

# **Audit**



# **Report**

OFFICE OF THE INSPECTOR GENERAL

**QUICK-REACTION REPORT ON THE MANAGEMENT OF  
THE TITAN IV SOLID ROCKET MOTOR UPGRADE  
SUBCONTRACT**

Report Number 92-132

September 2, 1992

This is a special version of Report No. 92-132 that omits Government sensitive data and contractor proprietary data.

**Department of Defense**

**The following acronyms are used in this report.**

**FAR.....Federal Acquisition Regulation**  
**RFP.....Request for Proposals**  
**SRM.....Solid Rocket Motor**  
**SRMU.....Solid Rocket Motor Upgrade**

Office of the Inspector General

REPORT NO.  
(Project No. 2AS-0007.01) -

September 2, 1992

QUICK-REACTION REPORT ON  
MANAGEMENT OF THE TITAN IV  
SOLID ROCKET MOTOR UPGRADE SUBCONTRACT

EXECUTIVE SUMMARY

**Introduction.** The Air Force's Titan IV is an unmanned, expendable launch vehicle that complements the space shuttle and ensures access to space for certain national security payloads. Martin Marietta's Titan IV Solid Rocket Motor Upgrade (SRMU) subcontract with Hercules is intended to increase reliability, increase performance to launch larger payloads, reduce solid rocket motor cost growth, and eliminate solid rocket motor asbestos and launch waivers. Development and production of SRMU units began in October 1987 with a subcontract price of \$ \* million for the initial \* production units. Despite the original assessments by the Air Force, Martin Marietta and Hercules that SRMU development was low risk, the program has experienced significant technical problems and delays.

**Objective.** As requested by Congress, we reviewed the SRMU subcontract to determine to what extent the fixed-price development and production subcontract contributed to the current unsatisfactory SRMU program status.

**Audit Results.** We concluded that the SRMU fixed-price development and production subcontract awarded to Hercules by Martin Marietta did not contribute to the current unsatisfactory SRMU program status. However, we found that there was no written acquisition plan for the SRMU, and the financing strategy for SRMU development costs was not viable or equitable.

**Summary of Recommendations.** We recommended that the Air Force monitor the completion of Martin Marietta and Hercules' negotiations concerning Hercules' recovery of SRMU development costs and consider restructuring the Titan IV contract provisions to preserve the continuity of the SRMU development effort.

**Management Comments.** In response to the draft report, the Assistant Secretary of the Air Force (Acquisition) disputed several facts in the report. \*

\*  
\*

---

\* Contractor proprietary data deleted.

\*

\*

**Audit Response.** We made appropriate changes to the draft report based on additional input from the Air Force, Martin Marietta and Hercules, although we stand by the basic conclusions of the draft report. We believe that the Air Force, if restructuring is deemed appropriate, can take further action to aid restructuring the Titan IV contract. Therefore, we believe that our revised recommendation is valid. Enclosure 3<sup>o</sup> contains the complete Air Force comments, and Enclosure 4<sup>o</sup> contains our audit response to the Air Force comments. We request that the Assistant Secretary of the Air Force (Acquisition) provide additional comments to the final report by October 2, 1992.

---

\* Contractor proprietary data deleted.  
o For Official Use Only data deleted.

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
BACKGROUND	1
DISCUSSION	3
RECOMMENDATIONS FOR CORRECTIVE ACTION	7
MANAGEMENT COMMENTS	7
AUDIT RESPONSE TO MANAGEMENT COMMENTS	7
REQUEST FOR COMMENTS	8
ENCLOSURE 1 Chronology of Events Affecting the Potential Market for SRMUS	
ENCLOSURE 2 Air Force Involvement in the Acquisition of the SRMU	
ENCLOSURE 3 Department of the Air Force Comments (Not Included)	
ENCLOSURE 4 Audit Response to Air Force Comments (Not Included)	
ENCLOSURE 5 Activities Visited or Contacted	
ENCLOSURE 6 Report Distribution	





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



REPORT  
NO. 92-132

September 2, 1992

MEMORANDUM FOR ASSISTANT SECRETARY OF THE AIR FORCE (FINANCIAL  
MANAGEMENT AND COMPTROLLER)

