comparing the initial established office spaces to the number of office spaces occupied during the period of our review (December 1997 through May 1998), calculated the percentage of reduction, and multiplied it times the monthly lease cost. When the percentage of NASA work did not equal 100 percent, we

[4]Costs identified specifically with the contract are direct costs of the contract and are to be charged directly to the contract (that is, direct lease). Costs not directly identified with a single, final cost objective, but identified with two or more final cost objectives, or an intermediate cost objective, are indirect costs and are computed in overhead rates for the applicable contract (that is, indirect lease).

Objectives, Scope, and Methodology

calculated only the percentage of NASA work to determine NASA's cost. Appendix E contains additional details on the costs NASA will pay if corrective action is not taken.

To determine whether the contractor facility leases were correctly classified, we reviewed applicable laws, regulations, and guidelines for classifying facility leases. We then interviewed contractor and NASA personnel to develop a list of potential contractor facility leases and to obtain copies of active contractor facility lease agreements. We reviewed NASA contract files to verify justifications for approving lease agreements and to analyze comparative cost analyses performed by JSC and/or contractors. We also reviewed DCAA incurred cost audits and recommendations. To perform the capital lease calculations and analyses, we used the FAS 13 software package DCAA provided to us and subsequently relied on the DCAA validation of the software package. We did not perform our own validation of the software.

To determine whether contractors accurately billed lease costs, we verified that the contractor was approved for facilities reimbursement. We compared lease costs billed by the landlord to the contractor with the lease costs the contractor billed to JSC.

Objectives, Scope, and Methodology

Management Controls Reviewed

We reviewed management policies, procedures, and guidelines to evaluate NASA's management of contractor facility leasing. As discussed in the findings, management policies and procedures for contracting officers should be strengthened to improve the management of facility leasing at JSC.

Audit Field Work

We performed field work from December 1997 through July 1998 at JSC and the contractors' sites. We performed the audit in accordance with generally accepted government auditing standards.

Appendix B

PRIOR OFFICE OF INSPECTOR GENERAL REVIEWS

"Contractor Facility Leases, Lewis Research Center," Audit Report No. IG-97-009, November 22, 1996

"Contractor Facility Leases, Lockheed Credit Union Occupancy Costs," Audit Report No. IG-97-037, September 10, 1997

"Contractor Facility Leases," Audit Report No. IG-98-007, March 5, 1998

Definitions, Guidelines, and Regulations Governing Contractor-Leased Facilities

Idle Facilities

FAR 31.205-17 (Idle facilities and idle capacity costs)
The cost of idle facilities are unallowable unless the facilities (1) are necessary to meet fluctuations in workload or (2) were necessary when acquired and are now idle because of changes in requirements, production economies, reorganization, termination, or other causes that could not have been reasonably foreseen. Costs of idle facilities are allowable for a reasonable period, ordinarily not to exceed 1 year, depending on the initiative taken to use, lease, or dispose of the idle facilities.

Idle capacities are defined as the unused capacity of partially used facilities.

Idle facilities are completely unused facilities that are excess to the contractor's current needs.

Lease Classification

FAR 31.201-3 (Reasonableness)
A cost is reasonable if, in its nature and amount, it does not exceed that which would be incurred by a prudent person in the conduct of competitive business. Reasonableness of specific costs must be examined more closely when competition is not a factor.

FAR 31.205-11(m) (Depreciation)
Capitalization of Tangible Assets, 48 Code of Federal Regulations (CFR) 9904.404, applies to assets acquired by a "capital lease" as defined in Statement of Financial Accounting Standard No. 13 (FAS 13), "Accounting for Leases," issued by the Financial Accounting Standards Board. Compliance with 48 CFR 9904.404 and FAS 13 requires that such leased assets (capital leases) be treated as purchased assets, that is, be capitalized and the capitalized value of such assets be distributed over their leased life as amortization charges as appropriate.

FAR 31.205-36 (b)(1) (Rental costs)
Rental costs are allowable costs under operating leases, to the extent that the rates are reasonable at the time of the lease decision, after consideration of (1) rental costs of comparable property, if any; (2) market conditions in the area; (3) the type, life expectancy, condition, and value of the property leased; (4) alternatives available; and (5) other provisions of the agreement.

