

**Report Recipients:**

H/Assistant Administrator  
for Procurement  
JSC/AA/Director, Johnson  
Space Center  
KSC/AA/Director, Kennedy  
Space Center  
MSFC/DA01/Director,  
Marshall Space Flight  
Center

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**NASA'S REDUCTION OF  
UNDEFINITIZED CONTRACT ACTIONS**

**March 3, 2003**

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**cc:**

JM/John Werner, June  
Flickinger, Margy Myles,  
Margie Team  
JSC/BD5/Audit Liaison  
Representative  
KSC/QA-D/Audit Liaison  
Representative  
MSFC/RS40/Audit Liaison  
Representative



National Aeronautics and  
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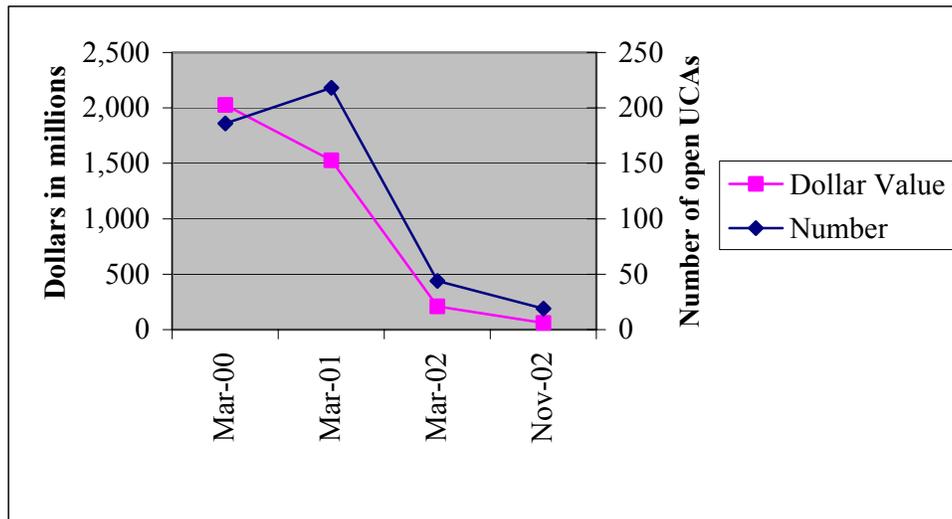
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Alan J. Lamoreaux, Assistant Inspector General for Audits

### NASA's Reduction of Undefinitized Contract Actions

In conducting this audit, we found that NASA had significantly reduced both the number and dollar amount of undefinitized contract actions (UCAs) since the U. S. General Accounting Office highlighted UCAs as one reason for identifying contract management as a major management challenge for NASA. Issuing contract changes as UCAs is a risky way of doing business, because contractors are performing the work before the cost is established, which increases the risk of unanticipated cost growth. On March 31, 2000, NASA had 186 UCAs with an estimated value of more than \$2 billion. On June 7, 2001, the NASA Administrator issued a letter to senior NASA managers requiring a reduction of at least 50 percent in the number and dollar amount of UCAs over the next year. In addition, new NASA policy required Center Directors to approve all UCAs in excess of \$100,000. By November 30, 2002, the Agency had reduced the number of UCAs to 19 with an estimated value of \$61 million (see Appendix D), which represents reductions of about 90 percent in the number of UCAs and 97 percent in the estimated dollar value of UCAs.

**Reduction in the Number and Dollar Value  
of UCAs from March 31, 2000, to November 30, 2002**



The NASA Assistant Administrator for Procurement requested that we identify those controls that were effective in reducing the number of UCAs so he could apply similar controls to other management issues. We believe the following strong centralized management actions at NASA Headquarters contributed to the significant reduction in UCAs.

- The NASA Administrator issued a letter to senior NASA managers on the need to reduce UCAs.
- NASA changed the UCA approval process by requiring Center Directors to approve all UCAs in excess of \$100,000 instead of the previous approval level of \$1 million.
- The Assistant Administrator for Procurement required Centers to report the number and dollar value of UCAs to Headquarters on a monthly basis.

Furthermore, Center Directors placed greater emphasis on the consideration of UCAs as a management issue rather than a procurement issue. NASA must continue to be vigilant in managing UCAs in order to limit their use to an exception basis for urgent requirements only, as required by the Federal Acquisition Regulation (FAR) and the NASA FAR Supplement.

### ***Categorizing and Reporting UCAs***

NASA could further improve its policy by categorizing and reporting as UCAs, undefinitized contract changes in excess of \$100,000 but below contract dollar threshold levels. Contract dollar threshold levels are the contract-specific levels below which changes can be made without further negotiation. The dollar threshold levels vary among contracts and can be as high as \$1 million.

