IG-00-015

AUDIT REPORT

SPACE FLIGHT OPERATIONS CONTRACT PHASE II - COST-BENEFIT ANALYSIS

March 14, 2000

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and
Space Administration

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Acronyms

SFOC	Space Flight Operations Contract
USA	United Space Alliance

W March 14, 2000

TO: A/Administrator

FROM: W/Inspector General

SUBJECT: INFORMATION: Space Flight Operations Contract Phase II - Cost-Benefit Analysis
Report Number IG-00-015

The NASA Office of Inspector General has completed an audit of the Space Flight Operations Contract (SFOC) Phase II - Cost Benefit Analysis. We found that NASA had not performed a cost-benefit analysis prior to consolidation of Space Shuttle prime contracts into one prime contract with the United Space Alliance (USA). Therefore, the Agency is not relying on a complete analysis and documentation of estimated benefits for the consolidation. In addition, the Agency does not have a good baseline, which would have been established during a cost-benefit analysis, to evaluate the outcome of the consolidation. As a result, NASA cannot be certain that further consolidation of about $10 billion in Space Shuttle contracts will result in net savings to the Government.

Background

The USA became the prime contractor responsible for all Shuttle missions in 1996. As the prime contractor, USA assumed responsibility for ensuring all Shuttle missions manifested by NASA are successfully accomplished. The contract has two phases within which NASA consolidates prior prime contracts over several years as USA assumes more responsibility. The contract is currently in Phase II; however, the most significant portion of Phase II has not been completed, specifically the portion related to the Space Shuttle main engines, external tanks, and reusable solid rocket motors.

Recommendations

We recommended that the Associate Administrator for the Office of Space Flight (1) perform a cost-benefit analysis before further consolidation of Space Shuttle contracts into the SFOC and (2) evaluate at least annually whether estimated benefits are realized.

Management Response and OIG Evaluation

Management concurred with Recommendation 1 and concurred with the intent of Recommendation 2. In response to Recommendation 1, the Associate Administrator for the Office of Space Flight will ensure that an appropriate cost-benefit analysis is applied in all phases of the SFOC management cycle. NASA will implement a structured cost-benefit analysis into the processes used to determine the overall impacts and effects of consolidating any additional contracts into SFOC. In response to Recommendation 2, NASA will increase the focus of the continuous Program budget assessments of realized cost performance under SFOC as compared to previous performance under individual contracts.

Management comments were responsive to the recommended corrective actions. The recommendations are resolved but will remain undispositioned until agreed-to corrective actions are completed. We are monitoring the recommendations for reporting purposes pending implementation of agreed-to corrective actions.

[Original signed by]

Roberta L. Gross

Enclosure
Final Report on Audit of Space Flight Operations Contract Phase II -
Cost-Benefit Analysis

FINAL REPORT
AUDIT OF SPACE FLIGHT OPERATIONS CONTRACT PHASE II - COST BENEFIT ANALYSIS

W March 14, 2000

TO: M/Associate Administrator for Office of Space Flight

FROM: Assistant Inspector General for Auditing

SUBJECT: Final Report on the Audit of Space Flight Operations Contract Phase II - Cost-Benefit Analysis
Assignment Number A9906400
Report Number IG-00-015

The subject final report is provided for your use and comment. Our evaluation of your response is incorporated into the body of the report. Management comments were responsive to the recommended corrective actions. However, management did not specify an estimated completion date for the corrective action on Recommendation 2. We request that information by April 13, 2000, in response to the final report. Also, please notify us when actions have been completed on the recommendations, including the extent of testing performed to ensure corrective actions are effective. The recommendations will remain open for reporting purposes.

If you have questions concerning the report, please contact Mr. Dennis E. Coldren, Program Director, Human Exploration and Development of Space Audits, at (281) 483-4773, or Mr. Dennis Clay, Auditor-in-Charge, at (281) 483-0482. We appreciate the courtesies extended to the audit staff. The final report distribution is in Appendix E.