Definitions, Guidelines, and Regulations Governing Contractor-Leased Facilities

FAS 13 (Capital versus Operating Leases)
The Financial Accounting Standards Board issued FAS 13, establishing the generally accepted accounting principles and practices of financial accounting and reporting for leases by lessees and lessors. FAR 31.205-11(m) incorporates the standards prescribed by FAS 13. According to FAS 13, a lease is defined as an agreement conveying the right to use property, plant, or equipment (land and/or depreciable assets) usually for a stated period of time. FAS 13 also classifies a lease as either (1) a capital lease for which the lease obligation is treated similar to that of a purchased asset acquired with borrowed funds or (2) an operating lease for which all payments are treated as an expense of the accounting period during which they are incurred. FAS 13 lists four criteria for a capital lease:

(1) lease transfers ownership (title) to lessee during lease term,
(2) lease contains a bargain purchase option,
(3) lease term is 75 percent or more of the estimated economic life of the leased property, and
(4) present value of minimum lease payments equals or exceeds 90 percent or more of fair market value of the leased property less any lessor investment tax credit.

If a lease, at its inception, meets any one of the above criteria, FAS 13 states that the lease shall be classified as a capital lease. A lease not meeting any of the criteria shall be classified as an operating lease.

FACILITIES WITH IDLE SPACE

CONTRACTOR LOCATION[1]	Percent of Idle Space (a)	Minimal Monthly Lease Payment (b)	Estimated Annual Cost Impact (c) (a x b x 12)	Months Remaining as of 7/98 (d)	Estimated NASA Cost[2] (e) (a x b x d)
(b)(4) [redacted]	11.4%	$ 74,227	$101,384	43	$ 363,292
(b)(4) [redacted]	13.0%	12,149	18,952	43	67.913
(b)(4) [redacted]	13.8%	89,969	148,914	6	74,457
(b)(4) [redacted]	24.8%	174,202	518,156	99	4,274,789
Subtotal					$4,780,451
(b)(4) [redacted][3]	25.5%	$129,981	$397,085	37	1,224,344
Total					**$6,004,795**[4]

[1] Contractors with more than one location are identified by (b)(4) [redacted].
[2] Indicates that work at the facility is 100 percent NASA work.
[3] JSC management took action during the audit (see page 2).
[4] As discussed on page 5, actual monetary benefits for idle space total $1.2 million.

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CAPITAL LEASES[1]
WITH QUESTIONED COSTS

Contractor Location[2]	Maximum Allowable Depreciation (a)	Lease Costs (b)	Questioned Costs (c) (b - a)
(b)(4) [redacted]	$ 98,400	$ 182,321	$ 83,921
(b)(4) [redacted]	2,381,400	3,119,579	738,179
(b)(4) [redacted]	2,381,400	3,119,579	738,179
(b)(4) [redacted]	2,493,900	3,718,723	1,224,823
Total Questioned Costs for the Four Leases			**$ 2,785,102**

[1] For each of these leases, we performed two separate FAS 13 analyses, one using the basic lease term and the other using the basic lease term including the option years. Each method showed that the four leases should be classified as capital leases.
[2] Contractors with more than one location are identified by (b)(4) [redacted]

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MANAGEMENT'S RESPONSE

National Aeronautics and
Space Administration
Lyndon B. Johnson Space Center
2101 NASA Road 1
Houston, Texas 77058-3696

DEC 0 7 1998

Reply to Attn of: BD5

TO: NASA Headquarters
Attn: W/Assistant Inspector General for Auditing

FROM: AA/Director

SUBJECT: Management's Response to OIG's Draft Report on the Audit of Contractor-Acquired Facilities at Johnson Space Center (Assignment Number A-HA-97-066)

We appreciate the opportunity to provide comments to the subject draft report, and acknowledge the significant changes made to the draft report following the exit conference held on October 15. As stated at that meeting, we disagreed with both the methodology used in defining capital versus operating leases, and for computing idle space. Because of information exchanged at the meeting, the findings were significantly changed to allow us to concur with the overall intent of the audit report. We disagree with the potential $6.0 million cost avoidance from reducing idle space, and do not feel that idle space is currently an issue in the contracts discussed.

