

**AUDIT
REPORT**

**IMPACT OF THE BOEING COMPANY'S
RESTRUCTURING ON NASA**

November 27, 2000



National Aeronautics and
Space Administration

OFFICE OF INSPECTOR GENERAL

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Acronyms

CAS	Cost Accounting Standards
DCAA	Defense Contract Audit Agency
DCMA	Defense Contract Management Agency
DFARS	Defense Federal Acquisition Regulation Supplement
DoD	Department of Defense
FAR	Federal Acquisition Regulation

W

November 27, 2000

TO: A/Administrator

FROM: W/Inspector General

SUBJECT: INFORMATION: Impact of the Boeing Company's Restructuring on
NASA
Report Number IG-01-006

The NASA Office of Inspector General (OIG) has completed an audit of the Impact of the Boeing Company's (Boeing) Restructuring on NASA. We performed the audit to determine whether Boeing's restructuring was executed in accordance with Federal guidance and was beneficial to NASA. We found that while Boeing handled the restructuring in accordance with Federal requirements, it has not been beneficial to NASA. Boeing's commercial and defense customers will primarily benefit from its restructuring, changes in accounting practices, and cost allocation methods, while NASA will absorb most of the costs.¹ We also found reasons to question the potential savings accruing to NASA that Boeing reported in the advance agreement² with the Defense Contract Management Agency (DCMA).³ The audit identified potential monetary benefits of \$64.7 million that NASA can recover through future contract cost reductions resulting from the DCMA's efforts to mitigate the impacts of accounting and cost allocation changes Boeing implemented as part of its restructuring. The audit also identified NASA's need for legislation requiring contractors involved in restructurings to provide NASA the same consideration (savings) as that provided to the Department of Defense (DoD).

¹ Appendix C lists NASA's major contracts with Boeing that experienced cost increases as a result of Boeing's restructuring, changes in accounting practices and cost allocation methods.

² The Federal Acquisition Regulation (FAR) and the Defense Federal Acquisition Regulation Supplement (DFARS) permit contractors to enter into advance agreements with the Government for the treatment of special or unusual costs.

³ The DCMA is the contract manager for the Department of Defense (DoD). The DCMA's mission is to ensure Federal acquisition programs, supplies, and services are delivered on time and within cost and meet performance requirements. DCMA provides to DoD components and to other Government agencies (including NASA) contract management and administration services that consist of on-site surveillance and program-specific processes that cannot be monitored by off-site buying agencies.

Background

As a result of its acquisition of the Rockwell International Corporation (Rockwell) Aerospace and Defense Units and its merger with the McDonnell Douglas Corporation (McDonnell Douglas), Boeing signed an advance agreement with the DCMA in December 1999. The advance agreement permitted Boeing to charge restructuring costs to Government contracts with the expectation that future Government savings would be at least twice the amount of incurred restructuring costs. Boeing's cost proposal, which served as the basis for the advance agreement, identified total potential gross savings of \$839.3 million of which \$376 million accrued to the DoD. The total savings included \$279.6 million related to the closing and transfer of operations from a Boeing (formerly Rockwell International) facility in Downey, California, that primarily supported NASA missions. NASA's total net savings under the agreement were projected to be \$50 million.⁴

Prior to initiating the advance agreement with the DCMA, Boeing also adopted changes to its accounting and cost allocation methods as a result of its acquisition of Rockwell and its merger with McDonnell Douglas. Those changes had major effects on Government contracts, particularly on NASA contracts in that the accounting and cost allocation changes exceed the projected restructuring savings for NASA. However, neither Boeing nor the DCMA addressed the accounting changes and their impacts when developing and negotiating the advance agreement.

The \$64.7 million in potential monetary benefits represents the Defense Contract Audit Agency's (DCAA)⁵ and the DCMA's analysis of the cost to NASA, resulting from Boeing's accounting and cost allocation changes, that the Agency could recover from

⁴ We found that NASA's share of projected savings resulting from Boeing's restructuring was not equitable. Boeing's cost proposal identified a net savings of \$219 million (36 percent of the total net savings of \$601 million) as a result of transferring operations from and closing the Downey, California, facility. Johnson Space Center (Johnson) procurement officials told us that historically, 80 percent of the workload at the Downey facility was NASA-related. However, Boeing's cost proposal identified only \$50 million (8 percent) of the \$601 million of total net savings as accruing to NASA. Based on the historical percentage of NASA work performed at the Downey facility, NASA should have logically expected to receive about \$175 million (80 percent of the \$219 million savings from closing the Downey facility.)

⁵ The DCAA is responsible for performing all contract audits for the DoD and for providing accounting and financial advisory services for contracts and subcontracts to DoD procurement and contract administration activities. The DCAA also provides contract audit services to other Government agencies including NASA.

Boeing.⁶ Implementation of our recommendations will ensure that the Agency realizes this cost recovery through offsets to contract billings, which will have a positive effect on NASA's budget.⁷

Recommendations

We recommended the Associate Administrator for Procurement pursue legislation for NASA similar to that provided the DoD regarding business restructurings and monitor any future restructurings to ensure that the 2-to-1 savings-to-cost ratio is realized.⁸ We also recommended that the Associate Administrator coordinate with the DCAA to determine whether actual savings are accruing to NASA from the advance agreement and to ensure that DCAA segregate any NASA savings in its planned audit of Boeing's DoD business segments. We further recommended the Associate Administrator participate in the negotiations between the DCMA and Boeing to mitigate the adverse effects of the accounting and cost allocation changes. Implementation of these recommendations will help ensure that NASA's interests are adequately protected not only with respect to Boeing's restructuring, but also in the event of future restructuring by NASA's contractors.

Management's Response and OIG Evaluation

Management concurred with all the recommendations, but its proposed actions are responsive to only two of the six recommendations. Management's planned corrective actions are responsive in relation to pursuing legislation for NASA similar to that provided the DoD regarding business restructurings and to monitor future restructurings to ensure the savings-to-cost ratio is realized. In future restructurings involving NASA contracts, management intends to pursue an agreement with the DoD to achieve the same 2-to-1 savings-to-cost ratio required for DoD.

Management did not provide specific corrective actions or implementation dates in relation to (1) coordinating with the DCAA to obtain cost savings data pertaining specifically to NASA and (2) participating in the negotiations between the DCMA and Boeing to mitigate the impacts of the accounting and cost allocation changes. We have asked management to provide specific corrective actions and implementation dates. Management also did not address the potential monetary benefits of \$64.7 million.

⁶ The DCMA Boeing Defense Corporate Executive told us that NASA should recover \$64.7 million from Boeing. DCMA determined the amount using audit information DCAA developed. See Appendix F for more details.

⁷ DCMA officials told us that under the offset method, Boeing would continue to bill NASA for contract work, but NASA would not make contract payments on the billings until the amounts billed equaled the offset amount negotiated.

⁸ As specified by the DFARS, the 2-to-1 savings-to-cost ratio applies only to DoD contracts. DCMA officials told us that Boeing and the DCMA agreed to treat non-DoD customers the same as DoD in negotiating the advance agreement

Management commented extensively on our findings (see Appendix G). We respond to those comments in Appendix H of the report. Management's basic position is that we did not understand the statutory and regulatory requirements associated with business restructuring and cost accounting changes. As detailed in the report, we are well aware of the statutory and regulatory requirements for those areas. Although Boeing and the DCMA handled the restructuring and cost accounting changes as two separate and distinct events, they were not mutually exclusive, and taken together had an adverse effect on NASA. Our report describes and quantifies that effect on NASA and provides some methods for relief.

Details on the status of the recommendations are in the finding section of the report.

[original signed by]

Roberta L. Gross

Enclosure

Final Report on Audit of Impact of the Boeing Company's Restructuring on NASA

FINAL REPORT
AUDIT OF IMPACT OF THE BOEING COMPANY'S
RESTRUCTURING ON NASA

W

November 27, 2000

TO: H/Associate Administrator for Procurement

FROM: W/Assistant Inspector General for Auditing

SUBJECT: Final Report on Audit of Impact of the Boeing Company's Restructuring
on NASA
Assignment Number A0003900
Report Number IG-01-006

The subject final report is provided for your use and comments. Our evaluation of your response is incorporated into the body of the report and Appendix H.

We ask that management provide additional comments on recommendations 1, 2, 5, and 6 by January 26, 2000. The additional comments should provide the specific corrective actions and implementation dates in relation to (1) requesting the DCAA to audit and validate the actual savings accruing to NASA from Boeing's restructuring, (2) determining whether the actual restructuring savings exceed costs by a ratio of 2-to-1, (3) the specific role the Agency intends to take in the negotiations to mitigate the impacts from Boeing's accounting changes, and (4) requesting DCAA to provide a specific breakout of the effects to NASA from DCAA's audit of Boeing's business segments. We also ask that management address the \$64.7 million in potential monetary benefits associated with recommendation 5. The corrective actions planned for recommendations 3 and 4 are responsive. Please notify us when action has been completed on those recommendations, including the extent of testing performed to ensure corrective actions are effective. All recommendations will remain open for reporting purposes until agreed-to corrective actions are completed.

If you have questions concerning the report, please contact Mr. Kevin J. Carson, Program Director, Safety and Technology Audits, at (301) 286-0498, or Mr. Karl Allen, Program Manager, at (202) 358-2595. We appreciate the courtesies extended to the audit staff. The final report distribution is in Appendix I.

[original signed by Lee Ball for]
Russell A. Rau

Enclosure

cc:

B/Chief Financial Officer

B/Comptroller

BF/Director, Financial Management Division

G/General Counsel

JM/Acting Director, Management Assessment Division

L/Associate Administrator for Legislative Affairs

M/Associate Administrator for Space Flight

AA/Director, Lyndon B. Johnson Space Center

AA/Director, John F. Kennedy Space Center

AA/Director, George C. Marshall Space Flight Center

bcc:

AIGA, IG Chrons

JSC/BD5/Audit Liaison Officer

KSC/QA-D/Audit Liaison Officer

MSFC/BE01/Audit Liaison Officer

W/K. Carson

K. Allen

L. Brickhouse

NASA Office of Inspector General

IG-01-006
A0003900

November 27, 2000

Impact of the Boeing Company's Restructuring on NASA

Introduction

On December 17, 1999, Boeing entered into an advance agreement with the DCMA. The advance agreement allowed Boeing to claim the costs to reorganize and restructure as a result of its previous acquisitions and mergers, with the expectation that future savings to the Government would be at least twice the amount of the restructuring costs incurred. We performed this audit to address the resulting disparities between the savings accruing to Boeing and the DoD, and those accruing to NASA. The objectives of the audit were to determine whether:

- the advance agreement negotiated by the DCMA met all Federal requirements and
- NASA's interests were adequately considered and addressed under Boeing's restructuring.

Appendix A contains further details on the audit objectives, scope, and methodology.