[Original signed by]

Russell A. Rau

Enclosure

cc:
B/Chief Financial Officer
B/Comptroller
BF/Director, Financial Management Division
G/General Counsel
JM/Director, Management Assessment Division
AA/Director, Lyndon B. Johnson Space Center

bcc:
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W/Program Director, Human Exploration and Development of Space Audits
W/Auditor-in-Charge
JSC/BD5/Audit Liaison Representative

NASA Office of Inspector General

IG-00-015 **March 14, 2000**
A9906400

Space Flight Operations Contract Phase II - Cost-Benefit Analysis

Introduction

The NASA Office of Inspector General has performed an audit to evaluate management of Phase II of the Space Flight Operations Contract (SFOC). Specifically, our objectives were to determine whether contract requirements were properly determined, fair and reasonable pricing was obtained, and cost savings and other SFOC goals have been achieved. We identified a condition regarding a cost-benefit analysis that warrants timely action by NASA management. We will issue a report on the other objectives later. Details on our objectives, scope, and methodology are in Appendix A.

NASA began consolidating Space Shuttle contracts in 1996 under the SFOC with United Space Alliance (USA).[1] (See Appendix B for overall contract details.) Under the USA contract, NASA identified 12 contracts to be combined during Phase I and 15 contracts to be combined during Phase II as NASA gains confidence in USA's abilities to assume more responsibility.

Results in Brief

NASA has not performed a cost-benefit analysis to ensure that consolidation of Space Shuttle contracts is in the best interest of the Government. Instead, NASA has proceeded with the consolidation based on an assumption that consolidation will be cost-effective and in the best interest of the Government. Without a cost-benefit analysis, NASA cannot be certain that further consolidation of about $10 billion in Space Shuttle contracts will result in a net savings to the Government.

Background

In September 1996, NASA entered into a contract with USA as the prime contractor for Space Shuttle Program[2] and International Space Station Program[3] activities to ensure that all missions manifested by NASA are successfully accomplished in accordance with the applicable flight

[1]The contract, NAS 9-20000, is a cost plus, award fee, incentive fee, and performance fee contract (original cost was $6.339 billion and fee was $.610 billion).

[2]NASA's plan for the SFOC was designed to include a subset of the Shuttle Program contracts and activities specifically focused on the operational functions of the Shuttle Program. Development activities were not targeted for consolidation and neither were science activities or institutional activities required to support the Shuttle Program.

[3]The Space Station Program activities targeted for SFOC were very limited and focused primarily on the mission operations functions integrally associated with flight controller support, mission planning, and training.

definition and requirements, schedule, and implementation plan. The original contract value was $6.949 billion[4] with a 6-year period of performance, October 1996 through September 2002. The contract contained two options to extend the period of performance for 2 years each that, if exercised, would extend the contract another 4 years through September 2006.

The contract has two phases within which NASA is consolidating prior prime contracts over several years as the USA demonstrates the ability to assume more responsibility. During Phase I, which began in October 1996, the USA assumed overall responsibility for the fleet of orbiter vehicles. During Phase II, which began in September 1997, NASA has transitioned more prime contracts under SFOC for work either to be performed by USA or to subcontract with USA. Table 1 shows the Phase II effort that NASA and USA have negotiated.

Table 1. Phase II Consolidations (Millions)

Description	Modification Value	Modification Date
Kennedy Base Operations*	$ 9	Sept. 1997
Waste Collection System	5	Sept. 1997
Flight Software	140	June 1998
Flight Equipment	183	June 1998
Solid Rocket Boosters	596	June 1998
Total	$933	

*NASA added elements of the Kennedy Space Center Base Operations contract to the SFOC.

However, the most significant portion of Phase II has not been completed. Table 2 shows the contracts remaining to be consolidated.