The exit conference resulted in a number of changes being made to the findings regarding the classification of leases as capital versus operating, and a recomputation of the projected cost savings. We will continue to review these findings to ascertain the correct lease classification, and to determine any recoupment due. Appendix E shows that the $2.7 million amount is based on the difference between lease costs and depreciation costs. It is understood that facilities capital cost of money was not considered for any of the leases, and this would be a significant offset to the questioned costs. Additionally, the executory cost estimated for [redacted] is considered low, which also impacts the questioned costs. These factors are important variables in the determination of lease classification which may alter the results. JSC concurs that these leases require further review.

The findings and recommendations are addressed individually in the enclosure. This response has been coordinated with the NASA Office of Procurement, Contract Management Division, and comments from that office are incorporated into this response. If you have any questions regarding the response, please contact Ms Pat Ritterhouse, Audit Liaison Representative, at 281-483-4220.

George W. S. Abbey
George W. S. Abbey

Enclosure

MANAGEMENT'S RESPONSE

cc:

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MANAGEMENT'S RESPONSE

Management's Response to OIG's Draft Report on the Audit of Contractor-Acquired Facilities at Johnson Space Center (Assignment Number A-HA-97-066)

Auditor's Findings

"JSC's management of facility leasing can be improved. The lease costs billed to the Government were accurate; however, contractor facilities were not always effectively utilized. Five of 28 facilities reviewed had idle space exceeding 10 percent of the total leased space."

Recommendation 1

"The Director, JSC, should:

a. Establish procedures that require contracting officers to periodically reevaluate facility requirements for contractors with leases.

b. Review the allowability of costs for the leased space at the five sites identified in this audit, and recoup any unallowable costs resulting from idle space."

JSC Comments

a. Concur. While we believe that periodic evaluation of facilities is a part of good contract administration, we also believe that adequate procedures currently exist to provide such evaluation and there is no need for the proliferation of additional procedures. Idle facilities could be better handled as part of the annual audit plan that is developed with the Defense Contract Audit Agency (DCAA). This would ensure that incurred cost audits review the issue with regards to both facilities that are dedicated to specific contracts (direct) and those that support more than one contract and/or overhead or General and Administrative (G&A) activities (indirect).

b. Concur. During the conduct of this audit, the JSC Pricing Office and individual contracting officers have expended a great deal of time to understand the basis of the findings regarding idle space. We have reviewed each of the facilities discussed in the audit report, and do not agree with either the definition of idle space nor the amount of unallowable costs as stated in the report. The audit was based upon two separate "walk through" evaluations (in some cases one), the last of which was completed in the May 1998 time frame. JSC does not agree that one or two physical reviews (walk throughs) is sufficient to make a definite determination about continuous facility space. The OIG calculated associated costs by multiplying the monthly rent by the remaining months times idle seats identified during the physical reviews. Instead of computing idle space based on a visual inspection of workstations that were not in use, we believe that idle capacity should be based on accepted audit standards (square footage per person) Based on Federal Acquisition Requirements (FAR) and changed contractor performance, our current reviews indicate that no issue related to idle space currently exists. Further, the "changed contractor performance" was anticipated during the audit. For example, the audit report did not fully take into consideration the (b)(4) [redacted] transition activities. These activities are currently on-going and affect the idle space percentages calculated for (b)(4) [redacted]. We also contend there is no issue with the other facilities based on the FAR. In summary, our review

Enclosure

MANAGEMENT'S RESPONSE

shows there is no recoupment due on these contracts. We agree with the intent of the audit recommendations. Periodic review of this element of contract administration is important. We believe that such reviews are included in the fabric of good contract administration at JSC. For example, we were aware of the issue with the (b)(4) [redacted] contract, and actions were already underway to address this concern prior to the audit.

Auditor's Findings

"NASA incurs additional costs when contractors classify leases as operating leases rather than capital leases due to the method of accounting. A contractor would depreciate the value of a facility over the life of the lease on a capital lease. For an operating lease, the contractor may charge the Government in the period the expense occurred. For the four leases, the total lease payments will exceed the total fair market value (not just the 90 percent criteria) of the facility by about $2.7 million by the time the leases expire."