Results in Brief

NASA did not benefit from Boeing's restructuring and its advance agreement with the DCMA. Boeing's DoD customers could realize potential savings of \$376 million, while NASA could incur as much as \$115 million in additional costs resulting from Boeing's acquisition of the Rockwell International Corporation (Rockwell) Aerospace and Defense Units and its merger with the McDonnell Douglas Corporation (McDonnell Douglas). The additional costs may accrue to NASA because it does not have guidance and legislation⁹ comparable to that for the DoD regarding external business restructurings and because NASA was not closely involved in reviewing and negotiating Boeing's restructuring proposal. Through active participation in negotiations with the DCMA and Boeing, NASA has an opportunity to recover about \$64.7 million through future contract cost reductions, which would mitigate some of the impact of Boeing's restructuring and reorganization on the Agency.

⁹ The Defense Federal Acquisition Regulation Supplement (DFARS) is the implementing guidance for DoD concerning contractor restructurings as a result of legislation provided under Section 8115 of the DoD Appropriations Act of 1997 (Public Law 104-208).

Background

Boeing became the largest aerospace company in the world and NASA's largest contractor after its 1996 acquisition of the Aerospace and Defense Units of Rockwell and its 1997 merger with McDonnell Douglas. After the acquisition and merger, Boeing asked the DCMA to execute an advance agreement under which the company could charge the costs of reorganizing and restructuring to Government contracts, under the provisions of the Federal Acquisition Regulation (FAR) and the Defense Federal Acquisition Regulation Supplement (DFARS). The regulations permit contractors to enter into advance agreements with the Government and allow the contractors to accumulate and bill restructuring costs to the Government as long as the savings from the restructuring exceed costs by a ratio of 2-to-1.¹⁰ The DCMA's December 17, 1999, advance agreement with Boeing allowed Boeing to be reimbursed for its costs to restructure, reorganize, and consolidate operations of the three former separate business entities (Boeing, Rockwell, and McDonnell Douglas).

Boeing's cost proposal, which served as the basis for the advance agreement, identified total potential gross savings of \$839.3 million as a result of the restructuring, of which \$376 million would accrue to the DoD. The total savings of \$839.3 million included \$279.6 million related to the closing and transfer of operations from a former Rockwell facility in Downey, California, that had primarily supported NASA missions. The cost proposal identified NASA's total net savings as \$50 million. Appendix B of the report provides specific details of the cost proposal's beneficiaries, potential savings, and projected costs.

Prior to DCMA's approval of the restructuring proposal, Boeing also adopted accounting changes and revised its cost allocation methods. These changes and revisions resulted in significant cost redistributions among Boeing's various business units. The changes and revisions in accounting procedures and allocation methods had a greater cost impact on NASA than did the projected savings from the advance agreement (see Appendix C).

Appendix D of the report provides additional information on Boeing's acquisition, merger, and restructuring. Appendix E contains a summary of prior NASA OIG audits related to contractor restructurings.

Boeing Company Restructuring

Finding. NASA has not benefited from Boeing's restructuring and its advance agreement with the DCMA. Specifically, NASA (1) received an inequitable share of the projected restructuring savings and (2) has little assurance that it will realize any actual savings from Boeing's restructuring. In addition, NASA could incur increased costs of as

¹⁰ As specified by the DFARS, the 2-to-1 savings-to-cost ratio applies only to DoD contracts. DCMA officials told us that Boeing and the DCMA agreed to treat non-DoD customers the same as DoD in negotiating the advance agreement.

much as \$115 million due to changes in accounting procedures and cost allocation methods related to Boeing's restructuring. The Agency has not benefited because (1) NASA does not have the legislation and implementing guidance similar to DoD's regarding external business restructurings, (2) NASA was not actively involved in reviewing and negotiating Boeing's restructuring proposal, and (3) the DCMA considered Boeing's accounting and cost allocation changes separate and distinct from its restructuring efforts and did not include these items in negotiating the advance agreement. As a result, Boeing's commercial and defense customers will primarily benefit from its restructuring, changes in accounting practices, and cost allocation methods while NASA will absorb most of the costs. NASA has an opportunity to recover about \$64.7 million in contract offsets as a result of DCMA's efforts to mitigate some of these cost increases. The contract offsets are actual dollar savings for NASA and have a positive impact on the Agency's budget.¹¹

Guidance on Restructuring and Advance Agreements

The FAR, Part 31, section 109, "Advance Agreements," requires that contracting officers and contractors seek advance agreements on the treatment of special or unusual costs. The FAR also states that an advance agreement may be negotiated with a particular contractor for a single contract, a group of contracts, or all the contracts of a contracting office, an agency, or several agencies. Further, before negotiating an advance agreement, the Government negotiator shall:

- (1) determine if other contracting offices inside the agency or in other agencies have a significant unliquidated dollar balance in contracts with the same contractor;
- (2) inform any such office or agency of the matters under consideration for negotiation; and
- (3) as appropriate, invite the office or agency and the responsible audit agency to participate in prenegotiation discussions and/or in the subsequent negotiations.

The DFARS, section 231.205-70, "External Restructuring Costs," provides further guidance on restructuring costs and states:

. . . for business combinations occurring after October 1996, the Undersecretary of Defense for Acquisition, Technology, and Logistics must certify that projections of future restructuring savings resulting to DoD from the business combination are based on audited cost data and the audited projected savings for the DoD will either exceed the costs

¹¹ DCMA officials indicated that under the offset method (once the amount is negotiated), Boeing would continue to bill NASA for contract work. Conversely, NASA would not make contract payments on the billings until the amounts billed equaled the offset amount negotiated. DCMA officials indicated this method is preferable to having Boeing issue a check for the offset amount. A check would be deposited directly into the U.S. Treasury, and while the Government would benefit as a whole, there would be no direct benefit to NASA.

allowed by a factor of at least 2-to-1 or that the business combination results in the preservation of a critical capability that might otherwise be lost to DoD.

NASA has no legislation equivalent to that in Public Law 104-208 or guidance to parallel that in the DFARS regarding business restructurings. Further, the NASA FAR Supplement does not address business restructurings and advance agreements. Thus, if an external restructuring affects both DoD and non-DoD customers, there is no requirement that effects on non-DoD customers be addressed as long as the 2-to-1 savings-to-cost ratio is realized for the DoD.

The NASA FAR Supplement contains provisions for Agency representatives to participate with DoD in situations involving NASA's interests. Specifically, the NASA FAR Supplement Subpart 1842.705-1(a)(i) states:

Since many NASA contractors are under DoD's final overhead rate determination procedure, NASA's policy is to participate jointly with DoD for those companies where NASA has a major financial interest. The NASA participant shall be a representative from that installation having the predominance of NASA work.

The Code of Federal Regulations, Title 48, Chapter 99, "Cost Accounting Standards Board, Office of Federal Procurement Policy, Office of Management and Budget," requires certain contractors and subcontractors to comply with the Cost Accounting Standards (CAS) by providing written disclosure statements and to consistently follow the company's disclosed accounting practices. The CAS apply only to negotiated contracts and subcontracts. Compliance with the CAS is mandatory for all executive branch agencies and for contractors and subcontractors in estimating, accumulating, and reporting costs in connection with pricing and administration and settlement of disputes concerning all negotiated prime contract and subcontract procurements with the U.S. Government in excess of \$500,000.

NASA's Share of Restructuring Savings

NASA's share of projected savings resulting from Boeing's restructuring was not equitable. Boeing's cost proposal served as the basis for the advance agreement and identified a net savings of \$219 million (36 percent of the total net savings of \$601 million) as a result of transferring operations from and closing its Downey, California, facility.¹² Johnson Space Center (Johnson) procurement officials told us that historically, about 80 percent of the workload at the Downey facility was NASA-related and estimated the total dollar value of the NASA work performed at the facility at about \$8 billion. However, Boeing's cost proposal identified only \$50 million (8 percent) of the \$601 million of total net savings as accruing to NASA. Based on the historical

¹² The heritage Boeing North America portion of the company (formerly Rockwell International-Rocketdyne) operated a facility in Downey, California, where the Space Shuttle fleet was conceptualized, designed, and built beginning in the early 1970's.

percentage of NASA work performed at the Downey facility, NASA should have logically expected to receive about \$175 million (80 percent of the \$219 million savings from closing the Downey facility) in net savings from the facility closure.

DCMA representatives told us the savings accruing to NASA were not based on the historical percentage of NASA work performed at Downey. Instead, the NASA savings were based on the projected percentage of work to be performed at the facilities to which Boeing transferred the work. The majority of work performed at the Downey facility was transferred to Boeing's Huntington Beach, California, facility. DCMA representatives stated that the Huntington Beach facility primarily performed DoD-related work prior to the transfer of NASA work that had been performed at the Downey facility. After the transfer, NASA's activities represented only about 45 percent of the Huntington Beach facility's total workload. In addition, the costs to transfer the NASA work to Huntington Beach reduced the projected net savings even further. As a result, Boeing's Commercial Aircraft Group and its DoD business segments (the Military Aircraft and Missiles Group and the DoD business base of the Space and Communications Group) realized more savings from closing the Downey facility than did NASA, even though historically, NASA contracts provided the majority (80 percent) of the workload for the facility.

Actual versus Projected Savings

The actual savings realized from Boeing's restructuring could be much less than Boeing's projected savings. Specifically, neither the DCMA nor the Defense Contract Audit Agency (DCAA) requires Boeing to identify and report actual restructuring savings. Further, the actual restructuring costs could be much higher than those projected. DCMA representatives told us that they do not request Boeing to provide actual savings figures and that the DCAA does not require actual savings data for its audits. Rather, DCAA audits the projected savings and determines whether Boeing followed the methodologies outlined in its cost proposal in determining the savings amounts. As further evidence that the savings are only estimates, the DCAA does not review all the individual business elements¹³ supporting the annual projected savings figures. DCMA officials told us that DCAA reviewed 19 of the 60 business elements since the 19 elements accounted for more than 90 percent of the annual reported savings.

In addition to the actual savings being less than projected, the restructuring implementation costs could be higher than those used to negotiate the advance agreement. While the implementation costs under the advance agreement will be

¹³ The 60 business elements were all the locations at which Rockwell International, McDonnell Douglas, and Boeing had facilities prior to Boeing's acquisition and merger. Boeing's restructuring proposal consolidated, transferred, or discontinued operations from a number of the sites. The Downey, California, site is one such example.

amortized¹⁴ through 2003, the advance agreement also contains a negotiated cost ceiling that is \$90.3 million more than the implementation costs used to determine projected restructuring savings. Thus, until completion of restructuring amortization (2003), the actual implementation costs will not be known. Consequently, the actual restructuring savings could be much less than Boeing's projections due to higher than anticipated implementation costs.

The procedures previously discussed do not provide NASA with reasonable assurance that actual savings are being generated. Unless NASA asks Boeing and DCAA to determine actual savings, the Agency cannot be assured that it is realizing any savings from the restructuring. NASA should request that DCAA audit and determine whether actual savings are accruing to the Agency and to ensure that NASA's savings exceed the restructuring costs by a 2-to-1 ratio.