Table 2. Future Contract Consolidations (Millions)

Description	Contract Value	Planned Consolidation Date
External Tanks	$4,589	July 2000
Space Shuttle Main Engines	1,481	July 2001
Reusable Solid Rocket Motors	3,880	July 2001
Total	$9,950	

[4]The contract value was $8.607 billion as of October 1, 1999 (per contract modification number 380, cost was $7.915 billion and fee was $.692 billion).

Cost-Benefit Analysis

Finding. NASA did not perform a cost-benefit analysis prior to consolidation of Space Shuttle contracts under the SFOC. The Associate Administrator of the NASA Office of Space Flight directed the consolidation of Space Shuttle contracts in 1995 based on recommendations of an independent review team commissioned by the NASA Administrator. Without a cost-benefit analysis and periodic evaluation, NASA cannot be certain it will achieve net savings from further consolidation of Space Shuttle contracts valued at about $10 billion, specifically, for Space Shuttle main engines, external tanks, and reusable solid rocket motors.

Requirement to Perform a Cost-Benefit Analysis

NASA Deputy Administrator. In a March 1997 memorandum, the Acting NASA Deputy Administrator directed all NASA personnel to use a cost-benefit analysis in the process of considering issues related to consolidation, downsizing, outsourcing, and research or program elimination.[5] The memorandum stated that, in order for NASA to meet its goals, the Agency must make decisions based on the best information available. Independent and up-front cost-benefit analyses should be a key element in NASA's decision-making process. Further, all NASA offices are required by the memorandum to perform the analyses in a reasonable and timely manner. The analyses should be sufficient to provide NASA management with the information it needs to make the best decisions as well as withstand the scrutiny of others.

Office of Management and Budget Circular A-94. Office of Management and Budget Circular A-94, "Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs," October 29, 1992, provides general guidance for conducting benefit-cost and cost-effectiveness analyses. Circular A-94 applies to all agencies of the Executive Branch of the Federal Government and is intended to promote efficient resource allocation through well-informed decision making by the Federal Government. Circular A-94 recommends verification as an element of an analysis (see Appendix C for details). Periodic verification is necessary to determine whether anticipated benefits and cost savings have been realized.

NASA's Basis for Consolidation

Kraft Review. In November 1994, the NASA Administrator commissioned an independent review team to evaluate the Space Shuttle Program. The team was chartered to appraise the current set of processes used in performing Shuttle operations at the Johnson Space Center, Kennedy Space Center, Marshall Space Center, and Stennis Space Center and to recommend alternative operational concepts that could significantly reduce operating costs. The team was asked to develop an approach that would aid in the transition of Agency functions to any proposed new organizational and/or management structures. The review, known as the Kraft review,[6] concluded in a February 1995 report that the Space Shuttle Program and its elements

[5]The Deputy Administrator addressed the memorandum to Officials-in-Charge of Headquarters Offices; Directors, NASA field installations; and the Director, Jet Propulsion Laboratory.
[6]Dr. Christopher Kraft, former director of the Johnson Space Center, was Team Chairman.

should be consolidated and that NASA involvement and oversight should be reduced. The Kraft review did not perform a cost-benefit analysis to support its conclusion.

Associate Administrator Briefing to Industry. In August 1995, the Associate Administrator, Office of Space Flight, and the Program Director, Space Shuttle Program, presented a Space Shuttle Restructuring Industry Briefing and issued a synopsis to potential contractors. In the briefing, NASA outlined the guidelines for consolidation of contracted routine Space Shuttle operations and started the process for the procurement.

Joint Venture. In 1995, Rockwell International Corporation and Lockheed Martin Corporation held 69 percent of the dollar value of Shuttle-related prime contracts. In response to NASA's desire to competitively consolidate the prime Shuttle contracts, the two corporations formed USA, a joint venture, in order to obtain the contract for Shuttle operations. The joint venture ensured that NASA would have to negotiate with USA in order to avoid a more difficult transition to a single prime contractor.