Recommendation 2

"The Director, JSC, should require contracting officers to:

a. Request DCAA to review the lease classifications for the four questioned leases and to determine any unallowable lease costs.

b. Require contractors to perform a FAS 13 analysis, as stated in the JSC Requests for Proposal.

c. Review FAS 13 analyses for the correct lease classification in accordance with the FAR.

d. Complete training on FAS 13 requirements for contractor-acquired facilities."

JSC Comments

a Concur. It is the practice at JSC to periodically review leases with the assistance of the DCAA when issues arise. Our review of the facilities discussed in the initial draft report did not support the OIG's findings regarding lease classification, nor the potential questioned costs. Following the exit conference, the JSC Pricing Office worked each lease classification issue individually with the auditor-in-charge to clarify and substantiate the allegations. This effort resolved a number of the differences, and we now concur with the recommendation. We will continue to analyze the findings regarding the four leases on a case-by-case basis, and will request DCAA reviews if that is determined prudent business judgment following that analysis. Until such reviews are completed, we can not substantiate the potential $2.7 million in questioned costs. Appendix E shows that the $2.7 million amount is based on the difference between lease costs and depreciation costs. The audit does not take into account the facilities capital cost of money for any of the leases, and this would be a significant offset to the questioned costs. Also, the executory cost estimated for Lincom is considered low.

b Concur. As stated in the audit report, requirements currently exist to require contractors to perform a FAS 13 analysis.

MANAGEMENT'S RESPONSE

c. Concur. We agree that performing a review of FAS 13 to determine the proper classification for leases is reasonable and prudent. This is a financial requirement of Generally Accepted Accounting Principles (GAAP), and JSC ensures this analysis is done by reviewing the results/analyses with the assistance of the DCAA during periodic reviews.

d. Concur. We concur that FAS 13 training is important; however, the audit report suggests organizational-wide, detailed training. We understand the importance associated with having a knowledgeable procurement workforce; however, we believe that FAS analysis is best performed by specially trained professionals who remain constantly current on the subject. JSC currently provides general training related to all critical contract administration issues, but will continue to rely on the analysis performed by DCAA and the expertise of the in-house Pricing Office. This issue was discussed at the exit conference, and it is our understanding that your office accepted this position.

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Deputy Associate Director, Energy and Science Division, Office of Management and Budget
Budget Examiner, Energy and Science Division, Office of Management and Budget
Associate Director, National Security and International Affairs Division, General Accounting Office
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Appendix G

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Congressional Member

Honorable Pete Sessions, U.S. House of Representatives

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CM

IG-98-026

AUDIT REPORT

SURVEY OF THE JOINT BASE OPERATIONS AND SUPPORT CONTRACT (J-BOSC) AT KENNEDY SPACE CENTER

SEPTEMBER 14, 1998

NOTICE – SOURCE SELECTION INFORMATION - SEE FAR 3.104

This report contains source selection information. Title 41, USC, section 423 provides specific penalties for the unauthorized disclosure of source selection information. This document must be safeguarded in accordance with the provisions of the Federal Acquisition Regulation, Part 3.104-5.

OFFICE OF INSPECTOR GENERAL

National Aeronautics and Space Administration

National Aeronautics and
Space Administration

Headquarters
Washington, DC 20546-0001

Reply to Attn of: W

September 14, 1998

TO: Cochairpersons, Joint Base Operations and Support Contract Source Evaluation Board at John F. Kennedy Space Center

FROM: W/Assistant Inspector General for Auditing

SUBJECT: Final Management Letter on the Survey of the Joint Base Operations and Support Contract (J-BOSC) at Kennedy Space Center
Assignment Number A-HA-98-005
Management Letter Number IG-98-026

The subject final management letter is provided for your use. Your comments on a draft of this management letter and our evaluation of your response have been incorporated into the body of the final letter. We consider all suggestions closed.

If you have questions concerning the management letter, please contact Mr. Lorne Dear, Program Director, Procurement and International Agreements Audits, at (818) 354-3360, or Ms. Bonnie Armstrong, Auditor-in-Charge, at (407) 867-4073. We appreciate the courtesies extended to the audit staff.