SUBJECT: Quick-Reaction Report on Management of the  
Titan IV Solid Rocket Motor Upgrade Subcontract  
(Project No. 2AS-0007.01)

Introduction

On November 18, 1991, we began the audit of the Acquisition of the Titan IV Program. The audit objective is to evaluate the effectiveness of the acquisition management of the Titan IV program to determine whether the system is being cost-effectively developed and procured. During the audit, Congress requested that we review the Solid Rocket Motor Upgrade (SRMU) subcontract to determine to what extent the fixed-price form of the development subcontract contributed to the current unsatisfactory SRMU program status. We concluded that the form of the SRMU fixed-price development subcontract awarded to Hercules by Martin Marietta did not contribute to the current unsatisfactory SRMU program status. However, we found problems with the financing strategy for SRMU development costs. This quick-reaction report is being provided to alert management of the need to reconsider restructuring the Air Force Titan IV contract with Martin Marietta concerning Hercules' recovery of SRMU development costs. The activities we visited or contacted while reviewing this particular issue are listed in Enclosure 5. Other issues developed during our audit of the Titan IV program will be reported in a subsequent audit report.

Background

The Titan IV program is managed by the Titan IV Program Office at Air Force Space Systems Division, Air Force Materiel Command (formerly the Air Force Systems Command). The Titan IV is an unmanned, expendable launch vehicle that complements the space shuttle and carries certain national security payloads. In February 1985, the Air Force awarded Martin Marietta a contract for development of the Titan IV and production of 10 Titan IV launch vehicles. In 1986, the Air Force and Martin Marietta decided to upgrade the Titan IV solid rocket motor (SRM) because of the space shuttle accident and an engine failure on the

Titan 34D, another unmanned, expendable launch vehicle. The planned SRM upgrade was intended to enhance reliability, increase performance and capability to launch larger payloads, reduce SRM cost growth, and eliminate SRM asbestos and launch waivers. Because the Air Force and Martin Marietta considered technical risks to be low, they planned an acquisition strategy whereby the SRM upgrade would be concurrently developed and produced. In addition, as protection for the launch schedule, Martin Marietta informed us they negotiated the option for SRMs in the event SRMUs were not developed on time. This Martin Marietta assertion is referred to as a back-up plan in the remaining portion of the report.

Since the Air Force had not planned, programmed, and budgeted funds for the SRMU, an unorthodox financing method was decided upon for SRMU development costs. Martin Marietta's request for proposals (RFP), which was reviewed by the Air Force Space Systems Division, stipulated that bidders could propose recovery of SRMU development costs to be amortized against production contracts for up to the first \* SRMU units produced. The RFP also indicated that the initial SRMU would be included, at the earliest, in the \* Titan IV launch vehicle. On June 4, 1987, Martin Marietta clarified the RFP to establish \* units as the maximum initial SRMU order and to permit expansion of the development cost amortization base. The clarification established \* SRMU units as the minimum number of production units to amortize development costs against and allowed bidders to spread development costs over a greater number of SRMU units if they desired. In addition, Martin Marietta stated that the successful bidder would be selected as a "winner-take-all" supplier for future Titan IV SRMs, and the Air Force may have a requirement for a total of \* Titan IV launch vehicles, with conversion to SRMUs starting with the \* vehicle. Enclosure 1 provides a chronology of events affecting the potential market of \* SRMUs identified in Martin Marietta's RFP amendments dated April 27 and June 4, 1987.

In Hercules' final offer, it bid to recover and amortize SRMU development costs against contracts for the first \* SRMU units produced. Hercules stated that this bid was made based on Martin Marietta's June 4, 1987, letter. In October 1987, Martin Marietta awarded Hercules an advanced authority to proceed contract for about \$ \* million which was later definitized as a fixed-price incentive fee/award fee contract, totaling \$ \* million, for the development and production of \* SRMUs. Martin Marietta negotiated a ceiling price of \$ \* million for SRMU development costs, of which \$ \* million was to be amortized against contracts for the first \* SRMU units produced. Of the \$ \* million, about \$ \* million was to be amortized against the initial production contract for \* units.