Changes in Accounting Procedures and Cost Allocation Methods

Boeing implemented accounting and cost allocation changes in December 1998 (prior to the restructuring advance agreement) as a result of its acquisition of Rockwell and its merger with McDonnell Douglas. These changes could result in an additional \$115 million cost increase to NASA. The accounting changes included changes in capitalization and depreciation methods¹⁵ while the change in cost allocation methods involved a change from a total-cost-input basis to a value-added base method of cost allocation.¹⁶ The change in cost allocation methods had the most significant impact on Boeing's Space and Communications Group, which is the company's business segment that provides support to NASA. Boeing's first estimate of the total impact to the Space and Communications Group resulting from the accounting changes and changes in cost allocation methodology was \$128 million; of that amount, Boeing estimated NASA's share of the costs to be \$115 million.¹⁷

¹⁴ Boeing's cost proposal supporting the advance agreement provided for 20 percent of the estimated total indirect costs to be amortized (charged to customers) annually over a 5-year period beginning in 1999. At the end of the 5-year period, the total amount amortized will be the lesser of the actual indirect costs incurred or the indirect cost ceiling negotiated by DCMA (\$327.9 million).

¹⁵ Capitalization refers to the accounting treatment for assets. Specifically, when an asset is acquired and placed into service and if it has a lifespan of several years, its cost is usually divided over the number of years it is expected to be in service. Depreciation is the yearly proportionate charge of the acquisition cost. After acquiring Rockwell International's Space and Defense units and merging with McDonnell Douglas, Boeing implemented a standard as to when assets were placed into service (capitalized) and when the charges for the assets began (depreciated). Prior to the acquisition and merger, capitalization and depreciation methods were different for each of the heritage companies.

¹⁶ The total cost input base of allocation is all costs (direct and indirect) charged to final cost objectives (that is, contracts), excluding incoming intercompany work authorization costs, cost of money, and general and administrative expense. The value-added base allocation method is the total cost input base less direct material and subcontract costs.

¹⁷ We obtained this information from Boeing's presentation, "Merger Overview," given at NASA Headquarters on March 28, 1999.

Legislation and Implementing Guidance Regarding External Business Restructurings

NASA does not have legislation and implementing guidance for external business restructurings similar to the legislation and guidance applicable to DoD. There is no legislative authority or guidance (as provided in the DFARS) for NASA to benefit similar to the DoD. Further, the NASA FAR Supplement has no provisions addressing contractor restructurings or advance agreements, and there is no requirement for the restructurings to generate a savings-to-cost ratio of at least 2-to-1. Even though Boeing and the DCMA agreed to provide NASA equitable treatment under the advance agreement, NASA's share of the potential savings is minimal. Therefore, NASA should pursue legislation for the Agency similar to that provided to the DoD requiring that external restructurings generate NASA a savings-to-cost ratio of at least 2-to-1.

NASA Involvement in the Restructuring Proposal

NASA did not actively participate in the development or negotiation of the advance agreement. NASA's participation was limited even though DCMA representatives met with Johnson procurement officials and invited a NASA Headquarters division director to review the agreement prior to its implementation. DCMA representatives told us that they did not invite NASA to participate in the review and negotiation of the advance agreement, but were aware of NASA's concerns for fair and equitable treatment. Even though a NASA Headquarters division director had the opportunity to review the advance agreement before it was signed, Boeing had not identified or presented the total impact of the restructuring on NASA. For example, details regarding the projected savings from closing the Downey, California, facility were not addressed in the advance agreement, but were included as 1 of 21 Work Breakdown Structures in an appendix to the cost proposal supporting the advance agreement. Furthermore, the effects of the accounting and cost allocation changes were not made known until March 1999.¹⁸ In accordance with the provisions of FAR Part 31, Section 109, NASA should have had the opportunity to help develop and negotiate the advance agreement and provide an opinion on the potential savings and impacts. Instead, NASA had a limited opportunity to review the cost proposal/advance agreement prior to its implementation and without full knowledge of the potential savings and impacts. NASA should take action to participate in any future restructurings involving Agency contractors and ensure the agreements provide a 2-to-1 savings-to-cost ratio for NASA.

Accounting Procedures and Cost Allocation Changes Not Considered Part of Restructuring

Boeing adopted its revised cost accounting and cost allocation procedures in December 1998. Boeing made these changes to standardize procedures throughout the company. Although Boeing made the changes as a result of the acquisition of Rockwell and the

¹⁸ Boeing's presentation entitled "Space and Communications Group Home Office Costs Review," on March 12, 1999, was the first discussion of the impact of the accounting and cost allocation changes to NASA.

merger with McDonnell Douglas, DCMA excluded the changes from the advance agreement negotiations because they did not meet DCMA's interpretation of the DFARS restructuring activities definition of:

non-routine, non-recurring or extraordinary activities to combine facilities, operations, or workforce, in order to eliminate redundant capabilities, improve future operations and reduce overall costs.

DCMA officials also told us they considered the changes to be routine accounting practice modifications, not restructuring activities as defined by the DFARS. In our opinion, the Boeing changes in accounting and cost allocation procedures were not routine, were made to facilitate the company's restructuring, and should have been considered in determining the savings-to-cost ratio used to justify the advance agreement. In February 1999, the DCMA asked DCAA to determine whether Boeing's accounting changes represented "improved cost accounting, accommodated operational economies and efficiencies, or are necessary given a particular organizational structure notwithstanding the cost impact of such changes on specific contracts or types of contracts." In a March 1999 letter to the DCMA, the DCAA stated that the changes were not considered desirable or necessary, did not represent operational economies or efficiencies, and were not necessary to meet Boeing's organizational structure. Additionally, in a February 2000 audit report,¹⁹ the DCAA concluded that the changes were not desirable to the Government because they appeared to have shifted costs from commercial to Government work, specifically to NASA contracts.

A comparison of the effects of the accounting and cost allocation changes to the projected savings from the advance agreement shows that NASA's savings do not offset its increased costs. Boeing uses the savings from the restructuring efforts and increased costs due to the change in accounting and cost allocation practices to determine contract forward pricing rates. Therefore, DCMA should use the effects of the changes to determine the actual savings resulting from the advance agreement since they ultimately affect contract rates.

Mitigating the Impact to NASA

Efforts by the DCMA to mitigate the cost impact to NASA from Boeing's accounting and cost allocations procedure changes could result in NASA receiving up to \$64.7 million in contract offsets. These offsets would result from DCMA's application of CAS 9903.201-4(a)(4), which provides for negotiations between the contractor and the contracting officer to determine the terms and conditions under which a change may be made to a cost accounting practice provided that the agreement will not increase the costs paid by the Government. As stated previously, the DCAA determined that Boeing's accounting

¹⁹ This information was contained in the February 3, 2000, DCAA Audit Report Number 4381-1999F19500004, "Report on Audit of Boeing Company Offices' General Dollar Magnitude Cost Impact Proposal for Cost Accounting Practice Changes Associated with Original and Revisions 99A, 99B, and 99C, effective 1 January 1999."

changes were not considered desirable or necessary, did not represent operational economies or efficiencies, and were not necessary to meet Boeing's organizational structure.

DCMA asked Boeing to identify the impact to its Government contracts since the accounting and cost allocations procedure changes resulted in significant cost increases. DCMA provided us with Boeing's estimates and the DCAA audit of the estimates. Using the offset procedure outlined in the CAS whereby positive impacts resulting from the changes are used to offset the negative impacts, the DCMA determined that NASA is due \$64.7 million from Boeing's changes in accounting and cost allocation procedures. The DCMA has yet to negotiate these amounts with Boeing. DCMA officials told us the amounts were both reasonable and supportable and invited NASA participation in the negotiations. NASA's Associate Administrator for Procurement or his designated representative should participate in any negotiations with Boeing involving the offsets to ensure the Agency's interests are adequately protected and that the maximum offset possible is received.

Other Potential Material Impacts

The DCAA has scheduled an audit of Boeing's three main defense businesses (the Military Aircraft and Missiles Group, the Space and Communications Group, and the Phantom Works) to determine whether they meet the definition of a business segment and are actually operating as such. DCAA is concerned that the segments may not actually be operating as separate business units. Consequently, some of the costs allocated to contracts by the segments would not be allowable. Should DCAA's audit confirm that Boeing's defense units do not operate as segments, much of the impact from the cost allocation changes will likely be negated.²⁰ Further, such findings would result in additional contract cost offsets for NASA.²¹ NASA should monitor the progress of DCAA's audit to determine whether the Agency is entitled to additional contract offsets.

Recommendations, Management's Response, and Evaluation of Response

The Associate Administrator for Procurement, should:

- 1. Request the DCAA to audit and validate the amount of actual savings accruing to NASA from Boeing's restructuring.**

²⁰ DCAA representatives provided this information at a June 1, 2000, meeting with the NASA Office of Inspector General at Boeing's Headquarters in Seattle, Washington. The DCAA representatives told us that a finding that Boeing's defense units did not operate as true segments would essentially "undo" the cost allocation pools established prior to the restructuring. Consequently, the change (Boeing's accounting change that had the largest impact on NASA) to a value-added basis cost allocation from the total-cost-input method would be negated.

²¹ DCAA representatives stated that DCAA would have to calculate the net difference between Boeing's allocations using methods prior to its restructuring and those in effect after its restructuring. This difference will then serve as the basis for any adjustment necessary to offset the increased costs resulting from Boeing's change in cost allocation methods.

Management's Response. Concur. Management believes that it is not necessary to request a DCAA audit to determine actual savings to NASA because there is a statutory requirement for an annual report to DoD beginning with the year of certification. Management will work with the Boeing Defense Corporate Executive to track external restructuring savings to NASA on an annual basis as is done for DoD. The complete text of management's response is in Appendix G.

NASA management also provided extensive comments on the finding that we address in Appendix H.

Evaluation of Management's Response. Management's planned actions are not responsive to the recommendation. A DCAA audit is necessary because the actual savings from Boeing's restructuring could be less than projected. We believe that it would be more valuable to the Agency to have actual savings data rather than estimates in order to use that data in determining whether NASA is actually receiving a benefit from the cost of the restructuring. The benefit of knowing whether actual savings are accruing to NASA is worth requesting DCAA to perform the audit. Therefore, we request that management provide additional comments to address the need for a DCAA audit to validate the amount of actual savings accruing to NASA. The additional comments should include an estimated completion date for planned corrective actions. The recommendation is unresolved and will remain undispositioned and open for reporting purposes.

2. Determine whether the savings accruing to NASA are at least twice the costs of restructuring. The Associate Administrator or his designated representative should use the results of DCAA's audit (Recommendation 1) to make this determination and participate in negotiations as necessary to ensure the 2-to-1 savings are achieved.

Management's Response. Concur. Management will work with the Boeing Defense Corporate Executive to annually track the restructuring savings accruing to NASA. Management does not guarantee that the savings accruing to NASA as a result of Boeing's restructuring will be at least twice the restructuring costs because there is no requirement that actual savings exceed actual costs by 2-to-1 (see Appendix G).

