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REPORT TO THE CONGRESS



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Use Of Missile Procurement Funds To Finance Research And Development Efforts B-146876

Department of the Air Force

**BY THE COMPTROLLER GENERAL
OF THE UNITED STATES**

770246/087469

MAY 7, 1969



COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B- 146876

To the President of the Senate and the
Speaker of the House of Representatives

Enclosed is a report on the use of missile procurement funds by the Department of the Air Force to finance research and development efforts. Our review preparatory to this report was made pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), the Accounting and Auditing Act of 1950 (31 U.S.C. 67), and the authority of the Comptroller General to examine contractors' records, as set forth in contract clauses prescribed by 10 U.S.C. 2313(b).

Copies of this report are being sent to the Director, Bureau of the Budget; the Secretary of Defense; and the Secretary of the Air Force,

A handwritten signature in cursive script, reading "James B. Stewart".

Comptroller General
of the United States

D I G E S T -

WHY THE REVIEW WAS MADE

During a review at a contractor's plant, the General Accounting Office (GAO) noted that a substantial amount of apparent research and development (R&D) effort was being financed from procurement funds rather than from R&D funds. The effort was being performed under supplemental agreements to basic contracts for MINUTEMAN missile motors.

In view of congressional interest in the funding of R&D and of the possible harmful effects on the management and control of R&D activities in using procurement funds rather than R&D funds, GAO extended its review to the contracting activity, the Air Force Space and Missile Systems Organization (SAMSO), El Segundo, California.

FINDINGS AND CONCLUSIONS

During the period 1964 to 1967, SAMSO awarded supplemental agreements for a product improvement program totaling 922.5 million to the three MINUTEMAN missile motor contractors. Although these agreements were financed from missile procurement funds, in GAO's opinion, most of the work performed involved R&D effort rather than product improvement. For example:

- One project, valued at \$1.2 million, was to advance the state-of-the-art of solid rocket motor technology.
- Another project, valued at \$2 million, was to test-fire two 74-inch-diameter motors (the largest diameter motor on the present and planned MINUTEMAN is 65-1/2 inches). (See app. II for further examples.)

SAMSO officials cited Air Force Procurement Instruction (AFPI) 59-500 as their authority for financing the supplemental agreements with missile procurement appropriations. GAO found, however, that the disclosure and approval procedures of AFPI 59-500 had not been followed. As a result, no higher level of authority had the opportunity to consider whether the work to be performed was appropriately classified as a product improvement or whether the work was necessary and of a higher priority than unfunded R&D projects,

Tear Sheet

MAY 7, 1969

RECOMMENDATIONS OR SUGGESTIONS

GAO proposed that (1) full disclosure be made in program budget submissions to allow for ready detection and critical evaluation of significant provisions for product improvements by officers having budget approval responsibility and (2) R&D effort be procured from Research, Development, Test, and Evaluation (RDT&E) funds rather than from funds appropriated for the procurement of approved equipment.

GAO also suggested that (1) to avoid situations such as the one discussed in this report, the Air Force clarify the provisions of AFPI 59-500 through 59-505 and (2) the Secretary of Defense examine into the matters discussed in this report to determine if similar situations existed in other Air Force programs or other organizational elements within the Department of Defense (DOD).

AGENCY ACTIONS AND UNRESOLVED ISSUES

DOD advised GAO that a revised DOD instruction had been issued delineating the circumstances for the use of P&D and production funds **for** product improvement **purposes**. In GAO's opinion, the revised instruction clearly indicated that projects such as those discussed in this report should be financed with R&D appropriations. DOD also advised that section 59, part 5, of the AFPI was being revised and updated and that the need for submitting copies of product improvement proposals to Headquarters, U.S. Air Force would be reemphasized.

Additionally, DOD stated that the Army and Navy had advised that they had no knowledge of any funding deviations of the type discussed in the GAO report and that a review made by the Air Force Systems Command and the Air Force Logistics Command had not disclosed similar instances. (See pp. 9 and 10.)

GAO believes that the actions **taken** or being taken should preclude recurrence of circumstances such as those discussed in its report but plans at a later date to examine into the extent to which SAMSOC has achieved compliance with the revised OOD and Air Force instructions.