---

\* Contractor proprietary data deleted.

Problems between Hercules and Martin Marietta have led to a lawsuit by Hercules and counterclaims by Martin Marietta.

### Discussion

We concluded from available evidence that Hercules was unaware of Martin Marietta's SRM back-up plan at the time the SRMU subcontract was awarded. We believe that Hercules should have been made aware of this information before the subcontract was awarded. However, we also determined that shortly after the award of the subcontract, Hercules became aware of the SRM back-up plan and chose not to pursue an aggressive resolution of this issue before subcontract terms were definitized.

Potential market. In its RFP, Martin Marietta stated that the successful bidder would be selected as a "winner-take-all" supplier for future Titan IV SRMs. However, Martin Marietta began separate negotiations in May 1987 with Chemical Systems Division, United Technologies, to procure long-lead materiel for \* SRMs and an option for long-lead materiel for \* additional SRMs. This action was initiated and negotiations were completed before the SRMU contract was awarded in October 1987. Martin Marietta stated to us that this back-up plan was necessary to protect the Titan IV launch schedule in the event that the successful bidder for the SRMU encountered difficulties in successfully developing the SRMU. Therefore, the existence of this SRMU back-up plan was of importance to SRMU bidders in knowing that the potential market for SRMUs could be reduced by \* or by as many as \* in the event of SRMU development delays. The Air Force Titan IV Program Office approved Martin Marietta's decision to procure long-lead materiel for additional SRMs before the SRMU contract was awarded in October 1987.

Hercules asserts that it would not have bid to amortize the development costs against \* SRMUs had it known that the potential SRMU market was reduced by \*. The Air Force Titan IV Program Office stated that "it is possible" that Hercules did not know of the SRM back-up plan when Hercules bid.

Martin Marietta provided documentation showing that Hercules was briefed in December 1986 that additional SRMs would be procured; however, the subject of the Martin Marietta briefing was second sourcing the SRM. Subsequently, Martin Marietta decided not to second source the SRM but instead decided to develop and procure upgraded SRMs. Based on that decision, in March 1987, Martin Marietta released the SRMU RFP, which asserted there would be a "winner-take-all."

---

\* Contractor proprietary data deleted.

Martin Marietta stated that the success of the SRMU procurement strategy was contingent on an orderly transition plan. This back-up plan provided for continued SRM capability until development of the SRMU was successfully completed. Accordingly, Martin Marietta stated that its decision to procure long-lead materiel for the \* SRMs was to assure that gaps in the Titan IV launch capability did not exist. The Air Force modified the Titan IV contract to add this procurement and a contract clause to credit the \* SRMs from United Technologies and replace them with SRMUs if the SRMU development program was completed on time. We found no indication that Hercules was informed of the SRM back-up plan after release of the SRMU RFP and before contract award in October 1987. However, the trade press subsequently covered the back-up contract. Articles in the Aerospace Daily showed Hercules should have been aware shortly after the award of the SRMU subcontract that the Air Force and Martin Marietta intended to procure more SRMs. An October 28, 1987, article quoted the Secretary of the Air Force as stating that "it will take SRMs from both manufacturers (Hercules and United Technologies) to support production of 10 Titan IVs per year, . . . and CSD (United Technologies) will stay in the program." An October 30, 1987, article quoted Air Force officials as later stating that "Martin Marietta doesn't intend to keep buying the CSD motor once Hercules can deliver ten sets of SRMUs . . . and the Air Force has funded long-lead procurement for six more. The service needn't commit itself fully to the additional six until next fall (1988)."

Hercules confirmed to us that it became aware of Martin Marietta's procurement of long-lead materiel for \* SRMs in November 1987. Hercules stated it mildly protested to Martin Marietta at that time, but made the management decision not to request that Martin Marietta renegotiate the financing strategy for recovery of SRMU development costs. Hercules stated that it made this decision because it believed it could develop the SRMU on time and would be awarded the contract for an additional \* SRMUs very soon. For this reason, Hercules stated that it did not raise the issue with Martin Marietta of renegotiating the number of production units against which to amortize SRMU development costs before definitizing the SRMU subcontract terms on July 19, 1988.