Evaluation of Management's Response. Management's planned actions are not responsive to the recommendation. The planned actions do not constitute a reasonable effort to ensure that the Agency realizes savings of at least twice the costs of the restructuring. While we agree there is no statutory provision that actual savings be realized, we believe that actual savings should be generated because NASA is paying for restructuring costs and that the actual savings should at least approximate the savings that Boeing estimated. However, as stated in the report, there is no comparison of the actual savings generated to the estimates being reported. Therefore, we request that management provide additional comments that address whether NASA is actually achieving a 2-to-1 savings-to-cost ratio as a result of the restructuring. The additional

comments should include an estimated completion date for planned corrective actions. The recommendation is unresolved and will remain undispositioned and open for reporting purposes.

3. Pursue legislation for NASA similar to that provided to the DoD (Section 8115 of the DoD Appropriations Act of 1997) requiring that external restructurings yield a 2-to-1 savings-to-cost ratio for NASA.

Management's Response. Concur. Management believes that the pursuit of legislation is not the best approach to take and that such legislation could work against the restructuring process by creating separate requirements for NASA and DoD contracts. Management proposed to pursue an agreement with DoD to achieve, in future restructurings involving NASA contracts, the same 2-to-1 savings-to-cost ratio required for DoD (see Appendix G).

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

4. Monitor any future external restructurings involving NASA contractors to ensure that they meet the 2-to-1 savings-to-cost ratio.

Management's Response. Concur. Management plans to monitor future external restructurings that involve a significant dollar amount of NASA contracts. However, management does not guarantee that a 2-to-1 savings-to-cost ratio will be obtained for NASA (see Appendix G).

Evaluation of Management's Response. Management's planned actions, in conjunction with its plans (management's response to recommendation 3) to pursue an agreement with the DoD to achieve 2-to-1 savings in future restructurings that involve NASA contracts, is responsive to the recommendation. The recommendation is resolved but will remain undispositioned and open for reporting purposes until corrective actions are completed.

5. Require the responsible contracting officers (or the Associate Administrator's designated representative) for NASA's major existing contracts with Boeing to participate in the negotiations to mitigate impacts from Boeing's accounting changes to ensure NASA receives the maximum offset possible (see Appendix F for details on the potential benefits of \$64.7 million).

Management's Response. Concur. The Administrative Contracting Officer is responsible for administration of the CAS. For most NASA contractors, the Administrative Contracting Officer is a representative of the DCMA. In those cases in which NASA would be significantly affected by a contractor's proposed accounting changes, the Agency should participate. NASA's participation could take a variety of

forms such as providing input to the Administrative Contracting Officer, attending meetings, participating in teleconferences, or some combination of these activities (see Appendix G).

Evaluation of Management's Response. Management's planned actions are not responsive to the recommendation. Management did not indicate whether it would participate in the particular negotiations with Boeing and the DCMA to mitigate the impacts from Boeing's accounting changes. NASA has an opportunity to recover as much as \$64.7 million in contract offsets that are actual dollar savings for NASA and that would have a positive impact on the Agency's budget. Furthermore, the Boeing Defense Corporate Executive told us that he would welcome NASA's participation in these negotiations. NASA's active participation in these negotiations is critical to ensure not only that the Agency's interests are appropriately represented but also that the maximum amount of dollar savings is obtained. Therefore, we request that management provide additional comments that address the specific role the Agency will take in the negotiations to mitigate the impacts from Boeing's accounting changes. The comments should also indicate a planned completion date for the corrective actions and provide specific comments on the potential \$64.7 million cost avoidance. The recommendation is unresolved and will remain undispositioned and open for reporting purposes.

6. Request DCAA to provide a specific breakout of effects on NASA in its audit of Boeing's business segments and to take appropriate action based on the results.

Management's Response. Concur. Management stated that the recommendation is premature because the referenced audit is still in progress. It is DCAA's opinion as to whether Boeing's segments are operating as separate business units with the Boeing Defense Corporate Executive being responsible for determining whether DCAA's recommendation is correct. Management will monitor the results of DCAA's audit and participate as appropriate (see Appendix G).

Evaluation of Management's Response. Management's planned actions are not responsive to the recommendation. Management plans to defer to the DCAA and Boeing Defense Corporate Executive to resolve any issues identified by the audit. We did not recommend a separate audit but rather for DCAA to perform additional audit procedures that would provide a specific breakout of the effects on NASA of its audit of Boeing's business segments. A finding that Boeing's defense units did not operate as separate business segments could result in additional contract offsets to NASA. Therefore, we request that management provide additional comments on requesting that DCAA provide a specific breakout of effects on NASA from the audit of Boeing's business segments. The comments should also include an estimated completion date for the planned corrective actions. The recommendation is unresolved and will remain undispositioned and open for reporting purposes.

Appendix A. Objectives, Scope, and Methodology

Objectives

The overall objective of the audit was to determine whether the advance agreement between Boeing and the DCMA was equitable to NASA. Specific objectives were to determine whether:

- the advance agreement negotiated by the DCMA met all Federal requirements and
- NASA's interests were adequately considered and addressed under Boeing's restructuring.

Scope and Methodology

To determine whether the advance agreement between Boeing and the DCMA was equitable to NASA, we:

- Researched applicable regulations, requirements, and guidance including Section 818 of the National Defense Authorization Act of 1995 (Public Law 103-337); 10 United States Code section 2325; Section 8115 of the DoD Appropriations Act for Fiscal Year 1997; CAS (48 Code of Federal Regulations 99); FAR Part 31, Section 109; DFARS subpart 231.205-70; and the NASA FAR Supplement.
- Obtained and reviewed the Boeing/DCMA advance agreement and Boeing's cost proposal and other applicable supporting documentation.
- Obtained and reviewed the DCAA audit report of the Boeing restructuring cost proposal and other applicable DCAA reports and documents.
- Met with Johnson procurement personnel, including the Director of Procurement, and discussed NASA's involvement with the advance agreement and impacts resulting from its execution.
- Met with DCMA and DCAA personnel including the DCMA Corporate Administrative Contracting Officer and discussed the advance agreement, Boeing's cost proposal, and their impacts to NASA.
- Visited the Downey facility, and met with both Boeing and NASA personnel at the facility.

Appendix A

Management Controls Reviewed

We reviewed management controls related to the development and execution of advance agreements including DoD appropriations, public laws, the FAR and DFARS. We also reviewed management controls related to contractor compliance and disclosure with the CAS (48 CFR 99). These controls are adequate to meet the purpose intended. For this audit, compliance with these controls was primarily external to NASA. However, NASA does not have similar controls related to external business restructurings in the NASA FAR Supplement. We recommend that NASA pursue legislation to provide similar benefits from corporate restructurings to that provided to the DoD and contained in the DFARS.

Audit Field Work

We performed the audit field work from April through July 2000 at the Johnson Space Center; the Marshall Space Flight Center; and Boeing Company Headquarters in Seattle, Washington. We performed the audit in accordance with generally accepted government auditing standards.

Appendix B. Projected Savings and Costs by Customer Due to Boeing's Restructuring

Boeing Cost Proposal Data (in millions of dollars)

<u>Beneficiary</u>	<u>Gross Savings</u>	<u>Restructuring Cost</u>	<u>Net Savings</u>
Boeing ¹	\$391	\$113	\$278
DoD ²	376	103	273
NASA	72	22	50
Totals	\$839	\$238	\$601

Net Savings Attributable to the Downey Closure³

<u>Gross Savings</u>	<u>Restructuring Costs</u>	<u>Net Savings</u>
\$279.6	\$60.3	\$219.3

¹ The cost proposal specifically identifies Boeing's Commercial Aircraft Group and its Shared Services Group.

² DoD's share of the potential savings and costs is adjusted to represent net present value of \$320.6 million and \$90.3 million, respectively.

³ We obtained this data from Boeing's Cost Proposal Work Breakdown Structure Number 15.04.

Appendix C. NASA/Boeing Contracts Affected by Boeing's Changes in Accounting Methods and Cost Allocation Methodology

Cost Impact (in millions of dollars)

<u>Contract</u>	<u>FY 99</u>	<u>FY 00</u>	<u>Out-Years</u>	<u>Total</u>
Space Flight Operations Contract (subcontract to United Space Alliance) NAS9-20000	\$8.6	\$4.2	\$5.1	\$17.9
Payload Ground Operations Contract NAS10-11400	2.7	1.1	0.0	3.8
Space Shuttle Main Engine NAS8-40000	23.4	18.1	17.2	58.7
International Space Station NAS15-10000	16.4	8.0	6.2	30.6
Space Shuttle Sustaining Engineering NAS9-140002	4.1	0.0	0.0	4.1
Totals	\$55.2	\$31.4	\$28.5	\$115.1

Appendix D. Additional Information on the Boeing Company

After its 1996 acquisition of the Aerospace and Defense Units of Rockwell International Corporation and its subsequent 1997 merger with McDonnell Douglas, the Boeing Company became the largest aerospace company in the world, employing more than 195,000 people. Its major operations are centered in the Seattle-Puget Sound area of Washington State; Southern California; Wichita, Kansas; and St. Louis, Missouri. Boeing is organized into four major business segments: the Boeing Commercial Airplane Group; the Space and Communications Group; the Military Aircraft and Missile Systems Group; and the Shared Services Group.

Boeing is NASA's largest contractor. NASA's fiscal year 1999 contract awards to Boeing totaled about \$36.4 billion (total award value of contracts including options), while fiscal year 1999 obligations related to Boeing contracts totaled about \$1.3 billion. NASA's major contracts with Boeing include the International Space Station managed by the Johnson Space Center, the Space Flight Operations Contract (as a subcontractor to the United Space Alliance) also managed by Johnson, the Payload Ground Operations Support managed by the John F. Kennedy Space Center, and the Space Shuttle Main Engine managed by the George S. Marshall Space Flight Center. NASA is Boeing's largest non-DoD Government customer. The heritage Boeing North America portion of the company (formerly Rockwell International/Rocketdyne) operated a facility in Downey, California, where the Space Shuttle fleet was conceptualized, designed, and built beginning in the early 1970's. Total estimated contract work performed for NASA at the Downey facility from the 1970's to present was about \$8 billion. However, after Boeing's restructuring, only a small amount of NASA work related to the Space Shuttle's cryogenics remains at Downey. This function will be relocated as soon as a new cryogenic facility is completed and certified.

Appendix E. Summary of Prior Audit Coverage

“Performance Management of the International Space Station Contract,” Report Number IG-00-007, February 16, 2000. The report addressed NASA’s management of the International Space Station contract and Boeing’s cost overruns of \$203 million. The report states that Boeing-projected estimates of cost overruns were unrealistically low and that incentives paid were not earned. In addition, the report attributed a portion of the cost overruns on the contract to Boeing’s reorganization and restructuring associated with its acquisition of Rockwell International and its merger with McDonnell Douglas. We made a total of 14 recommendations to strengthen the International Space Station contract management and minimize the impacts of Boeing’s restructuring activities. Management concurred or partially concurred with the findings and recommendations and agreed to take corrective action on all 14 recommendations.