MATTERS FOR CONSIDERATION BY THE CONGRESS

The situation described in this report may be of interest to the Congress in its deliberations on agency appropriation requests.

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ABBREVIATIONS

AFPI	Air Force Procurement Instruction
DOD	Department of Defense
GAO	General Accounting Office
PI?	Product Improvement Program
R&D	Research and Development
RDT&E	Research, Development, Test and Evaluation
SAMSO	Space and Missile Systems Organization

D I G E S T

WHY THE REVIEW WAS MADE

During a review at a contractor's plant, the General Accounting Office (GAO) noted that a substantial amount of apparent research and development (R&D) effort was being financed from procurement funds rather than from R&D funds. The effort was being performed under supplemental agreements to basic contracts for MINUTEMAN missile motors.

In view of congressional interest in the funding of R&D and of the possible harmful effects on the management and control of R&D activities in using procurement funds rather than R&D funds, GAO extended its review to the contracting activity, the Air Force Space and Missile Systems Organization (SAMS0), El Segundo, California.

FINDINGS AND CONCLUSIONS

During the period 1964 to 1967, SAMS0 awarded supplemental agreements for a product improvement program totaling \$22.5 million to the three MINUTEMAN missile motor contractors. Although these agreements were financed from missile procurement funds, in GAO's opinion, most of the work performed involved R&D effort rather than product improvement. For example:

- One project, valued at \$1.2 million, was to advance the state-of-the-art of solid rocket motor technology.
- Another project, valued at \$2 million, was to test-fire two 74-inch-diameter motors (the largest diameter motor on the present and planned MINUTEMAN is 65-1/2 inches). (See app. II for further examples.)

SAMS0 officials cited Air Force Procurement Instruction (AFPI) 59-500 as their authority for financing the supplemental agreements with missile procurement appropriations. GAO found, however, that the disclosure and approval procedures of AFPI 59-500 had not been followed. As a result, no higher level of authority had the opportunity to consider whether the work to be performed was appropriately classified as a product improvement or whether the work was necessary and of a higher priority than unfunded R&D projects.

RECOMMENDATIONS OR SUGGESTIONS

GAO proposed that (1) full disclosure be made in program budget submissions to allow for ready detection and critical evaluation of significant provisions for product improvements by officers having budget approval responsibility and (2) R&D effort be procured from Research, Development, Test, and Evaluation (RDT&E) funds rather than from funds appropriated for the procurement of approved equipment.

GAO also suggested that (1) to avoid situations such as the one discussed in this report, the Air Force clarify the provisions of AFPI 59-500 through 59-505 and (2) the Secretary of Defense examine into the matters discussed in this report to determine if similar situations existed in other Air Force programs or other organizational elements within the Department of Defense (DOD) .

AGENCY ACTIONS AND UNRESOLVED ISSUES

DOD advised GAO that a revised DOD instruction had been issued delineating the circumstances for the use of R&D and production funds for product improvement purposes. In GAO's opinion, the revised instruction clearly indicated that projects such as those discussed in this report should be financed with R&D appropriations. DOD also advised that section 59, part 5, of the AFPI was being revised and updated and that the need for submitting copies of product improvement proposals to Headquarters, U.S. Air Force would be reemphasized.

Additionally, DOD stated that the Army and Navy had advised that they had no knowledge of any funding deviations of the type discussed in the GAO report and that a review made by the Air Force Systems Command and the Air Force Logistics Command had not disclosed similar instances. (See pp. 9 and 10.)

GAO believes that the actions taken or being taken should preclude recurrence of circumstances such as those discussed in its report but plans at a later date to examine into the extent to which SAMSOC has achieved compliance with the revised DOD and Air Force instructions.

MATTERS FOR CONSIDERATION BY THE CONGRESS

The situation described in this report may be of interest to the Congress in its deliberations on agency appropriation requests.

INTRODUCTION

The General Accounting Office has reviewed the use of missile procurement appropriations by the Space and Missile Systems Organization, Department of the Air Force, in financing a product improvement program under supplemental agreements to basic contracts for MINUTEMAN missile motors.