Since the SRMU contract award in October 1987, there have been numerous delays in the SRMU development effort and the extent of the initial miscalculations on program risk by all parties is now clear. Martin Marietta and Hercules encountered difficulties establishing and implementing the SRMU system design, and the Air Force's Titan IV Program Office did not provide adequate oversight of Martin Marietta's administration of

---

\* Contractor proprietary data deleted.

the subcontract award. Hercules experienced several accidents during development of the SRMU that also contributed to program cost overruns and schedule delays. Accordingly, they exercised the option to build \* SRMs on September 15, 1988.

On September 7, 1988, Martin Marietta notified the Air Force of its intent not to exercise the option for long-lead materiel for \* additional SRMs from United Technologies. Martin Marietta stated, "Given SRMU development progress, it does not appear to be in the program's best interest to procure long-lead hardware for the \* remaining SRM vehicles." The contracting officer at Headquarters, Air Force Space Systems Division, notified Martin Marietta that it concurred with this action on September 12, 1988.

However, the subsequent SRMU development delays caused Martin Marietta to subcontract with United Technologies on September 22, 1989, for long-lead materiel for \* additional SRMs and on August 9, 1991, for long-lead materiel for \* additional SRMs to meet Titan IV launch requirements. This will further reduce the potential market for SRMUs to \* units, of which \* units were included on the initial production contract. As of March 31, 1992, the Air Force was uncertain whether it will need the other \* SRMU units because changed world conditions have reduced potential requirements for Titan IV launch vehicles. Consequently, Hercules' recovery of SRMU development costs, with an estimated cost at completion totaling \$ \* million as of the time of our audit, may be limited to \$ \* million (exclusive of added scope and tooling development costs) for the \* units under contract.

Hercules did not take action to seek financial damages from Martin Marietta until it became apparent that follow-on buys of the SRMU would not be coming soon because of delays incurred in the SRMU development. On November 21, 1990, Hercules notified Martin Marietta that it believed that it had been financially damaged by the award of SRMs to a company other than Hercules in breach of the winner-take-all terms in the RFP.

Acquisition plans and oversight. The Titan IV program officials did not ensure that a comprehensive acquisition plan was developed that allowed for schedule and cost risks associated with the acquisition of the Titan IV SRMU. Federal Acquisition Regulation (FAR), part 7, "Acquisition Planning," requires that an acquisition plan specify the effects on cost and schedule risks if concurrent development and production are planned and address the effects of contractors not achieving contract goals in terms of cost and schedule. However, Martin Marietta did not prepare a written acquisition plan for the SRMU subcontract, and

---

\* Contractor proprietary data deleted.

the Air Force did not update the Titan IV acquisition plan to allow for cost and schedule risks associated with the concurrent development and production effort. Had the required planning and updating occurred, the flaws in the financing plan for the subcontract would have been readily apparent.

Air Force Titan IV Program Office involvement with the SRMU subcontract award included meetings with Martin Marietta concerning requirement studies, funding, the RFP, and source selection, as detailed in Enclosure 2. There were opportunities for the Air Force to intervene to ensure that an equitable, viable SRMU development cost financing arrangement was put into place. Those opportunities were not exploited.

Contractors' request for restructuring. In July 1991, Martin Marietta and Hercules submitted a memorandum of intent to the Air Force to restructure the Titan IV contract, including provisions to enable Martin Marietta and Hercules to amortize all SRMU development costs against the initial \* production units and to change the contract type from fixed-price incentive fee/award fee to cost-plus-award-fee for the initial \* production units. In August 1991, Titan IV program officials denied the request, because they did not have the authority to change the contract type. In denying the restructure request, the Air Force officials did not address the development cost equity issue, although internal Air Force documents indicated an awareness of the problems with the original subcontract financing structure. A restructuring decision would have entailed returning to the Congress for additional funding. The Air Force response stated that the Assistant Secretary of the Air Force (Acquisition) advised Martin Marietta it would need to submit a formal restructure proposal for the Government to consider changes to the contract structure.