Justification for Other than Full and Open Competition. In November 1995, the NASA Administrator submitted to Congress a justification for other than full and open competition to negotiate a single prime contract with the USA to become the new Shuttle Flight Operations Contractor and to assume responsibility for Space Shuttle operations. The Administrator stated that awarding a single prime contract for Space Shuttle operations should reduce Shuttle program costs in two ways. First, NASA would provide incentives to eliminate unnecessary or duplicative work. Second, NASA would no longer be heavily involved in the management of day-to-day Shuttle operations; therefore, fewer civil servants would be required to manage the program.

Budget and Civil Servant Reductions

The Space Shuttle Program Business Management Office provided budget data to support its assertion that there were savings associated with the SFOC. The Space Shuttle Program's annual budget has declined before and after the SFOC began in fiscal year 1997. Also, the associated civil servant workforce on the Space Shuttle Program has declined during the same timeframe. Table 3 shows details on the reductions.

Table 3. Space Shuttle Program Reductions

Fiscal Year	1995	1996	1997	1998	1999
Budget Reductions (millions)	$222	$348	$30	$204	$83
Civil Servant Reductions	365	363	401	241	176

However, these reductions are for the total Space Shuttle Program. The Business Management Office did not conclusively show the amount of reductions attributed to the SFOC alone, as opposed to the annual reductions for the total Shuttle Program. While the reductions show a downward trend for the Shuttle Program, reduced spending for the total Program does not imply SFOC savings and, therefore, cannot justify the consolidation based on cost savings.

Cost-Benefit Analysis Provides a Needed Cost Baseline

A cost-benefit analysis establishes the basis for an agency decision and provides a baseline that can be used for future evaluation of that decision. The rationale for the program should be clearly stated in the analysis and all assumptions should be explicit. For example, the USA contract adds additional cost and fee to its subcontract cost before billing NASA. USA must manage those subcontracts and is entitled to cost and fee associated with that task. However, for there to be overall cost savings as a result of the SFOC, there must be cost reductions elsewhere to offset the additional USA cost and fee. These cost reductions may be due to reductions in civil servants, reductions in subcontractor personnel, or reductions in subcontract content. The analysis and resulting baseline provides the basis for future evaluation to determine whether anticipated benefits and costs have been realized.

Cost-Benefit Analysis Should Address Critical Skills

The proper civil servant workforce and skill mix is a challenge as NASA adjusts to budgetary and personnel constraints. Therefore, NASA should have a good business reason for the consolidation and downsizing of its workforce, which should be based on a cost-benefit analysis. The analysis should identify the critical skills in its civil servant workforce and the associated cost to provide adequate management of the Shuttle Program and contractors as NASA transfers more responsibility for Shuttle operations to a single prime contractor.

Analysis and Periodic Evaluation is Needed

The Agency should comply with the Acting Deputy Administrator's direction for performing a cost-benefit analysis before additional consolidation during Phase II of the SFOC. As a sound business practice, NASA should have performed a cost-benefit analysis before starting consolidation of the Space Shuttle operations contracts in 1996. Although NASA did not specifically require a cost-benefit analysis when the SFOC consolidation began, the Agency subsequently required it. Since consolidation is not complete, a cost-benefit analysis and periodic evaluation would be beneficial and could provide NASA reasonable assurance that further consolidation is the best decision for the Government.

Recommendations, Management's Response, and Evaluation of Response

The Associate Administrator for Office of Space Flight should:

1. **Perform a cost-benefit analysis before further consolidation of Space Shuttle contracts into the SFOC. The analysis should include the cost and fee received by the USA for the administration of its subcontracts and any reductions in civil servants, subcontractor personnel, or work content.**

2. Evaluate at least annually whether estimated benefits are realized.

Management's Response. Concur with Recommendation 1, and concur with the intent of Recommendation 2. In response to Recommendation 1, the Associate Administrator for the Office of Space Flight will take action to ensure that an appropriate cost-benefit analysis is applied in all phases of the SFOC management cycle. NASA will implement a structured cost-benefit analysis into the processes used to determine the overall effects of consolidating additional contracts into SFOC. In response to Recommendation 2, NASA will increase the focus of the continuous Program budget assessments of realized cost performance under SFOC as compared to previous performance under individual contracts. The complete text of management's comments is in Appendix D.