“Boeing Indirect Cost Allocations to Space Station Contract,” Report Number JS-96-001, December 12, 1995. The report addressed NASA’s reimbursement to Boeing for indirect costs for which it received no benefit. Essentially, the Space Station contract received an inequitable allocation of indirect costs from Boeing’s Engineering Resource and Engineering Computing Cost Centers. The DCAA and the Office of Inspector General found these allocations did not comply with the provisions of CAS 418. We recommended that the Associate Administrators for Procurement and Space Flight work with the DCMA to ensure indirect costs were appropriately allocated to the Space Station contract in accordance with CAS 418. Management concurred and indicated that it would monitor the Defense Administrative Contracting Officer’s proposed corrective actions and review the feasibility of suspending payments for the excess allocations of cost.

“Earth Observing System (EOS) AM Spacecraft Planning and Management Restructuring Funding Authorization (RFA),” Report Number GO-94-004, March 31, 1994. NASA did not receive cost reductions from a restructuring of General Electric’s Aerospace Group and a subsequent advance agreement between General Electric and the Defense Logistics Agency. NASA paid about \$14 million in restructuring funding over a 4-year period and, in turn, should have received savings through reduced contract costs. However, the savings (contract price reductions) never materialized. We recommended that the Center responsible for the contract have the Defense Logistics Agency review the advance agreement and determine whether any savings were realized. Management conditionally concurred indicating that it had benefited from the restructuring agreement and that it would coordinate with the Defense Administrative Contracting Officer to monitor the savings resulting from the agreement.

Appendix F. Calculation of Potential Funds That Could Be Put to Better Use

Recommendation 5 results in a potential \$64.7 million in funds that NASA can put to better use. The DCMA determined the amount using audit information developed by the DCAA. The amount represents the monetary harm to NASA from Boeing's changes in accounting and cost allocation methods. The amount has yet to be negotiated with Boeing. When negotiations are completed and finalized, the amount negotiated will represent a true monetary savings to NASA and will be realized through offsets to current Boeing contract billings.

Appendix G. Management's Response

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



Reply to Attention:

HK

SEP. 25 2000

TO: W/Assistant Inspector General for Auditing
FROM: HK/Director, Contract Management Division
SUBJECT: Code H Response to OIG Draft Audit Report on the Impact of the Boeing
Company's Restructuring on NASA, A0003900

Enclosed is our response on the subject audit report dated August 25, 2000.

Please contact Joe Le Cren at (202) 358-0444 or Jack Horvath at (202) 358-0456 if you
have any questions or need further coordination on this matter.

R. Scott Thompson
for R. Scott Thompson

Enclosure

HEADQUARTERS OFFICE OF PROCUREMENT
RESPONSE TO
OFFICE OF INSPECTOR GENERAL (OIG)
DRAFT REPORT ASSIGNMENT NUMBER A0003900
DATED AUGUST 25, 2000
IMPACT OF THE BOEING COMPANY'S RESTRUCTURING ON NASA

Date: SEP. 25 2000

ENCLOSURE

Appendix G

A0003900
Page 2

General Comments:

The findings and other information contained in the report convey a general lack of understanding of the restructuring process and cost accounting practice changes. This lack of understanding is demonstrated in three areas that are repeated throughout the audit report: savings to cost ratio should be based on the combined results of the restructuring and cost accounting practice changes; little assurance that any actual savings will be realized from the Boeing restructuring; and NASA has not benefited from the restructuring. Each of these areas is discussed as follows:

Savings to cost ratio should be based on the combined results of the restructuring and cost accounting practice changes:

OIG Position: At the heart of the audit report's conclusions that NASA did not achieve a savings to cost ratio of at least two to one from Boeing's restructuring, is the OIG's opinion that the results of the restructuring savings and the cost accounting practice changes should be combined. In addition, this position is the basis for the OIG's recommendation that NASA seek the same statutory requirement as DoD, i.e., obtain a ratio of savings to costs from external restructurings of two for one. The OIG's position is that the accounting practice changes were not routine and were made to facilitate the company's restructuring and, therefore, should have been considered in determining the external restructuring savings to cost ratio used to justify the restructuring advance agreement. When the impact of the cost accounting practice changes are combined with the costs of implementing the external restructuring, the result is that NASA's savings do not offset its increased costs.

Response: The OIG has commingled two statutory and regulatory separate administrative actions. The Defense Federal Acquisition Supplement (DFARS) at 231.205-70 contains a specific definition of what constitutes an external restructuring. That definition, which is derived from Section 8115 of the Department of Defense Appropriations Act of 1997 (Public Law 104-208), precludes DCMA from considering the Boeing cost accounting practice changes as part of the external restructuring. Those cost accounting practice changes are handled separately by the process laid out in the Cost Accounting Standards (48 CFR 9903.201-6) and the FAR (30.602) for contractor unilateral (voluntary) cost accounting changes. The OIG uses external restructuring in a way that encompasses much more than that used in DFARS 231.205-70, which results in the OIG arriving at the wrong conclusion, i.e., NASA did not benefit from the external restructuring.

In addition to a review of the DFARS, there is no information that the Defense Contract Audit Agency (DCAA), which audited Boeing's restructuring proposals, or DCMA management, which approved the Boeing restructuring proposal, took exception to the Boeing Defense Corporate Executive's (DCE) separate handling of the restructuring and cost accounting practice changes.

See Appendix H,
OIG Comment 1

See Appendix H,
OIG Comment 2

See Appendix H,
OIG Comment 3

See Appendix H,
OIG Comment 4

Little assurance that any actual savings will be realized from the Boeing restructuring:

OIG Position: The OIG reports that the actual savings realized from Boeing's restructuring could be much less than Boeing's projected savings. The report points out that neither DCMA nor DCAA requires Boeing to identify and report actual restructuring savings. The report also goes on to state that the actual restructuring costs could be much higher than those projected. The OIG faults DCAA for its auditing of the projected savings and that DCAA audited only 19 of the 60 business elements supporting the annual projected savings amounts. Also, the OIG takes exception to the negotiated cost ceiling contained in the advance agreement with Boeing because it exceeded the restructuring implementation costs used to determine the projected restructuring savings. The OIG also states that the actual implementation costs will not be known until after completion of the amortization period in 2003.

Response: While the OIG is correct that the actual savings from Boeing's external restructuring could be less than projected, the OIG fails to point out that there is no requirement that actual savings exceed actual costs by a ratio of two to one, the statutory criterion for DoD approval of a restructuring proposal. In fact there is no statutory requirement for actual savings for a contractor to be reimbursed for restructuring costs after DoD certification. Because external restructurings are based on what will take place in the future, just like proposals for contracts, the review for approval is based on estimates. If the actual savings and costs turn out to be different than originally estimated, it has no impact on the restructuring that was approved. In other words, it can't be undone because the results do not turn out to be as projected.

The approach used in the case of Boeing, which is typical for evaluating a contractor's restructuring savings proposal, is to compare the future costs that would have been incurred had the external restructuring project not taken place to the costs estimated to be incurred as a result of the external restructuring project. The difference represents the estimated savings. DoD has an annual reporting requirement for external restructurings that begins with the year of certification whereby DCMA is required to estimate the actual savings accruing to DoD during the reporting period. In the case of Boeing, an examination of the actual performance for only 19 of the 60 restructuring projects for 1999 was performed to determine the estimated actual savings for the annual report. As the OIG reported, those 19 projects accounted for more than 90 per cent of the actual reported savings. The implication of the OIG report is that a much larger percentage of the projects should have been reviewed. However, we believe that would have been an inefficient use of audit resources that would have provided little, if any, additional assurance as to the reported savings. Since there is a cost to NASA for audits, there also would have been increased audit costs for the agency from the additional auditing suggested by the OIG.

With regards to the issue that the ceiling amount exceeded the negotiated advance

See Appendix H,
OIG Comment 5

See Appendix H,
OIG Comment 6

See Appendix H,
OIG Comment 7

Appendix G

Page 4

agreement implementation costs, the OIG does not understand the higher ceiling amount is intended to provide some relief from the original implementation cost estimates on those projects not completed at the time of the negotiation and certification. Without a ceiling, the contractor would need to obtain recertification for each and every cost increase.

See Appendix H,
OIG Comment 8

The OIG's assertion that the actual implementation costs will not be known until completion of the amortization period is not completely accurate. Most of the implementation costs were estimated to be incurred in the first two to three years of the amortization period. Implementation costs beyond year three represent, for the most part, depreciation costs, which would be known once an item is capitalized during year one or two. Consequently, the majority of the Boeing implementation costs would be known by the third year. In fact, the DCAA review for the annual report for 1999 disclosed that the estimated external restructuring savings and costs showed that NASA's share of the savings were in excess of those originally anticipated (\$14.3 million versus \$7.8 million), while the costs were slightly less (\$5.5 million versus \$5.7 million). This information was provided to the OIG during its audit but was not included in its report.

See Appendix H,
OIG Comment 9

NASA has not benefited from the restructuring:

OIG Position: The OIG argues that NASA's share of the projected Boeing restructuring savings was not equitable. To support this argument, the OIG points out that historically NASA represented about 80 per cent of the workload at the Downey, CA facility. However, NASA did not receive anywhere near that amount of the savings from the closure of that facility and the transfer of the workload to Boeing's Huntington Beach facility. The result, according to the OIG, is that Boeing's Commercial Aircraft Group and the DOD business segments received more savings than NASA. This position is at the heart of the OIG's recommendation that NASA pursue legislation mandating a two for one savings to cost ratio for external restructurings.

See Appendix H,
OIG Comment 10

Response: The OIG's position again reflects a lack of understanding. Although a particular agency may have represented a certain percentage of an operation that was closed, the organizations where the work is transferred to, and the Government agencies with the work with that organization, are the ones to benefit from the decreased costs from that restructuring. (The organization where the work was transferred from cannot benefit as it no longer exists.) A contractor's accounting system and its disclosed accounting practices will dictate how costs are actually allocated and the benefits achieved. Consequently, NASA would not benefit to the same degree as its share at Downey from the closure of that operation unless NASA represented the same percentage of work at Huntington Beach.

See Appendix H,
OIG Comment 11

Contrary to the OIG's report, Boeing's Commercial Aircraft Group did not benefit at all from the closure of Downey. Rather, other commercial work represented only four to five percent of the business base at Huntington Beach. While DoD did benefit, it

represented approximately 51% to 43% for contractor fiscal years 2000 through 2002, a percentage comparable to that for NASA (45% to 52% for contractor years 2000 through 2002). Therefore, it is inaccurate for the OIG to state that NASA did not benefit from the Boeing restructuring.

The OIG recommends that NASA needs to pursue legislation to obtain a ratio of external restructuring savings to costs ratio of two to one. The OIG's Downey example could lead some to believe that NASA did not receive equitable treatment and that such legislation could be warranted. However, the audit report does not disclose that NASA received from Boeing's external restructuring savings of about 3.3 to 1 (DCAA audited savings of \$72 million to \$22 million of costs), well above the two for one ratio the OIG argues should be obtained. This ratio compares favorably with the DoD savings to cost ratio of about 3.6 to 1 (savings of \$376 million to \$103 million of costs). Consequently, we believe that NASA received equitable treatment in the Boeing external restructuring. This equitable treatment of NASA was achieved in part to Boeing's and DCMA's agreement to treat NASA and other non-DoD customers no differently than DoD, and not from any legislative requirement.