The three Centers we reviewed had differing policies for classifying and reporting changes above \$100,000 but below contract dollar threshold levels: Johnson Space Center (Johnson) and Marshall Space Flight Center (Marshall) treated such changes as UCAs, but Kennedy Space Center (Kennedy) did not (see Appendix E). Kennedy allowed for contract changes below the contract dollar threshold to take place without being treated as UCAs, which could cause inaccurate UCA reporting and could adversely affect program spending if unanticipated cost growth occurred.

### ***Recommendation***

The Assistant Administrator for Procurement should establish guidelines for consistent treatment of all undefinitized contract changes in excess of \$100,000 but below the contract dollar threshold level as UCAs requiring Center Director approval.

***Management's Response.*** Concur. When the estimated cost of a change at the time of submission is unknown, or exceeds the negotiated dollar threshold negotiated in the basic contract, the change will be treated as a UCA. Procurement Officers will be reminded of this policy by the Assistant Administrator for Procurement not later than March 31, 2003.

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

***Appendices***

Among the appendices, note Appendix E, in particular, which discusses the different Center policies for classifying and reporting contract changes above \$100,000 but below contract dollar threshold levels.

## **List of Appendices**

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Appendix A – Status of Recommendation

Appendix B – Background

Appendix C – Objectives, Scope, and Methodology

Appendix D – NASA Actions to Reduce the Use of Undefined Contract Actions (UCAs)

Appendix E – Center Policies for Processing Changes Below Contract Dollar Threshold Levels

Appendix F – Other Matters of Interest

Appendix G – Management’s Comments

Appendix H – Report Distribution

### **Acronyms Used in the Report**

FAR	Federal Acquisition Regulation
FY	Fiscal Year
GAO	General Accounting Office
UCA	Undefined Contract Action

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## Appendix A. Status of Recommendation

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<b>Recommendation No.</b>	<b>Resolved</b>	<b>Unresolved</b>	<b>Open/ECD*</b>	<b>Closed</b>
1	X		03-31-03	

\* Estimated Completion Date

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## Appendix B. Background

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In the past, NASA has relied heavily on undefinitized contract actions (UCAs) to modify work or initiate new work on its contracts for major programs such as the International Space Station and the Space Shuttle. In May 2000, the General Accounting Office (GAO) issued a letter to the Chairman, Committee on Science, House of Representatives, on Space Station prime contract changes.<sup>1</sup> The letter showed that unnegotiated change orders in fiscal years (FYs) 1998 and 1999 accounted for more than half of all authorized changes and 98 percent of the costs for changes. NASA management acknowledged that beginning work on contract changes that have not been negotiated is not the preferred way of doing business, because the cost of the change is unknown while the work is being done.

UCAs are a major reason that the GAO included contract management as a major management challenge for NASA. As of September 1996, NASA had 271 open UCAs with a total value of more than \$450 million. By the year 2000, the number of UCAs was still about 200, but the total dollar value had increased to more than \$2 billion. In a January 2001 report,<sup>2</sup> GAO stated that “relying on unnegotiated changes as a way of doing business is risky because it increases the potential for additional unanticipated cost growth.” GAO further stated that NASA’s frequent use of UCAs on the International Space Station prime contract is contrary to the Federal Acquisition Regulation (FAR) and puts NASA at risk for unanticipated cost increases.

The FAR states that work on unnegotiated changes should occur on an exception basis and be limited to urgent requirements. NASA FAR Supplement Part 1843.7003, “Procedures,” incorporates the FAR requirement. The NASA FAR Supplement also requires that Center Directors approve in writing all UCAs with an estimated cost or price greater than \$100,000.<sup>3</sup> The NASA FAR Supplement does not specifically address the treatment of undefinitized contract changes that exceed \$100,000 but are below the contract dollar threshold level.

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<sup>1</sup> The GAO letter, B-284721, “Space Station: Prime Contract Changes,” was dated May 11, 2000.

<sup>2</sup> GAO’s January 2001 report, “Major Management Challenges and Program Risks, National Aeronautics and Space Administration,” GAO-01-258, cited contract management as a major management challenge.

<sup>3</sup> The previous Center Director approval level was \$1 million.

## **Appendix C. Objectives, Scope, and Methodology**

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### **Objectives**

The overall objective was to determine whether NASA had adequately managed undefinitized contract actions (UCAs). A UCA is an action that allows the contractor to begin work on contract changes before NASA and the contractor have agreed on the final estimated cost and fee for those changes. Specifically, we determined whether NASA contracting officers did the following:

- obtained cost estimates prior to issuance of change orders in accordance with NASA Federal Acquisition Regulation (FAR) Supplement Part 1843 (see Appendix F),
- definitized change orders within NASA’s goal of 180 days (see Appendix F), and
- accurately reported change order activity to NASA’s Office of Procurement.