Evaluation of Response. The actions planned by management are responsive to the recommendations. In a separate correspondence, management provided an estimated completion date of June 16, 2000, for corrective action on Recommendation 1, but did not specify an estimated completion date for the corrective action on Recommendation 2. We request that information in response to the final report. The recommendations are resolved but will remain undispositioned until agreed-to corrective actions are completed.

Appendix A. Objectives, Scope, and Methodology

Objectives

The overall objective was to evaluate management of the SFOC Phase II. Specifically, the objectives were to determine whether contract requirements were properly determined, fair and reasonable pricing was obtained, and cost savings and other SFOC goals have been achieved.

This report identifies a condition regarding a cost-benefit analysis that warrants timely action by NASA management. We will issue a report on the other objectives later.

Scope and Methodology

Our audit included a review of the rationale and plan for consolidation. We reviewed budget and spending data for fiscal years 1994 through 1999 provided by the Shuttle Program Office. We also reviewed contract files for the completed Phase II negotiations. We interviewed Shuttle Program personnel to understand the history of the procurement and the possible future of the SFOC. We did not assess the reliability of computer-processed data, because we did not rely on computer-processed data to achieve our objectives.

Management Controls Reviewed

We reviewed management controls relative to a cost-benefit analysis as described in the NASA Deputy Administrator's March 1997 memorandum,[7] and Office of Management and Budget Circular A-94, "Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs," October 29, 1992.[8]

We determined that controls needed to be strengthened to ensure that NASA performs cost-benefit analysis (see the Finding).

Audit Field Work

We performed the audit field work from August 1999 through January 2000. We conducted the audit in accordance with generally accepted government auditing standards.

[7]The memorandum directed all NASA personnel to use a cost-benefit analysis in the process of considering issues related to consolidation, downsizing, outsourcing, and research or program elimination.
[8]The Circular provides general guidance for conducting cost-benefit and cost-effectiveness analyses.

Appendix B. Space Flight Operations Contract

Brief Description of the Statement of Work. United Space Alliance **(**USA) has overall responsibility as the prime contractor to include all Space Shuttle Program and International Space Station Program activities defined in the contract. The work shall be performed so that all missions manifested by NASA are successfully accomplished in accordance with the NASA Space Transportation System 07700, Volume III, Space Shuttle Flight Definition and Requirements Directive and NASA Space Transportation System 08178, Space Shuttle Program Schedules for:

- overall flight definition and planning guidelines,
- near-term flight assignments, characteristics, and configuration,
- flight preparation configuration freeze point definitions,
- follow-on flight rate requirements by fiscal year,
- required capability enhancements in support of flight missions, and
- orbiter maintenance and down period schedule.

USA shall perform all work during the contract period necessary and appropriate to support scheduled missions pursuant to the mission profile. The Space Shuttle vehicle elements for which the USA has overall responsibility consist of the fleet of orbiter vehicles; solid rocket boosters and reusable solid rocket motors; external tanks; Space Shuttle main engines; flight crew equipment; and ground support systems, flight software, and integration of payloads manifested by NASA.

Date Awarded and Price. The SFOC contract NAS 9-20000 was awarded September 26, 1996, for $6.949 billion. The contract value was $8.607 billion as of October 1, 1999 (per contract modification number 380).

Contract Type. The contract is a cost plus, award fee, incentive fee, and performance fee contract.

Completion Date. The basic contract is a 6-year contract with a period-of-performance from October 1996 through September 2002. The contract has two options to extend the period-of-performance for 2 years each that, if exercised, would extend the contract another 4 years through September 2006.