In addition to the above three issues, the OIG report states that **NASA did not actively participate in the external restructuring process**. The OIG believes that NASA should have participated in the development and negotiation of the advance agreement, and it cites NFS 1842.705-1 as supporting this position. The OIG states that NASA's participation was limited even though DCMA met with Johnson Space Center (JSC) procurement officials and invited a NASA Headquarters representative to review the advance agreement prior to its implementation.

Response: NASA typically delegates the responsibility for contract administration, which includes restructuring to DCMA. Therefore, NASA's participation would normally be limited. In addition, cost accounting practice changes fall under the Cost Accounting Standards contract administration function, which are governed by FAR Subpart 30.6 and not 42.705-1 as reported by the OIG. FAR 42.705-1 pertains only to the settlement of final indirect cost rates and external restructuring.

Although NASA did not directly participate in negotiations with Boeing, it monitored the situation via meetings and telecons with the Boeing DCE to understand what was taking place with regards to the external restructuring and cost accounting practice changes. As the OIG acknowledges, the Boeing DCE met with JSC procurement officials. JSC's involvement, as the NASA installation with the largest Boeing contracts, would have been greater had it not been for the OIG's request for them to hold off until the OIG completed its audit work and issued its audit report, which was expected to be issued in the June 1999 timeframe. As the OIG's report became delayed, JSC began interacting directly with the Boeing DCE, who was willing to share information and keep JSC informed as to what was occurring. JSC's involvement has continued as evidenced by the July 2000 meeting in Seattle it requested. That purpose of that meeting, which was held with Boeing, DCMA and DCAA, was to discuss NASA's concerns regarding the

See Appendix H,
OIG Comment 12

See Appendix H,
OIG Comment 13

See Appendix H,
OIG Comment 14

increased costs to the agency resulting from Boeing's proposed cost accounting changes.

In addition to JSC's involvement, the Director, Program Operations, directly participated in the Board of Review held by the Boeing DCE and DCMA's headquarters on the Boeing restructuring. Furthermore, the Boeing DCE characterized NASA's involvement with the restructuring and cost accounting practice changes to be much greater than that of any DoD customer, even though DoD had a much greater financial interest than any other Government customer.

Other Items:

There were a few other items contained in the OIG's report which could lead to a misunderstanding of what took place with regards to the Boeing restructuring. One of these items, which is located at the end of the section titled "Results in Brief," the OIG states "Through active participation in negotiations with the DCMA and Boeing, NASA has an opportunity to recover about \$64.7 million through future cost reductions, which would mitigate some of the advance agreement's impact on the Agency." The OIG again is confusing the external restructuring and the cost accounting practice changes. The \$64.7 pertains entirely to the cost accounting practice changes. In addition, the OIG fails to mention in the report that in early 1999, the Boeing DCE disallowed \$13.2 million on NASA contracts pending the conclusion of the negotiation of the cost accounting practice changes.

Another item, located in the first paragraph of the "Background" section, is the statement that Boeing asked the DCMA to execute an advance agreement under which the company could reorganize and restructure under the FAR and DFARS. This is not an accurate statement. Boeing chose to reorganize and restructure its operation in order to combine facilities, operations, and workforce in order to eliminate redundant capabilities, improve future operations, and reduce overall costs. These activities took place irrespective of reimbursement by DoD. However, in order to receive reimbursement, Boeing had to comply with the requirements of DFARS 231.205-70, which culminated in the advance agreement. This DFARS section required the Boeing DCE to negotiate and enter into an advance agreement.

In the section titled "Other Potential Material Impacts," the OIG states that DCAA scheduled an audit of Boeing's four business segments to determine whether they are actually operating as separate business units. The report goes on to state that "Should DCAA's audit confirm that Boeing's four business units do not operate as segments, much of the impact from the restructuring will likely be negated." The OIG is incorrect in that the audit covers three, not four segments, but more importantly because the 1999 cost accounting changes would be negated, not the external restructuring.

See Appendix H,
OIG Comment 15

See Appendix H,
OIG Comment 16

See Appendix H,
OIG Comment 17

See Appendix H,
OIG Comment 18

OIG RECOMMENDATION 1:

Request the DCAA to audit and validate the amount of actual savings accruing to NASA from Boeing's restructuring.

CODE H RESPONSE TO RECOMMENDATION 1: CONCUR

We concur with the intent of the recommendation; however, we do not believe it is necessary to request a DCAA audit since there is a statutory requirement for an annual report to DoD beginning with the year of certification. DCMA is required by DoD to estimate the actual savings to DoD during the reporting period. The basis for the annual reports are reviews performed by DCAA to validate the estimates. We will work with the Boeing DCE to track the external restructuring savings to NASA on an annual basis as is done for DoD. Due to the fact that the annual report on restructuring will continue for several more years and we will work with the Boeing DCE to track the savings to NASA over that time, we cannot provide a projected corrective action closure date.

CORRECTIVE ACTION OFFICIAL: Code HK/Joe Le Cren
CORRECTIVE ACTION CLOSURE OFFICIAL: Code HK/S. Thompson
PROJECTED CORRECTIVE ACTION CLOSURE DATE: TBD

OIG RECOMMENDATION 2:

Determine whether the savings accruing to NASA are at least twice the cost of restructuring. The Associate Administrator or his designated representative should use the results of DCAA's audit (Recommendation 1) to make this determination and participate in negotiations as necessary to ensure the 2 to 1 savings are achieved.

CODE H RESPONSE TO RECOMMENDATION 2: CONCUR

As stated above in the response to recommendation 1, we will work with the Boeing DCE office to track on an annual basis the restructuring savings accruing to NASA. However, we cannot guarantee that the savings accruing to NASA are at least two to one since there is not even a requirement for DoD that the actual savings exceed the actual costs by two for one. Due to the fact that the annual report on restructuring will continue for several more years and we will work with the Boeing DCE to track the savings to NASA over that time, we cannot provide a projected corrective action closure date.

CORRECTIVE ACTION OFFICIAL: Code HK/Joe Le Cren
CORRECTIVE ACTION CLOSURE OFFICIAL: Code HK/S. Thompson
PROJECTED CORRECTIVE ACTION CLOSURE DATE: TBD

OIG RECOMMENDATION 3:

Pursue legislation for NASA similar to that provided to the DoD (Section 8115 of the DoD Appropriations Act of 1997) requiring that external restructurings yield a 2-to-1 savings to costs ratio for NASA.

CODE H RESPONSE TO RECOMMENDATION 3: CONCUR

We concur with the intent of the recommendation. However, we do not believe that the pursuit of legislation is the best approach to take. In fact, we believe that such legislation, if granted, could work against the restructuring process by creating separate savings to costs ratio requirements for DoD and NASA contracts that ACOs would need to meet before an external restructuring could be approved. The result could be that some restructurings, that otherwise would be beneficial for all of a contractor's affected Government contracts, would be jeopardized. We instead believe that a preferred approach is to pursue with DoD an agreement to achieve, in future restructurings involving NASA contracts, the same two for one savings to cost ratio required for DOD. We want to point out that in the case of Boeing, NASA's estimated restructuring savings approximate 3.3 to 1, which is well in excess of the two for one ratio and which is comparable to DoD's approximately 3.6 to 1 ratio.

CORRECTIVE ACTION OFFICIAL:	Code HK/Joe Le Cren
CORRECTIVE ACTION CLOSURE OFFICIAL:	Code HK/S. Thompson
PROJECTED CORRECTIVE ACTION CLOSURE DATE:	February 2, 2001

RECOMMENDATION 4:

Monitor any future external restructurings involving NASA contractors to ensure that they meet the 2-to-1 savings to cost ratio.

CODE H RESPONSE TO RECOMMENDATION 4: CONCUR

We agree that future external restructurings, which involve a significant dollar amount of NASA contracts, should be monitored by the agency. However, as stated in our response to recommendation number 2, we cannot guarantee that a two for one savings ratio will be attained for NASA contracts. Since the occurrence of future external restructurings are unknown, we cannot provide a projected corrective action closure date.

CORRECTIVE ACTION OFFICIAL:	Code HK/Joe Le Cren
CORRECTIVE ACTION CLOSURE OFFICIAL:	Code HK/S. Thompson
PROJECTED CORRECTIVE ACTION CLOSURE DATE:	TBD

OIG RECOMMENDATION 5:

Require the responsible contracting officers (or the Associate Administrator's designated representative) for NASA's major existing contracts with Boeing to participate in the negotiations to mitigate impacts from Boeing's accounting changes to ensure NASA receives the maximum offset possible.

CODE H RESPONSE TO RECOMMENDATION 5: CONCUR

We concur with the intent of the recommendation. Cost accounting practice changes are part of the Cost Accounting Standards whose administration is the responsibility of the cognizant ACO, who in most cases for NASA contractors would be a representative of DCMA. In those cases where NASA would be significantly impacted by a contractor's proposed cost accounting practice change, the agency should participate. However, that participation could take a variety of forms, such as providing input to the cognizant ACO, attending meetings, participating on telecons, or some combination of these and other actions. The exact form of participation would be based on an evaluation of the specific issues involved. In addition, who would participate for NASA would depend on the particular case involved. As Boeing cost accounting practice changes may, and very likely, will occur in the future, we cannot provide a specific projected corrective action closure date.

CORRECTIVE ACTION OFFICIAL:	Code HK/Joe Le Cren
CORRECTIVE ACTION CLOSURE OFFICIAL:	Code HK/S. Thompson
PROJECTED CORRECTIVE ACTION CLOSURE DATE:	TBD

OIG RECOMMENDATION 6:

Request DCAA to provide a specific breakout of effects on NASA in its audit of Boeing's business segments and to take appropriate action based on the results.

CODE H RESPONSE TO RECOMMENDATION 6: CONCUR

We concur with the intent of the recommendation. However, we believe the recommendation is premature since the audit referred to is still in progress. If that audit determines that Boeing's segments are not operating as separate business units, DCAA will conclude that the contractor is in noncompliance with the Cost Accounting Standards and recommend submission of a cost impact proposal by Boeing, which would include a cost impact by agency. It would be the DCE's responsibility to determine whether DCAA's recommendation regarding the noncompliance is correct. We will monitor the results of DCAA's audit and participate to the degree and in the form determined to be appropriate. As the DCAA audit is not complete and we do not know what its audit report will recommend, we cannot provide a specific projected corrective action closure date at this time.

Appendix G

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CORRECTIVE ACTION OFFICIAL:	Code HK/Joe Le Cren
CORRECTIVE ACTION CLOSURE OFFICIAL:	Code HK/S. Thompson
PROJECTED CORRECTIVE ACTION CLOSURE DATE:	TBD

Appendix H. Office of Inspector General Comments on Management's Response

The NASA Office of Procurement provided the following comments in response to the draft report. Our responses to the comments are also presented.

Management's Comment. The findings and other information in the report convey a general lack of understanding of the restructuring process and cost accounting practice changes. This lack of understanding is demonstrated in three areas that are repeated throughout the audit report: the savings-to-cost ratio should be based on the combined results of the restructuring and cost accounting practice changes; there is little assurance that any actual savings will be realized from the Boeing restructuring; and NASA has not benefited from the restructuring.