In our draft report, we concluded that the Air Force could either let the ongoing litigation run its course or move proactively to put the SRMU development effort on a sound and equitable financial footing. We recommended the latter option. Meanwhile, the House Appropriations Committee included a provision in the House Bill for FY 1993 Defense Appropriations requiring the Air Force to reimburse Hercules an additional \$120 million.

During the course of finalizing this report, Martin Marietta and Hercules initiated discussions to negotiate damages concerning Hercules' recovery of SRMU development costs. We fully support the speedy completion of these negotiations, which would enable the Air Force to preserve the continuity of the SRMU development effort. We therefore revised the recommendation

---

\* Contractor proprietary data deleted.

contained in the draft report to acknowledge the on-going negotiations between Martin Marietta and Hercules.

### Recommendation for Corrective Action

We recommend that the Assistant Secretary of the Air Force (Acquisition) monitor the completion of Martin Marietta and Hercules' negotiations concerning Hercules' recovery of SRMU development costs and consider restructuring the Titan IV contract to preserve the continuity of the SRMU development effort.

### Management Comments

The Assistant Secretary of the Air Force (Acquisition) stated that several errors and omissions of key facts and incorrect interpretations in the draft report resulted in an incomplete representation of the SRMU program. He further stated that the draft report inaccurately presumed an inequity in the SRMU subcontract terms and unfairly assigns responsibility for the presumed inequity to the Air Force. In response to the draft report recommendation, he stated that the Air Force has considered restructuring the Titan IV contract but is not in a position to take further action. \*

\*  
\*  
\*

\* The complete Air Force response is contained in Enclosure 3.°

### Audit Response to Management Comments

We made appropriate changes to the report content based on additional information provided to us by the Air Force, Martin Marietta, and Hercules after the issuance of the draft report. However, none of the information provided to us affected the basic conclusion we drew in the draft report. Specifically, we found no indication that Hercules was informed of the existence of Martin Marietta's SRM back-up plan and its potential effect on the number of production units to amortize SRMU development costs against before the SRMU advanced authority to proceed contract was awarded. Our detailed response to Air Force comments on the factual content of the draft report is contained in Enclosure 4.° In reference to the revised recommendation, we believe that the Air Force can, if restructuring is deemed appropriate, take further action to facilitate restructuring the Titan IV contract. Therefore, we request the Assistant Secretary to respond to the revised recommendation when responding to the final report.

---

\* Contractor proprietary data deleted.  
° For Official Use Only data deleted.

Request for Comments

DoD Directive 7650.3 requires that all audit recommendations be resolved promptly. Therefore, we request that the Assistant Secretary of the Air Force (Acquisition) provide final comments on the unresolved recommendation by October 2, 1992. If appropriate, you may propose alternative methods for accomplishing the desired improvement. The recommendation is subject to resolution in accordance with DoD Directive 7650.3 in the event of nonconcurrence or failure to comment. This report identifies no potential monetary benefits; however, establishing a more equitable subcontract financing arrangement would be in the best long-term interest of the Government and the contractors.

The courtesies extended to the staff during the audit are appreciated. If you have any questions on this audit, please contact Mr. John Meling, Program Director, at (703) 614-3994 (DSN 224-3994) or Mr. Thomas Bartoszek, Project Manager, at (703) 693-0481 (DSN 223-0481). Enclosure 6 lists the distribution of this report.



Robert J. Lieberman  
Assistant Inspector General  
for Auditing

Enclosures

cc:  
Secretary of the Air Force

**SPECIAL WARNING**

This report contains contractor information that may be company confidential or proprietary. U.S.C., title 18, sec. 1905 and U.S.C., title 41, sec. 423 provide specific penalties for the unauthorized disclosure of company confidential or proprietary information. The document must be safeguarded in accordance with DoD Regulation 5400.7-R. The report contains proprietary data from Martin Marietta and Hercules. In separate memorandums Martin Marietta and Hercules have agreed to waive their proprietary restrictions in regard to the release of the audit report to one another.