Contractor. The contractor is United Space Alliance, a joint venture between Boeing and Lockheed Martin.

Primary Locations of Performance. The Johnson Space Center and the Kennedy Space Center are the primary locations of performance on the contract.

Costs Incurred to Date. NASA has disbursed $4.074 billion as of October 6, 1999, on the contract.

Cost And Schedule Performance. The USA has declared $105 million of cost underruns.[9]

Other Performance Information. The USA award fee scores have ranged from 81 to 86, out of a possible score of 100.

[9]This underrun represents an increase of $29 million compared to the $76 million underrun referenced in the draft of this report.

Appendix C. Elements of Cost-Benefit or Cost-Effectiveness Analysis

The Office of Management and Budget Circular A-94, "Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs," October 29, 1992, provides the following guidance on the elements of a cost-benefit analysis.

1. **Policy Rationale**. The rationale for the Government program being examined should be clearly stated in the analysis. Programs may be justified on efficiency grounds where they address market failure, such as public goods and externalities. They may also be justified where they improve the efficiency of the Government's internal operations, such as cost-saving investments.

2. **Explicit Assumptions**. Analyses should be explicit about the underlying assumptions used to arrive at estimates of future benefits and costs. In the case of public health programs, for example, it may be necessary to make assumptions about the number of future beneficiaries, the intensity of service, and the rate of increase in medical prices. The analysis should include a statement of the assumptions, the rationale behind them, and a review of their strengths and weaknesses. Key data and results, such as year-by-year estimates of benefits and costs, should be reported to promote independent analysis and review.

3. **Evaluation of Alternatives**. Analyses should also consider alternative means of achieving program objectives by examining different program *scales*, different *methods* of provision, and different degrees of government *involvement*. For example, in evaluating a decision to acquire a capital asset, the analysis should generally consider: (i) doing nothing; (ii) direct purchase; (iii) upgrading, renovating, sharing, or converting existing government property; or (iv) leasing or contracting for services.

4. **Verification**. Retrospective studies to determine whether anticipated benefits and costs have been realized are potentially valuable. Such studies can be used to determine necessary corrections in existing programs, and to improve future estimates of benefits and costs in these programs or related ones.

Appendix D. Management's Response

National Aeronautics and
Space Administration

Headquarters
Washington, DC 20546-0001

MAR 1 2000

Reply to Attn of:

BD5

TO: W/Assistant Inspector General for Auditing

FROM: M/Associate Administrator for Office of Space Flight

SUBJECT: Management Response to OIG's Draft Report on Audit of Space Flight Operations Contract Phase II – Cost-Benefit Analysis
Assignment Number A9906400

We have reviewed the subject draft report and thank you for the opportunity to provide comments. This response has been coordinated with the Director, Johnson Space Center and the Manager, Space Shuttle Program. The draft report contains two recommendations regarding a cost-benefit analysis of the Space Flight Operations Contract (SFOC) prior to the Phase II consolidations. We concur with the general points of these recommendations, and will take action to ensure that appropriate cost benefit analysis is applied in all phases of the SFOC management cycle. General comments on the draft report and specific actions to be taken on the two recommendations are included in the enclosure.

If you have any questions regarding this response, please contact Mr. Jack Boykin, Contracting Officer's Technical Representative for the SFOC, at 281-483-6136 for technical content, or Ms. Pat Ritterhouse, Audit Liaison Representative, at 281-483-4220, for other issues.

Joseph H. Rothenberg

Enclosure

cc:
M-6/A. Henderson
MX/G. A. Gabourel
JSC/AA/G. W. S. Abbey
JSC/MA/R. D. Dittemore
JSC/MA/J. C. Boykin

Appendix D

Management Response to OIG's Draft Report on Audit of Space Flight Operations Contract Phase II – Cost-Benefit Analysis
Assignment Number A9906400

Auditor's Findings

"NASA did not perform a cost-benefit analysis prior to consolidation of Space Shuttle contracts under the SFOC. The Associate Administrator of the NASA Office of Space Flight directed the consolidation of Space Shuttle contracts in 1995 based on recommendations of an independent review team commissioned by the NASA Administrator. Without a cost-benefit analysis and periodic evaluation, NASA cannot be certain it will achieve net savings from further consolidation of Space Shuttle contracts valued at about $10 billion, specifically, for Space Shuttle main engines, External tanks, and reusable solid rocket motors."