Russell A. Rau

Enclosure

MANAGEMENT LETTER

Survey of the Joint Base Operations and
Support Contract (J-BOSC) at Kennedy Space Center
(Assignment Number A-HA-98-005)
September 14, 1998

SPECIAL WARNING

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Observations on the Survey of the NASA/Air Force Joint Base Operations and Support Contract (J-BOSC)

We have completed our survey of the consolidated procurement of base operations and support services at John F. Kennedy Space Center (KSC), Cape Canaveral Air Station, and Patrick Air Force Base, Florida. Our overall survey objective was to monitor and review ongoing acquisition activities to ensure that award of the consolidated contract is timely, will satisfy the stated goals of the J-BOSC, and is in the Government's best interest. During the survey, we reviewed the two contractor proposals received in response to the J-BOSC request for proposal (RFP).

We reviewed current contracts[1] to be consolidated, other National Aeronautics and Space Administration (NASA) contracts[2] that involved consolidations of support services, the J-BOSC RFP, and proposals received in response to the RFP. In addition, we interviewed NASA and Air Force personnel, examined acquisition strategy meeting minutes[3] and other pertinent documents,[4] and held discussions with Air Force Audit Agency (AFAA) auditors performing an Air Force management-requested review. We coordinated our objectives and survey approach with AFAA auditors to minimize any duplication of effort and to reduce the amount of time needed for acquisition team members to interact with auditors from both agencies.

On January 28, 1998, we briefed the J-BOSC Source Evaluation Board[5] cochairpersons and staff on two issues: (1) whether adequate competition would occur for the procurement and (2) whether contingency labor strike plans would be submitted by offerors. After reviewing the proposals, we have one additional observation regarding the performance metrics submitted in the proposals. Each issue is discussed below. Management partially concurred with our suggestions. Management's written response, dated July 29, 1998, is in the Enclosure. With the issuance of this letter, we are terminating this audit.

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[1] The Base Operations Contract at KSC and the Air Force Launch Base Support contract.

[2] The Space Flight Operations Contract at Lyndon B. Johnson Space Center and KSC and the Center Operation Support Services contract at George C. Marshall Space Flight Center.

[3] Acquisition strategy meeting minutes document the J-BOSC acquisition strategy; top procurement officials at NASA and the Air Force approved the minutes on October 29, 1997.

[4] The J-BOSC Contract Management Charter and Structure, the J-BOSC Master Schedule, the Memorandum of Agreement between the 45^{th} Space Wing and KSC for Joint Performance Management, KSC Business Objectives and Agreement for the Joint Performance Management Office, answers to the questions concerning the draft RFP, and the list of collective bargaining agreements for the J-BOSC.

[5] The Source Evaluation Board analyzes offerors' proposals and presents its findings to the source selection authority. The Board is cochaired by one NASA and one Air Force representative. The source selection authority is responsible for selecting the contractor whose proposal is the best value to the Government. Source selection authority has been delegated to the KSC Director.

Adequate Competition

Observation. Additional analysis was required to ensure that a fair and reasonable price is obtained on the J-BOSC procurement. While price competition requirements as prescribed by the Federal Acquisition Regulation (FAR) were met in the initial solicitation, the two remaining offerors who submitted final proposal revisions may have been affected by a proposed merger between two companies that are members of the two offeror (contractor) teams. Without the benefit of a price analysis, NASA and the Air Force may not be able to ensure adequate price competition is achieved during final negotiations.

The FAR contains guidance for evaluating adequate price competition. FAR 15.403-1(c), *Standards for exceptions from cost or pricing data requirements – (1) Adequate price competition*, states that adequate price competition exists if (1) two or more responsive and responsible offerors, competing independently, submit or are expected to submit offers or (2) a price analysis clearly demonstrates that the proposed price is reasonable. Contracting officers shall not require submission of cost or pricing data when prices agreed upon are based on adequate price competition. Although the RFP exempts offerors from submitting cost and pricing data based on a reasonable expectation of adequate price competition, the RFP requires submission of cost information, other than cost or pricing data, to evaluate cost realism and reasonableness.

The Source Evaluation Board originally expected six offerors to submit proposals, based on the number of prospective contractors that observed NASA and Air Force facilities and operations. By early January 1998, however, four potential offerors had decided not to participate. The two remaining offerors involved joint ventures. One joint venture included a division of Company A (company names are source-selection sensitive) as a major subcontractor. The other joint venture included Company B as a key member. [redacted]. However, the [redacted]. As of the time a draft of this management letter was issued for management comments, [redacted]. Final proposal revisions were due July 6, 1998. Because [redacted], it was essential that price analysis be used to ensure that a fair and reasonable price is obtained. After we issued the draft management letter, [redacted]

Suggestion. The Source Evaluation Board should perform a thorough price analysis to determine whether adequate price competition exists.