1. Office of Inspector General (OIG) Comments. As stated in the "Objectives, Scope, and Methodology" section of our report, the auditors developed an understanding of the restructuring process and cost accounting practice changes by researching applicable regulations, requirements, and guidance including Section 818 of the National Defense Authorization Act of 1995 (Public Law 103-337); 10 United States Code section 2325; Section 8115 of the DoD Appropriations Act for Fiscal Year 1997; CAS (48 Code of Federal Regulations 99); FAR Part 31, Section 109; Defense Federal Acquisition Regulation Supplement (DFARS) subpart 231.205-70; and the NASA FAR Supplement. Also, as stated in the report and announced to management at the beginning of the audit, one of our audit objectives was to determine whether NASA's interests were adequately considered and addressed under Boeing's restructuring. To meet that objective, we identified all the restructuring issues that had an effect on NASA. In doing so, we presented an audit report that:

- Explained how the DCMA administered Boeing's restructuring and accounting practice changes and that the DCMA treated those administrative actions as two separate and distinct events.
- Explained how the restructuring and accounting practice changes were due to Boeing's acquisition of Rockwell and its merger with McDonnell Douglas.
- Identified the amount of savings Boeing expected to generate from closing the Downey, California, facility and that NASA's savings were not based on historical workload requirements but on the savings generated at the facility where NASA's workload was being transferred.
- Presented the net effect of the two events (restructuring and accounting practice changes) on NASA and emphasized that unless the savings from the restructuring were greater than the costs from the accounting practice changes, NASA will not realize any benefit.

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The net result of these changes was an increase in costs to NASA of \$65 million (\$50 million net savings from restructuring less \$115 million in additional costs from the accounting changes). This position was supported by DCAA's affirmation that Boeing's accounting practice changes were not desirable to the Government because they appeared to have shifted costs from commercial to Government work, specifically to NASA contracts. The \$64.7 million in potential contract offsets is evidence of this logic as it represents both the DCMA's and DCAA's efforts to restore NASA to the position it held with Boeing prior to the implementation of accounting practice changes and the subsequent restructuring.

Management's Comment. The OIG commingled two separate statutory and regulatory administrative actions. The DFARS definition of what constitutes an external restructuring, which is derived from Section 8115 of the DoD Appropriations Act of 1997, precludes DCMA from considering the Boeing cost accounting practice changes as part of the external restructuring.

2. OIG Comments. Nothing in the DFARS definition of an external restructuring precludes cost accounting changes from the category of restructuring activities and, in fact, quite the opposite is true. The cost accounting changes at issue were a direct outgrowth of Boeing's business combination. The accounting changes were clearly nonroutine, nonrecurring, and extraordinary and were presented to the Government as being necessary in order to facilitate Boeing's corporate merger, to improve its future operations, and to reduce overall costs. Thus, we concluded that cost accounting changes resulting from business combinations may be, and in this case should have been, included as an integral part of the restructuring process.

Regardless of how Boeing and the DCMA treated the accounting changes, our report clearly detailed the DCMA's interpretation of the DFARS definition of restructuring activities and its separate treatment of Boeing's accounting practice changes. The report also showed that Boeing adopted the accounting practice changes as a result of its acquisition of Rockwell and merger with McDonnell Douglas, prior to submitting its proposal to restructure to the DCMA. We did not commingle the statutory and regulatory requirements concerning the restructuring and accounting practice changes. Although these actions were approved by the appropriate Government agencies, the net result of the restructuring and accounting changes is increased costs to NASA. Our report quantifies the net effect of these separate actions on NASA.

Management's Comment. The OIG arrived at the wrong conclusion, that is, that NASA did not benefit from the external restructuring.

3. OIG Comments. We concluded that NASA did not benefit from the external restructuring based on our audit work, which we performed in accordance with generally

accepted government auditing standards and for which we (1) included an analysis of the documentation supporting the accounting changes and the advance agreement and (2) held discussions with NASA procurement, DCAA, and DCMA personnel.

Management's Comment. There is no information that the DCAA, which audited Boeing's restructuring proposal, or DCMA management, which approved the Boeing restructuring proposal, took exceptions to the Boeing Defense Corporate Executive's separate handling of the restructuring and cost accounting changes.

4. OIG Comments. In a March 1999 letter and February 2000 audit report, the DCAA stated that Boeing's accounting practice changes were not considered desirable or necessary, did not represent operational economies or efficiencies, were not necessary to meet Boeing's organization structure, and were not desirable to the Government because they shifted costs from commercial to Government work, specifically to NASA contracts. The Boeing Defense Corporate Executive requested both of these DCAA reviews.

Management's Comment. While the OIG is correct that the actual savings from Boeing's external restructuring could be less than projected, the OIG does not point out that there is no requirement that actual savings exceed actual costs by a ratio of 2-to-1, the statutory criterion for DoD approval of a restructuring proposal.

5. OIG Comments. Management's statement is not true. The draft report specifically and clearly stated, in seven sentences and in two footnotes, that there is no requirement that actual savings accruing to NASA exceed actual costs by a ratio of 2-to-1, which is why we made the recommendation to create such a requirement. Included in the report is a separate paragraph entitled, "Legislation and Implementing Guidance Regarding External Business Restructurings" where we state, "NASA does not have legislation and implementing guidance for external business restructurings similar to the legislation and guidance applicable to DoD."

Management's Comment. If the actual savings and costs turn out to be different than originally estimated, it has no impact on the restructuring that was approved. In other words, it cannot be undone because the results do not turn out as projected.

6. OIG Comments. The report specifically detailed how the restructuring savings *estimates* were calculated and reported. While we agree there is no statutory provision that actual savings be realized, we believe a reasonable person would assume that actual savings should be generated and should approximate the estimates. However, as stated in our report, DCMA has made no comparison between actual savings generated and the *estimates* that Boeing projected. Based on these facts, we believe NASA has little, if any assurance that it is realizing any actual savings from the restructuring. Despite our conclusion, the report does not state, nor does it make any inference that the restructuring agreement be amended.

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Management's Comment. An examination of the actual performance for only 19 of the 60 restructuring projects for 1999 was performed to determine the estimated actual savings for the annual report. As the OIG reported, those 19 projects accounted for more than 90 percent of the actual reported savings. The implication of the OIG report is that a much larger percentage of the projects should have been reviewed. However, we believe that would have been an inefficient use of audit resources that would have provided little, if any, additional assurance as to the reported savings.

7. OIG Comments. We reported the facts regarding the number of business elements DCAA audited to validate Boeing's restructuring savings estimates. The draft report objectively identified the methods used to develop the estimated restructuring savings. We did not express an opinion on and the report does not imply a need for DCAA to perform additional audit work to validate the savings estimates. However, in an effort to eliminate any perceived implications, we modified the statement in this final report related to the number of business elements that DCAA audited.

Management's Comment. The OIG does not understand the higher ceiling amount is intended to provide some relief from the original implementation cost estimates on those projects not completed at the time of the negotiation and certification.

8. OIG Comments. The negotiated cost ceiling of \$327.9 million is 38 percent and \$90.3 million more than the *estimates* Boeing used to determine the restructuring savings. We find it an unlikely coincidence that the net present value of DoD's share of the restructuring costs used to calculate the DoD savings-to-cost ratio also equals \$90.3 million. We believe the ceiling represents little more than a "cushion" for inaccuracies in Boeing's estimates and a means for showing a higher than required savings-to-cost ratio. Consequently, if the restructuring costs are higher than expected and reach the ceiling amount, NASA's savings are less than those projected.

Management's Comment. The DCAA review for the 1999 annual report showed that the savings were in excess of those originally anticipated (\$14.3 as opposed to \$7.8 million) while the costs were slightly less (\$5.5 as opposed to \$5.7 million). Management stated that this information was provided to the OIG during the audit but was not included in the report.

9. OIG Comments. The data on NASA's savings for 1999 was not made available to the OIG auditors who conducted this audit. We received this data from an OIG auditor at Johnson who had received the data from an official at Johnson's procurement office regarding another matter. We received this data after the draft report was issued. During face-to-face meetings with the Boeing Defense Corporate Executive at Boeing's Headquarters in Seattle, Washington, on May 31 and June 1, 2000, we specifically requested information on the savings accruing to NASA from Boeing's restructuring. The Boeing Defense Corporate Executive and the Defense Corporate Analyst told the

OIG auditors during those meetings that specific savings data for NASA were not calculated because DCMA's only requirement was to report the DoD savings to Congress. However, the Defense Corporate Analyst, who told the auditors that this information did not exist, notified Johnson procurement management of the estimated amount of NASA savings in two electronic mail messages dated June 1, 2000 - the same day of our meeting.

The first message, dated June 1, 2000, states:

DCAA, using the contractor's data, estimated the NASA participation percentage for the Space and Communications Group at about 29.8 percent for 1999. However, in addition to Space and Communications Group specifically, NASA has a very small piece of Aircraft and Missiles Group savings and an allocable share of the Company Office's savings. Based on this approach (using the percentage of NASA workload), we estimate the external restructuring savings accruing to NASA during 1999 total about \$14.3 million.

A second message, also dated June 1, 2000, states:

Using the data furnished by Boeing and the same overall Space and Communications Group approach to estimating NASA's participation, it would appear NASA participation in the 1999 costs is about \$5.5 million.... It should be noted that as you "peel the onion" back further, and begin looking at customer participation at lower levels (segment/location), you probably would come up with slightly different answers. Administratively, that would make the process more cumbersome and wouldn't significantly change the data we would report to Congress in our Annual report.

Although these messages seem to indicate that savings accrue to NASA, a more thorough examination indicates that DCAA estimated the savings by using NASA's workload participation percentages of 29.8 percent for the Space and Communication Group and other unidentified methods. DCAA did not use actual savings data. Because of the total reliance on estimates and percentages in deriving the projected savings, there is no certainty that the projected amounts mirror any actual savings being generated. We believe that DCAA should be asked to determine the amount of actual savings accruing to NASA. This action would provide NASA with some degree of reliance on the Boeing/DCAA/DCMA estimated savings.

Management's Comment. The OIG states that NASA's share of the projected Boeing restructuring savings was not equitable. This position is at the heart of the OIG's recommendation that NASA pursue legislation mandating a 2-for-1 savings-to-cost ratio for external restructurings.

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10. OIG Comments. The OIG’s recommendation to pursue legislation requiring equitable treatment as that provided the DoD is a direct result of Boeing’s restructuring and the request of the NASA Headquarters Office of Procurement.

First, although the DCMA and Boeing agreed to provide NASA the same treatment under the restructuring as its DoD customers, DCMA and Boeing had no obligation to do so. We believe that DoD’s existing legislation was not enacted to provide benefits to one Government agency at the expense of another. However, this is the reality of NASA’s current situation. Our recommendation was made to mitigate the inequity as it currently exists and to provide NASA the same opportunities (savings) as the DoD when other contractors chose to restructure.