CHRONOLOGY OF EVENTS AFFECTING THE POTENTIAL MARKET FOR SRMUs

<u>Date</u>	<u>Event</u>	<u>Potential SRMU Requirements</u>	<u>SRMUs Under Contract</u>
Mar. 13, 1987	Martin Marietta released SRMU RFP, specifying a potential market of * production units.	*	
Apr. 27, 1987	Martin Marietta advised bidders for the SRMU subcontract that potential Titan IV launch vehicle requirements may increase to *, with the earliest use of the SRMU on the * (* less * vehicles without the SRMU equal *) Titan IV launch vehicle.	*	
May 12, 1987	Martin Marietta began negotiations with United Technologies (UT) to procure long-lead materiel for * SRMs and an option to procure another * SRMs in place of SRMUs.	< *>	1
June 4, 1987	Martin Marietta reaffirmed to bidders that the potential market for SRMUs had not changed from April 27, 1987.		
July 15, 1987	Martin Marietta awarded a letter contract to UT to procure long-lead materiel for * SRMs and an option to procure another * SRMs in place of SRMUs.		
Oct. 21, 1987	Martin Marietta awarded an advanced authority to proceed contract to Hercules for * SRMU production.		*
June 27, 1988	Martin Marietta issued a request for updated pricing data for * Titan IV follow-on SRMUs with an option for an additional * SRMUs.		
Subtotal <sup>1</sup>		<u>*</u>	<u>*</u>

<sup>1</sup> Remainder of chart on page 2 of 2.

\* Contractor proprietary data deleted.

CHRONOLOGY OF EVENTS AFFECTING THE POTENTIAL MARKET FOR SRMUs (Continued)

<u>Date</u>	<u>Event</u>	<u>Potential SRMU Requirements</u>	<u>SRMUs Under Contract</u>
Aug. 17, 1988	Hercules submitted a proposal to Martin Marietta for * Titan IV SRMUs with an option for an additional * SRMUs.		
Sept. 7, 1988	Martin Marietta informed the Air Force of its intent not to exercise the option for long-lead materiel for * SRMs.		
Sept. 15, 1988	Martin Marietta exercised the option with UT to build * SRMs.		
Sept. 22, 1989	Martin Marietta issued a contract to UT to procure long-lead materiel for the other * SRMs due to SRMU development delays.	< * >	1
Oct. 19, 1989	Martin Marietta notified Hercules of follow-on buy cancellation due to inclusion of investment profit in the Hercules proposal which the Air Force considered an unallowable expense.		
Aug. 9, 1991	Martin Marietta awarded a contract to UT for long-lead materiel for another * SRMs in place of SRMUs due to SRMU development delays.	< * >	—
Total		<u>*2</u>	<u>*</u>

<sup>2</sup> As of March 31, 1992, the Air Force was uncertain whether it will need another \* SRMUs because changed world conditions have reduced potential requirements for Titan IV launch vehicles.

\* Contractor proprietary data deleted.

AIR FORCE INVOLVEMENT IN THE ACQUISITION OF THE SRMU

<u>Date</u>	<u>Event</u>
Mar. 1986	Air Force (Titan IV Program Office) and Martin Marietta initiated studies to improve the Titan IV SRMs.
July 10, 1986	At a Titan IV program review, Martin Marietta and the Commander, Space Systems Division, agreed that an increase in solid rocket motor reliability was feasible.
July through Oct. 1986	The Air Force and Martin Marietta jointly visited * solid rocket motor manufacturers * * to evaluate their facilities and ability to develop and manufacture solid rocket motors.
Sept. 15, 1986	Martin Marietta met with the Commander, Eastern Space and Missile Center, to review the Titan IV improvement program and discuss the SRMU.
Sept. 16, 1986	Martin Marietta met with the Commander, Space Systems Division, to determine if an SRMU was appropriate.
Dec. 1986	Air Force informed Martin Marietta that near-term funding of the SRMU was not available.
Jan. 6, 1987	Martin Marietta briefed the Commander, Space Systems Division, on the status of SRMU activities. The Commander gave Martin Marietta approval to prepare and submit an unsolicited proposal to the Air Force Space Systems Division for development and initial production of the SRMU.
Feb. through Mar. 1987	Martin Marietta provided the SRMU draft RFP to the Air Force for review and comment.
Mar. 11, 1987	Martin Marietta addressed Air Force and Aerospace Corporation concerns on the SRMU acquisition. Martin Marietta's solution was to use UT's SRM as a backup to the SRMU development effort to protect the Titan IV launch schedule.