Summary of Management's Comments

Management responded that Company B is proposed as a subcontractor with only [redacted] percent of the total effort in one of the two offers received. This amount of participation is too insignificant to influence the overall pricing of the offer or violate competition requirements.

However, a very thorough cost and price analysis will be conducted for both offers and will include major subcontractor costs. Field pricing support will also be requested for analysis of proposed labor rates, labor burden, and indirect rates. The complete text of the coments is in the Enclosure.

Evaluation of Management's Comments

Management's plan to conduct a thorough cost and price analysis satisfactorily resolves this issue.

Contingency Strike Plan

Observation. Labor disputes may cause work stoppages that delay performance and increase costs once the J-BOSC is awarded. Work stoppages could occur if the successful offeror did not have a contingency strike plan in place to minimize the adverse effects from labor disputes. Although the RFP did not require submission of contingency strike plans prior to contract award, Source Evaluation Board members stated that they expected offerors to submit detailed information on labor relations in their proposals. The proposals included past performance in labor relations and explained planned approaches but did not include detailed contingency plans for labor strikes or work stoppages. Both NASA and the Air Force could realize mission impairments after contract award if labor relations are not adequately addressed.

NASA and Air Force management expect the consolidation of 1 NASA contract and 17 Air Force contracts into the J-BOSC to significantly reduce Government support costs. Managers expect cost savings to be achieved by reductions in overhead and the workforce. Although the Service Contract Act of 1965 (41 United States Code Section 351) extends wages and benefits under collective bargaining agreements established by predecessor contracts to successor contracts, the Act does not prevent workforce reduction or changes in labor classifications. According to the RFP, the successful J-BOSC contractor must pay wages and benefits set forth in as many as 23 collective bargaining agreements. The successful contractor must negotiate with 6 unions (13 local union branches) representing 1,972 workers.

Suggestion. The Source Evaluation Board should take the steps necessary to assure that contingency strike plans protect the Government against potential work stoppage and labor strikes.

Summary of Management's Comments

Requiring contract deliverables such as contingency strike plans is not consistent with a performance-based contract. In addition, requiring Government acceptance of such a plan places the Government in an oversight role. A strike plan does not guarantee there will never be a work stoppage or labor strike. The Source Evaluation Board has evaluated each offeror's approach for assuring amicable labor relations against the evaluation standards and criteria set forth in the RFP. Finally, an offeror's past performance as it relates to its ability to address complex labor concerns without dispute is of far greater value than a contingency strike plan.

Evaluation of Management's Comments

We agree that the Source Evaluation Board peformed a thorough evaluation of the offeror's proposal in this area. Subsequent to issuance of our draft report, we learned that the RFP requires the successful contractor to submit an Integrated Management Plan as a contract deliverable. The plan is to be implemented on the contract start date. The plan will include an approach for continuing or expanding performance in the event of work stoppage and labor strikes. Therefore, separate contingency strike plans are not required.

Performance Metrics

Observation. Incorporation of performance standards and metrics into contracts hold contractors accountable for quality performance. However, performance standards and metrics should be linked to incentives to encourage quality performance. The two proposals differed significantly in response to the RFP requirement to submit metrics to address performance standards specified in the J-BOSC RFP. The J-BOSC RFP required offerors to submit meaningful metrics, including trends, customer satisfaction, and long-term effectiveness of work performed. The RFP included 129 performance standards, allowed offerors to propose equivalent standards, and required submission of initial metrics. One offeror proposed metrics for 124 of 129 performance standards and 47 additional performance standards and corresponding metrics. The offeror's metrics expressed the method the contractor will use for evaluating performance against each standard. The second offeror proposed metrics for all 129 performance standards and proposed an additional 104 standards and corresponding metrics. The metrics, however, merely restated the performance standards and did not express a method for evaluating performance against standards. Metrics proposed by the awardee will be the basis for a joint effort with the Joint Performance Management Office[6] in developing an official set of contract-approved metrics for the J-BOSC. However, the amount of award fee attributable to meeting performance standards has not been established.