### **Scope and Methodology**

We reviewed applicable regulations, policies, and documentation from NASA and other Government agencies and performed the following:

- Reviewed applicable sections of the FAR, NASA FAR Supplement, and other NASA guidance relevant to UCAs.
- Met with GAO officials to determine the extent of their work regarding UCAs at NASA.
- Conducted field work at NASA Headquarters and the three NASA Centers that historically had issued the largest number and dollar value of UCAs: Johnson Space Center (Johnson), Kennedy Space Center (Kennedy), and Marshall Space Flight Center (Marshall).
- Reviewed a total of 83 UCAs at Johnson (45), Kennedy (27), and Marshall (11) to determine whether those actions were completed in accordance with existing criteria.
- Reviewed seven additional UCAs from a list contained in a FY 2002 Johnson Procurement Management Survey Report<sup>4</sup> to determine whether the Center had revised its processing steps in response to the guidance issued June 29, 2001, by the Assistant Administrator for Procurement.
- Evaluated a sample of seven changes that Centers classified as supplemental agreements to determine whether the changes should have been classified as UCAs.

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<sup>4</sup> The report was titled, “Procurement Management Survey Report, Johnson Space Center,” and covered the period February 22 through March 8, 2002.

## Appendix C

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### Management Controls Reviewed

We reviewed the following management controls over the use of undefinitized contract actions:

- FAR Part 43, “Contract Modifications”
- FAR Part 16, “Types of Contracts”
- NASA FAR Supplement 1843, “Contract Modifications”
- NASA Procurement Information Circular (PIC) 01-16, “Class Deviation to the NASA FAR Supplement”
- NASA Procurement Notice 97-67, “Undefinitized Contract Actions”

### Audit Field Work

We conducted audit field work from March through December 2002 at NASA Headquarters, Johnson, Kennedy, and Marshall. We performed the audit in accordance with generally accepted government auditing standards.

### Prior Audit Coverage

The NASA Office of Inspector General has issued reports related to the use of undefinitized contract actions. The reports are summarized below. Copies of NASA reports are available at <http://www.hq.nasa.gov/office/oig/hq/audits.html>.

#### **“Undefinitized Change Orders,” Report Number HA-95-001, November 9, 1994.**

The audit of undefinitized change orders issued under the Space Station Freedom Work Package contracts at Johnson Space Center showed that managers and contracting officers were not adequately administering contract changes. As a result, the risk of unnecessary cost growth under the contracts was high. Management concurred with our recommendations to limit the use of contract changes and to obtain cost estimates prior to the issuance of change orders.

#### **“Space Station Change Order Process,” Report Number IG-97-015, March 5, 1997.**

We found that the Space Station Program Office had not completed an effort to definitize old and high-priority changes within a self-imposed deadline. However, the effort was viable in that the program definitized many of the changes by the deadline, and had developed realistic plans to definitize the remaining changes within a 4-month period. We also found that the program had not issued undefinitized changes on an exception basis as recommended by Federal procurement regulations. The program’s extensive use

## **Appendix C**

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of undefinitized changes was dictated by a need to maintain schedule. A delay in starting change directed work pending definitization of the changes orders would have significantly increased the risk of not completing the Space Station on time.

## Appendix D. NASA Actions to Reduce the Use of Undefinitized Contract Actions (UCAs)

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Following the June 2001 emphasis by top NASA management, the number of UCAs decreased as shown below.

### Reduction in the Number and Dollar Value of UCAs from March 31, 2000, to November 30, 2002

Date	Number Of UCAs	Percent Change from Prior Period	Dollar Value (in millions)	Percent Change from Prior Period
March 31, 2000	186	--	\$2,025	--
March 31, 2001	218	+17.2	1,528	-24.5
March 31, 2002	24	-89.0	78	-94.9
November 30, 2002	19	-20.1	61	-21.8
Cumulative Percent Change*		-89.8*		-97.0*

\* We calculated the percentages by subtracting the November 30, 2002, figure (either the number of UCAs or the dollar value) from the corresponding March 31, 2000, figure and then dividing the result by the March 31, 2000, figure.

## **Appendix E. Center Policies for Processing Changes Below Contract Dollar Threshold Levels**

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Johnson policy required that contracting officers treat all changes that are in excess of \$100,000 but are below the contract dollar threshold as UCA's if urgency requires that the contractor begin work before the change is definitized.

Marshall policy required that a Configuration Control Board (Board) review contract changes including those that were less than the contract dollar threshold. The Board, the Project Manager, and the Contracting Officer would approve the changes before work began. The Center Director was not required to approve definitized changes above \$100,000 but below the contract dollar threshold, because the dollar value of the threshold had been negotiated in the basic contract, and no further contractual adjustment was required for such changes. However, the Team Lead, Marshall Procurement Office Policy and Review, stated that if it was necessary for the contractor to begin work on a change because of urgency before its cost had been definitized, Marshall would treat that change as a UCA even if the Center anticipated that the cost would be less than the contractor dollar threshold.