Second, the OIG originally recommended that the NASA Headquarters Office of Procurement revise the NASA FAR Supplement to include similar provisions as the DFARS with respect to external restructurings. Staff from the NASA Office of Procurement’s Contract Management Division told us that they could not make the suggested changes to the NASA FAR Supplement without the appropriate legislation allowing them to do so. Therefore, the best course of action was to pursue legislation that would allow NASA to obtain treatment similar to the DoD with respect to external restructurings.

Management’s Comment. Contrary to the OIG’s report, Boeing’s Commercial Aircraft Group did not benefit at all from the closure of the Downey plant.

11. OIG Comments. Boeing’s commercial interests did benefit to a greater extent than NASA from Boeing’s restructuring, including the closing of the Downey plant. Boeing’s August 2, 1999, restructuring proposal broke down the restructuring savings into three categories as follows:

<u>Other</u>	<u>DoD</u>	<u>NASA</u>
\$391 million (47 percent)	\$376 million (45 percent)	\$72 million (8 percent)

Boeing’s description of the “other” savings was that it consisted of:

- Significant near-term fixed-price and fixed-price incentive business already on contract.
- Substantial NASA and Foreign Military Sales business. (NASA’s savings were not included in this category.)

- Commercial Airplanes. (The proposal stated that because the Commercial Airplanes segment is a relatively large segment of the Boeing Company business base, it would receive the largest benefit from Boeing's restructuring savings.)

Based on this information and the fact that NASA's savings were not based on the historical percentage of NASA work performed at Downey (80 percent) but on the projected percentage of work to be performed at the facilities to which Boeing transferred the work (45 percent), we concluded that Boeing's commercial interests clearly benefited to a greater extent than NASA from Boeing's restructuring and the closing of the Downey plant.

Management's Comment. Although NASA did not directly participate in negotiations with Boeing, the Agency monitored the situation through meetings and teleconferences with the Boeing Defense Corporate Executive to understand what was taking place. Furthermore, the Boeing Defense Corporate Executive characterized NASA's involvement with the restructuring and cost accounting practice changes to be much greater than that of any DoD customer, even though DoD had a much greater financial interest than any other Government customer.

12. OIG Comments. Our report provides a balanced presentation of the facts made available to the auditors concerning NASA's participation in Boeing's restructuring process. We made repeated attempts to contact the NASA Headquarters' representative who was invited to review the advance agreement and obtain any data, information, trip reports, summaries, or notes he accumulated during his involvement in Boeing's restructuring process. The NASA Headquarters' representative never responded to our requests.

The Boeing Defense Corporate Executive told us that he did not invite NASA to participate in the negotiations for the advance agreement. Johnson personnel told us that because NASA was not afforded the same legislative requirements as the DoD and because DCMA chose not to include NASA in the advance agreement negotiations with Boeing, all they could do was try to "leverage" the DCMA to provide NASA similar benefits to the DoD. Our position that NASA should have taken a more proactive role in the negotiations is also supported by the FAR. Specifically, FAR Part 31, section 109, states that "before negotiating an advance agreement, the Government negotiator shall, as appropriate, invite the office or agency and the responsible audit agency to participate in prenegotiation discussions and/or in the subsequent negotiations."

Management's Comment. Johnson's involvement, as the NASA installation with the largest Boeing contracts, would have been greater had it not been for the OIG's request for them to hold off until the OIG completed its audit work and issued its audit report. Management expected the report to be issued in the June 1999 timeframe.

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13. OIG Comments. Management's statement that the OIG requested Johnson to hold off on its involvement in the negotiations until the OIG completed its audit in June 1999 is not true. No such request was made during this audit. As stated in Appendix A of this report, field work on this audit did not begin until April 2000.

Management's Comment. Johnson's involvement has continued as evidenced by the July 2000 meeting it requested in Seattle. The purpose of that meeting, which was held with Boeing, DCMA, and DCAA, was to discuss NASA's concerns regarding the increased costs to the Agency resulting from Boeing's proposed cost accounting changes.

14. OIG Comments. The OIG's attendance at this meeting would have been beneficial to all the parties involved; however, neither Johnson nor DCMA notified the OIG of the meeting, and we did not receive details from the meeting until after we completed our audit field work. Upon reviewing the information Boeing presented during those meetings, we identified the following issues that we did not include in our audit report, which cause us additional concern. Specifically:

- Boeing identified a total net impact of \$343 million from Boeing's accounting practice changes to its Space and Communications Group (the Group that holds the majority of NASA's major contracts). Our audit identified a total net impact of \$128 million to the Space and Communications Group of which \$115 million applied to NASA. Thus, the total cost to NASA as a result of the accounting practice changes could be much higher than the cost identified in our audit.
- Boeing identified a \$47 million cost shift to NASA resulting from General and Administrative cost changes at the heritage Boeing North American (formerly Rockwell) sites.
- Boeing identified an additional \$26 million in costs related to employee benefit plans that will be allocated to the Space and Communications Group. Our audit report addressed the accounting practice changes Boeing adopted prior to approval of the advance agreement with the DCMA, which were changes in Boeing's capitalization procedures and cost allocation methods.
- Boeing inappropriately commingled savings from the restructuring with impacts from the accounting changes. Specifically, Boeing identified \$24 million in restructuring savings accruing from the Downey and Huntington Beach, California; Houston, Texas; and Huntsville, Alabama, sites. The Boeing Defense Corporate Executive told us that restructuring savings could not be used to offset the impact of the cost accounting changes.

- The total effect of the accounting changes on NASA's major contracts with Boeing, as presented by Boeing during the meeting did not correlate to Boeing's General Dollar Magnitude Analysis that DCAA used to determine the impact of Boeing's 1999 accounting changes on NASA.
- Boeing identified total restructuring savings to major NASA programs of \$68.9 million through March 2000. The restructuring savings estimates that the DCMA provided to Johnson on June 1, 2000, showed NASA's fiscal year 1999 savings of \$14.3 million. Thus, the July presentation indicates that Boeing generated restructuring savings accruing to NASA of at least \$54.6 million during the first 6 months of fiscal year 2000, an increase of more than 700 percent from fiscal year 1999, which is highly unlikely.

We believe these points clearly support the need for active NASA participation in negotiations concerning the accounting changes as well as any future restructurings involving NASA contractors. These points also support our position that NASA needs actual data on savings accruing to the Agency to ensure that its interests are adequately protected as a result of Boeing's restructuring.

Management's Comment. The OIG stated "through active participation in negotiations with the DCMA and Boeing, NASA has an opportunity to recover about \$64.7 million through future cost reductions which would mitigate some of the advance agreement's impact on the Agency." The OIG again is confusing the external restructuring and the cost accounting practice changes

15. OIG Comments. The \$64.7 million in potential monetary benefits (contract offsets) results from the accounting practice changes Boeing adopted as a result of its acquisition of Rockwell International and its merger with McDonnell Douglas. Although the accounting practice changes were not considered part of the advance agreement, the changes Boeing implemented were based on its decision to restructure after the acquisition and merger. Consequently, even though the \$64.7 million is not a direct product of the advance agreement, it is an indirect result of Boeing's decision to restructure and the DCMA's response to that decision under the CAS.

Management's Comment. The OIG did not mention in the report that in early 1999, the Boeing Defense Corporate Executive disallowed \$13.2 million on NASA contracts pending the conclusion of the negotiation of the cost accounting practices changes.

16. OIG Comments. We cannot address management's comments regarding the \$13.2 million disallowance by the Boeing Defense Corporate Executive. The disallowance was not related to any of the evidence we reviewed during the audit, and it does not affect the \$64.7 million in potential monetary benefits.

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Management's Comment. Boeing chose to reorganize and restructure its operation in order to combine facilities, operations, and workforce to eliminate redundant capabilities, improve future operations, and reduce overall costs. These activities took place irrespective of reimbursement by DoD. However, to receive reimbursement, Boeing had to comply with the requirements of DFARS 231.205-70, which culminated in the advance agreement.

17. OIG Comments. We agree and revised the report to show that Boeing could have reorganized without the DCMA's approval. However, because Boeing chose to charge restructuring costs to its Government contracts, the company was required by law to follow the guidance outlined in DFARS 231.205-70.

Management's Comment. The report states that "should DCAA's audit confirm that Boeing's four business units do not operate as segments, much of the impact from the restructuring will likely be negated." The OIG is incorrect in that the audit covers three, not four segments, but more important, the 1999 cost accounting changes would be negated, not the external restructuring.

18. OIG Comments. DCAA's audit will be performed at the Defense units of Boeing's business segments. These units include the Military Aircraft and Missiles Group, the Space and Communications Group, and the Phantom Works. The audit report has been revised to reflect that a total of three of Boeing's business segments will be reviewed by the DCAA and that the cost allocation changes would be negated, not the external restructuring.

Appendix I. Report Distribution

National Aeronautics and Space Administration (NASA) Headquarters

A/Administrator
AE/Chief Engineer
AI/Associate Deputy Administrator
B/Chief Financial Officer
B/Comptroller
BF/Director, Financial Management Division
G/General Counsel
H/Associate Administrator for Procurement
HK/Director, Contract Management Division
HS/Director, Program Operations Division
J/Associate Administrator for Management Systems
JM/Acting Director, Management Assessment Division
L/Associate Administrator for Legislative Affairs
M/Associate Administrator for Space Flight
P/Associate Administrator for Public Affairs
R/Associate Administrator for Aerospace Technology
S/Associate Administrator for Space Science
Y/Associate Administrator for Earth Science
Z/Associate Administrator for Policy and Plans

NASA Centers

Director, Ames Research Center
Director, Dryden Flight Research Center
Director, John H. Glenn Research Center at Lewis Field
Director, Goddard Space Flight Center
Director, Jet Propulsion Laboratory
Director, Langley Research Center
Director, John C. Stennis Space Center

Non-NASA Federal Organizations and Individuals

Assistant to the President for Science and Technology Policy
Deputy Associate Director, Energy and Science Division, Office of Management and Budget
Branch Chief, Science and Space Programs Branch, Energy and Science Division, Office of Management and Budget

Appendix I

Non-NASA Federal Organizations and Individuals (Cont.)

Associate Director, National Security and International Affairs Division, Defense
Acquisition Issues, General Accounting Office
Professional Assistant, Senate Subcommittee on Science, Technology, and Space

Chairman and Ranking Minority Member - Congressional Committees and Subcommittees

Senate Committee on Appropriations
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
House Committee on Appropriations
House Subcommittee on VA, HUD, and Independent Agencies
House Committee on Government Reform
House Subcommittee on Government Management, Information, and Technology
House Subcommittee on National Security, Veterans Affairs, and International Relations
House Committee on Science
House Subcommittee on Space and Aeronautics, Committee on Science

Congressional Member

Honorable Pete Sessions, U.S. House of Representatives

NASA Assistant Inspector General for Auditing Reader Survey

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Report Title: Impact of the Boeing Company's Restructuring on NASA

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 | Media |
| NASA Employee | Public Interest |
| Private Citizen | Other: _____ |
| Government: _____ | Federal: _____ State: _____ Local: _____ |

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

Kevin J. Carson, Program Director, Safety and Technology Audits

Karl Allen, Program Manager

Lamar Brickhouse, Auditor

Nancy Cipolla, Report Process Manager