Policy Letter 91-2, issued by the Office of Federal Procurement Policy on April 9, 1991, established policy for Government acquisition of services. The policy emphasizes the use of performance requirements and quality standards in defining contract requirements, source selection, and quality assurance. To the maximum extent practicable, agencies must assign contractors full responsibility for quality performance and must develop formal, measurable (in terms of quality, timeliness, quantity, etc.) performance standards and surveillance plans to facilitate the assessment of contractor performance. FAR 37.602-4, *Contract Type*,

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[6]The J-BOSC will be administered jointly by the Joint Performance Management Office staffed by both NASA and Air Force members. The Joint Performance Management Office will report to a board of directors, alternately chaired by the KSC Director and the Commander of the Air Force 45th Space Wing.

requires agencies to include incentives in service contracts, to the maximum extent practicable, to encourage contractors to increase efficiency and maximize performance. Such incentives must correspond to the specific performance standards included in the surveillance plan.

The J-BOSC is structured as a cost-plus-award-fee contract, and contractor performance is one of three elements that will be evaluated to determine award fee. Although performance will be measured against performance standards and metrics, the correlation between performance standards and metrics and award fee has not been established.

Suggestion. The Source Evaluation Board should establish a process prior to contract award for using performance metrics in award fee determinations.

Summary of Management's Comments

The award fee will be determined by evaluating three criteria. The performance evaluation factor is one of the three criteria and is more heavily weighted (55 percent) than the other two factors combined. The contractor's demonstrated performance will be measured against performance standards and metrics to balance subjective assessments. The processes for measurement of performance, documentation, and evaluation of the contractor's performance will be in place prior to contract start date. Contractor performance will be evaluated against standards through meaningful, partnered metrics determined in advance, along with areas of special emphasis identified in advance for each award fee period. The contractor's performance for each period will be measured by the agreed metrics, and the results will be documented in the contractor's database, verified through the Government's surveillance plan, and evaluated within each applicable award fee criterion.

Evaluation of Management's Comments

Management's plan to establish a process prior to contract start date for incorporating evaluation of contractor performance into the award fee process satisfactorily resolves this issue.

Management's Comments

National Aeronautics and
Space Administration
John F. Kennedy Space Center
Kennedy Space Center, FL 32899

1998 JUL 31 PM 2:50

eply to Attn of: BOSC-SEB

JUL 29 1998

TO: NASA Headquarters
Attn: W/Assistant Inspector General for Auditing

FROM: BOSC-SEB/Co-Chairs, J-BOSC Source Evaluation Board

SUBJECT: Comments to Draft Management Letter on the Survey of the Joint Base Operations and Support Contract (J-BOSC) at Kennedy Space Center (Assignment Number A-HA-98-005)

The J-BOSC Source Evaluation Board partially concurs with the draft management letter. Enclosed are our comments per your request.

J. C. Fairey
J. Chris Fairey

Edmond F. Gormel

Enclosure
(4 pages)

ISSUE: Adequate Price Competition. "Because members of the only two contractors that will be submitting final proposal revisions are pursuing a merger, it is essential that a price analysis be used to ensure that a fair and reasonable price is obtained."

SUGGESTION: The Source Evaluation Board (SEB) should perform a thorough price analysis to determine whether adequate price competition exists.

RESPONSE: It should be noted that the company in question is proposed as a subcontractor with only [redacted] of the total effort in one of the two offers received. This amount of participation is considered too insignificant to influence the overall pricing of the offer or violate competition requirements. Nevertheless, a very thorough cost and price analysis will be conducted for both offers, to include major subcontractor costs. Although certified cost and pricing data are not required for this effort, sufficient information other than cost or pricing data has been requested in order to evaluate cost realism and reasonableness in accordance with FAR, NFS, Public Law 100-679 and Cost Accounting Standards. To supplement the SEB's cost and price analysis, field pricing support will also be requested for analysis of proposed labor rates, labor burden and indirect rates.

ISSUE: Contingency Strike Plan. "Work stoppages could occur if the successful offeror does not have a contingency strike plan in place to minimize adverse effects from labor disputes."