---

\* Contractor proprietary data deleted.

AIR FORCE INVOLVEMENT IN THE ACQUISITION OF THE SRMU (Continued)

<u>Date</u>	<u>Event</u>
Mar. 18, 1987	UT, Martin Marietta, and Space Systems Division representatives visited Vandenberg Air Force Base as part of fact-finding efforts for the SRM negotiation.
Apr. 30, 1987	Space Systems Division letter to Martin Marietta, "Space Launch Mission Model," increased the potential Titan IV launch requirement.
May 12, 1987	Air Force (various activities including the Titan IV Program Office) participated with Martin Marietta in reviewing SRMU proposals.
July 3, 1987	Martin Marietta met with Air Force officials to establish a method to limit the Air Force commitment and funding liability for SRMU development.
July 16, 1987	Martin Marietta briefed the Commander, Eastern Space and Missile Center, and the Deputy Commander, Launch and Control Systems, Space Systems Division, on the SRMU proposal evaluation, results, recommendations, and contract implementation methods.
July 17, 1987	Martin Marietta briefed the Vice Commander, Space Systems Division, on the SRMU proposal evaluation, results, recommendations, and contract implementation methods.
July 27, 1987	Martin Marietta briefed the Commander, Space Systems Division, on the SRMU source selection.
Oct. 19, 1987	Space Systems Division letter change order to Martin Marietta's Titan IV contract approved the procurement with UT for * SRMs and an option to procure long-lead materiel for * additional SRMs.

---

\* Contractor proprietary data deleted.

ENCLOSURE 3, DEPARTMENT OF THE AIR FORCE COMMENTS and  
ENCLOSURE 4, AUDIT RESPONSE TO AIR FORCE COMMENTS

Enclosures 3 and 4 were excluded from this version of the report because the Air Force has identified this information as being "For Official Use Only."



ACTIVITIES VISITED OR CONTACTED

Office of the Secretary of Defense

Office of the Under Secretary of Defense for Acquisition,  
Washington, DC  
Office of the Assistant Secretary of Defense (Command, Control,  
Communications and Intelligence), Washington, DC  
Office of the Director of Defense Procurement, Washington, DC

Department of the Air Force

Headquarters, Space Systems Division, Air Force Materiel Command,  
Los Angeles Air Force Base, CA

Other Defense Activities

Defense Contract Management Area Office, Denver, CO  
Defense Plant Resident Office, Martin Marietta, Denver, CO  
Defense Contract Audit Agency Resident Office, Salt Lake City, UT

Defense Contractors

Martin Marietta, Denver, CO  
Hercules, Salt Lake City, UT



REPORT DISTRIBUTION

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition  
Assistant Secretary of Defense (Command, Control, Communications  
and Intelligence)  
Assistant Secretary of Defense (Legislative Affairs)  
Assistant Secretary of Defense (Public Affairs)  
Comptroller of the Department of Defense  
General Counsel of the Department of Defense

Department of the Air Force

Assistant Secretary of the Air Force (Acquisition)  
Assistant Secretary of the Air Force (Financial Management and  
Comptroller)  
Headquarters, Air Force Space Command  
Titan IV Program Office

Non-DoD Organizations

Office of Management and Budget  
U.S. General Accounting Office, NSIAD Technical Information  
Center

Congressional Committees:

Senate Subcommittee on Defense, Committee on Appropriations  
Senate Committee on Armed Services  
Senate Committee on Governmental Affairs  
Ranking Minority Member, Senate Committee on Appropriations  
House Committee on Appropriations  
House Subcommittee on Defense, Committee on Appropriations  
Ranking Minority Member, House Committee on Appropriations  
House Committee on Armed Services  
House Committee on Government Operations  
House Subcommittee on Legislation and National Security,  
Committee on Government Operations

Senator Orrin G. Hatch  
Representative John P. Murtha