Kennedy's Joint Base Operations Support Contract did not require that changes in excess of \$100,000 and below the contract dollar threshold level be treated as UCAs and did not require Center Director approval for these changes.

## **Appendix F. Other Matters of Interest**

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The audit also identified the following issues that require no further management attention.

- We found that NASA complied with NASA Federal Acquisition Regulation (FAR) Supplement 1843.7003(b)(1). NASA had not issued change orders without setting a ceiling price or “not to exceed” estimated cost figure.
- We found that contracting officers had not definitized 49 of 83 undefinitized contract actions (UCAs) within NASA’s goal of 180 days. The 49 UCAs were at three Centers: 27 at Johnson, 14 at Kennedy, and 8 at Marshall. Sixty of the 83 UCAs reviewed, including all 49 that had been open over 180 days, had originated before the Administrator’s letter of June 7, 2001. Following the issuance of that letter, NASA procurement and program management personnel began timely action to reduce the number of open UCAs. As of October 31, 2002, NASA had only two UCAs, valued at \$611,000, that were over 180 days old.
- For one UCA on the International Space Station contract at Johnson Space Center, the contracting officer did not obtain oral approval from the Center Director as required by the NASA FAR Supplement part 1843.7003. On June 28, 2002, after advising the Procurement Officer, the contracting officer issued an e-mail authorization for the contractor to proceed with the contract change estimated to cost \$1.6 million before the Center Director had approved the UCA. The contracting officer took this action because of the urgency of the work and the nonavailability of the Center Director. On July 24, 2002, the Johnson Center Director approved the change.

## Appendix G. Management's Comments

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



February 12, 2003

Reply to Attn of:

HK

TO: W/Assistant Inspector General for Auditing  
FROM: HK/Director, Contract Management Division  
SUBJECT: Code H Response to OIG Draft Audit Report on NASA's Reduction  
Of Undefinitized Contract Actions

Enclosed is our response to the subject report dated January 30, 2003.

Please call Lou Becker at 202-358-4593 if you have any questions or need further coordination on this matter.

A handwritten signature in black ink, appearing to read "R. Scott Thompson".

R. Scott Thompson

Enclosure

**General Comment:** We were pleased to note that during the course of the review, you found that NASA had significantly reduced both the number and dollar amount of undefinitized contract actions (UCAs). Over the past several weeks, we have had numerous discussions with your office regarding what constitutes an "unnegotiated" change. It was agreed that when the estimated cost of the change is unknown at the time of submission, or the estimated amount exceeds the negotiated dollar threshold, the change will be treated as a UCA. It was also agreed that Center Director approval would not be necessary for changes above \$100,000 but below the contract dollar threshold when the dollar value of the changes had been determined and the threshold had been negotiated in the basic contract because no further contractual adjustment would be required.

**Recommendation:** The Assistant Administrator for Procurement should establish guidelines for consistent treatment of all undefinitized contract changes in excess of \$100,000 but below the contract dollar threshold level as UCAs requiring Center Director approval.

**Response:** Concur. When the estimated cost of a change at the time of submission is unknown, or exceeds the negotiated dollar threshold negotiated in the basic contract, the change will be treated as a UCA. Procurement Officers will be reminded of this policy via a letter from the Assistant Administrator for Procurement not later than March 31, 2003.

## **Appendix H. Report Distribution**

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ADI/Associate Deputy Administrator for Institutions and Asset Management  
ADT/Associate Deputy Administrator for Technical Programs  
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G/General Counsel  
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GSFC/100/Director, Goddard Space Flight Center  
JPL/1000/Director, Jet Propulsion Laboratory  
JSC/AA/Director, Lyndon B. Johnson Space Center  
KSC/AA/Director, John F. Kennedy Space Center  
KSC/CC/Chief Counsel, Kennedy Space Center  
LaRC/106/Acting Director, Langley Research Center  
MSFC/DA01/Director, George C. Marshall Space Flight Center  
SSC/AA00/Director, John C. Stennis Space Center

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**Report Title:** NASA's Reduction of Undefined Contract Actions

**Report Number:** \_\_\_\_\_ **Report Date:** \_\_\_\_\_

*Circle the appropriate rating for the following statements.*

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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.* \_\_\_\_\_

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| <input type="checkbox"/> NASA Employee  | <input type="checkbox"/> Public Interest |
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## **Major Contributors to the Report**

Lorne A. Dear, Program Director, Procurement Audits

Patrick A. Iler, Program Manager, Procurement Audits

Walter K. Curtis, Auditor-in-Charge

Amy L. Larkin, Auditor

Kimberly R. LaRock, Auditor

Lydia C. Lyn, Auditor

Iris T. Purcarey, Program Assistant