SUGGESTION: The Source Evaluation Board should take the steps necessary to assure that contingency strike plans protect the Government against potential work stoppage and labor strikes.

RESPONSE: The requirement for contract deliverables such as contingency strike plans are not consistent with a performance based contract. A strike plan, no matter how well prepared, does not guarantee there will never be a work stoppage or labor strike. Requiring government acceptance of such a plan places the government back in the role of providing "oversight" rather than gaining "insight" of contractor performance. Each offeror's proposed approach for assuring amicable labor relations has been evaluated by the SEB against the evaluation standards and criteria set forth in the RFP. Additionally, an offeror's past performance as it relates to its ability to address complex labor concerns without dispute is of far greater value than a strike contingency plan. The J-BOSC evaluation process places great weight on this performance history.

ISSUE: Performance Metrics.

SUGGESTION: The Source Evaluation Board should establish a process prior to contract award for using performance metrics in award fee determination.

RESPONSE: Agreed. The SEB has included in the J-BOSC a process for using performance metrics in award fee determinations. The J-BOSC uses an award fee incentive consistent with FAR and NFS guidance. As opposed to incentive fee contracts, award fee contracts subjectively assess contractor performance against an established set of criteria. The challenges associated with consolidating Air Force and NASA requirements, the dynamic operational environment in supporting a vast array of Government and commercial customers, and the significant labor relations concerns in merging workforces were all considered significant impediments to negotiating a target cost and an effective incentive fee arrangement.

Rather than "force fitting" the J-BOSC effort into an alternate contract type, the SEB recognized the merits of an award fee incentive and structured the RFP, evaluation criteria, and award fee criteria to strongly encourage innovation and commercial practices instead of business as usual. The J-BOSC Award Fee Evaluation Plan evaluation factors, which include weighted scoring of technical performance, subcontract performance, and cost control performance, will provide the contractor incentive to balance the cost factor with the other two factors to receive a reasonable fee. The Performance Evaluation Factor is one of three award fee criteria and is more heavily weighted (55%) than the Subcontracting Performance Factor (15%) and Cost Control Evaluation Factor (30%) combined. The Performance Evaluation Factor states specifically, "The contractor's demonstrated performance will be measured against performance standards and metrics in order to balance subjective assessments with objective considerations. The government will evaluate major elements of contractor performance, such as managerial and business performance, efficiency and effectiveness of operations, safety, quality, communications and customer support, and develop a performance evaluation score."

Pursuant to RFP Article H-17, the initial contractor proposed metrics will be used as the basis for the JPMO and the J-BOSC contractor to partner an official set of approved contract metrics for evaluating performance against each contract standard. The J-BOSC SEB acknowledges that in order to effectively manage this performance based requirement, the government must have visibility into the efficiency and productivity of the contractor. The award fee evaluation plan requires the contractor to provide performance-based results meeting the performance standards in the Statement of Work as measured by meaningful contract metrics which will be continually refined during the life of the contract. The JPMO and J-BOSC contractor will partner the metrics throughout the life of the contract to ensure the metrics remain valid and relevant to government priorities and contractor performance. The JPMO will evaluate contractor performance against the metrics and present results to the fee determining official (Chair of the Board of Directors) who will retain the ability to exercise his/her judgment of the contractor's true efforts and successes in determining the award fee score and resulting payment.

The J-BOSC award fee structure fully complies with the requirements and intent of FAR 37.602-4 and incentivizes the contractor to increase efficiency and maximize performance against the contract performance standards. This performance incentive is further enhanced by elimination of any base fee and by the J-BOSC's specific minimum evaluation thresholds which must be met before award fee may be earned. As noted above, the processes for measurement of performance, documentation, and evaluation of the contractor's performance will be in place prior to contract start. Under this arrangement contractor performance will be evaluated against contract standards through meaningful, partnered metrics determined in advance, along with areas of special emphasis identified in advance for each award fee period. The contractor's performance for each period will be measured by the agreed metrics and the results documented in the contractor's database, verified through the government's surveillance plan, and evaluated within each applicable award fee criterion.

This OIG suggestion is fully endorsed and will be met under the previously determined implementation procedures for use of partnered metrics in the measurement of contractor performance and evaluation of award fee scores.