Recommendations for Corrective Action

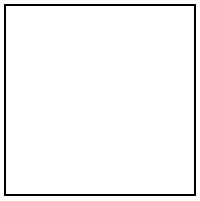
"The Associate Administrator for Office of Space Flight should:

1. Perform a cost-benefit analysis before further consolidation of Space Shuttle contracts into the SFOC. The analysis should include the cost and fee received by the USA for the administration of its subcontracts and any reductions in civil servants, subcontractor personnel, or work content.

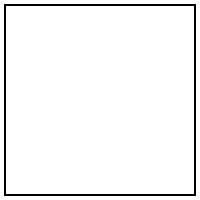
2. Evaluate at least annually whether estimated benefits are realized."

General Comments Regarding Recommendations: NASA planning for the original consolidations under SFOC and for the additions to the contract under Phase II have always included considerations of anticipated cost benefits, although formal cost benefit analyses have not been specifically employed. The original contract and operational strategy envisioned by NASA management, which led to SFOC, included a recognition that consolidation of the functional and geographically common contracts performing operations for the Space Shuttle Program would undoubtedly offer streamlining efficiencies which would enable cost reductions for the Program. While a "cost benefit analysis" was not formally performed on individual contracts prior to committing to Phase I of SFOC, it was assumed that a significant consolidated contract structure would indeed enable cost efficiencies, and the contractor proposals and negotiated costs of the contract validated this analytical assumption. Performance to date under SFOC has continued to validate the cost benefit of the consolidated contract, as United Space Alliance has incorporated a number of horizontal efficiencies and has consistently underrun the contract target costs. United Space Alliance has officially declared $105 million underrun to date, with further underrun additions expected as consolidation efficiencies continue to mature.

Similarly, when Phase II contracts additions were made, cost benefits were considered at the same strategic level as in Phase I. Although formal cost benefit analyses were not performed, recognition of real potential for consolidation efficiencies was a factor in the decisions. Where predictable and quantifiable, savings were taken into account in the negotiation of the costs for the contracts as they were consolidated.



Appendix D



Appendix E. Report Distribution

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Branch Chief, Science and Space Programs Branch, Energy and Science Division, Office of Management and Budget
Associate Director, National Security and International Affairs Division, Defense Acquisitions Issues, General Accounting Office
Professional Assistant, Senate Subcommittee on Science, Technology, and Space

Appendix E

Chairman and Ranking Minority Member – Congressional Committees and Subcommittees

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Senate Subcommittee on VA, HUD, and Independent Agencies
Senate Committee on Commerce, Science, and Transportation
Senate Subcommittee on Science, Technology, and Space
Senate Committee on Governmental Affairs
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House Subcommittee on VA, HUD, and Independent Agencies
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House Committee on Science
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Congressional Member

Honorable Pete Sessions, U.S. House of Representatives

NASA Assistant Inspector General for Auditing
Reader Survey

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Report Title: Audit of Space Flight Operations Contract Phase II - Cost-Benefit Analysis

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?

Excellent Fair
Very Good Poor
Good

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.

How did you use the report? _____

How could we improve our report? _____

How would you identify yourself? (Select one)

Congressional Staff
NASA Employee
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Government: _____ Federal: _____ State: _____ Local: _____
Media
Public Interest
Other: _____

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 Coldren, Program Director, Human Exploration and Development of Space Audits

Dennis Clay, Auditor-in-Charge

Nancy Cipolla, Report Process Manager

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