SAMSO was activated on July 1, 1967, at Los Angeles Air Force Station in El Segundo, California, and is the major Department of Defense agency for development of this nation's present and future space and ballistic missile programs. The formation of SAMSO realigned the former Ballistic Systems Division and Space Systems Division into a single entity under the Air Force Systems Command. The activities discussed in this report which occurred prior to July 1, 1967, were the responsibility of the Ballistic **Sys-**tems Division.

The mission of SAMSO is to plan, program, and manage efforts to acquire qualitatively superior space and missile systems, subsystems, and related hardware; provide for the activation of missile sites and ground launch facilities; perform the functions of launch, on-orbit tracking, data acquisition, and command and control of DOD satellites; and effect recovery of various space packages.

The MINUTEMAN was the major intercontinental ballistic missile program being managed by SAMSO at the time of our review. It is a three-stage, solid-propellant missile.

The basic contracts for production and delivery of the MINUTEMAN missile motors were awarded to Thiokol Chemical Corporation (first stage), Aerojet-General Corporation (second stage), and Hercules Incorporated (third stage).

Although we made inquiries into other **SAMSO** programs to assure ourselves that our findings concerning the MINUTEMAN were not applicable to them, we did not attempt to review the overall activities of SAMSO or evaluate the management of any of its programs. The scope of our review is presented on page 11.

The principal officials of the Department of Defense and the Department of the Air Force responsible for administration of activities discussed in this report are set forth in appendix IV.

MISSILE PROCUREMENT FUNDS
USED TO FINANCE RESEARCH AND DEVELOPMENT EFFORTS

During the period June 1964 through July 1967, SAMSO used about \$18.1 million of missile procurement appropriations to finance work which, in our opinion, was of an R&D nature and which should have been financed with RDT&E funds.

RESEARCH AND DEVELOPMENT EFFORTS
CLASSIFIED AS A PRODUCT
IMPROVEMENT PROGRAM

This work was performed by three contractors pursuant to supplemental agreements to basic contracts for production and delivery of MINUTEMAN missile motors. The supplemental agreements were awarded to allow the contractors to carry out a propulsion product improvement program (PIP). The contractors involved and their share of the PIP funds are shown below, and more detailed information concerning the supplemental agreements is included in appendix I.

	<u>(million)</u>
Thiokol Chemical Corporation	\$11.7
Aerojet-Genera I Corporation	5.8
Hercules Incorporated	<u>5.0</u>
	<u>\$22.5</u>

We found that missile procurement appropriation moneys had been used to finance the supplemental agreements, except for \$37,400 of RDT&E appropriation funds. However, most of the work assigned to the three MINUTEMAN propulsion contractors under the supplemental agreements was, in our opinion, of an R&D nature rather than approved improvements to the motors being produced. The \$18.1 million of work which appeared to be R&D oriented is identified by contractor in appendix I, and descriptions of some of the work performed are included in appendix 11. For example, work valued at about \$1.2 million was described under a supplemental agreement as follows:

"Research projects, the objective of which is to advance the state-of-the-art of solid rocket motor technology. This effort is to culminate in written reports of feasibility of new design concepts concerned with the development of high performance propellants."

SAMSO officials commented at the time of our fieldwork that the primary purpose of the supplemental agreements was to make it possible for the contractors to maintain a standby pool of engineers and scientists who would assist in the solution of possible production problems which might adversely affect critical schedule and mission requirements. They also stated that the product improvement projects were assigned to the contractors to keep the standby employees usefully engaged in advancing solid rocket motor technology during the time these standby employees were not needed to assist with production problems. The projects performed under the PIP were jointly selected by **SAMSO**, the Air Force Rocket Propulsion Laboratory, and the Aerospace Corporation. The latter two organizations provided technical direction of the projects.

In classifying the supplemental agreements as a PIP, **SAMSO** officials cited **AFPI** 59-500 through 59-505 as authority. The **AFPI** defines product improvement and authorizes the use of production funds for several categories of effort. One of these categories, "Large Increases in Performance," is defined under **AFPI** 59-503(d) as "development of equipment which is different in major respects from equipment being produced, and giving large increases in performance, but which remains the same type or category of product." A footnote states that this and the other listed categories are not to be construed as permitting basic development to be carried on as product improvement.

We do not believe it was reasonable to consider that the work performed by the standby employees under the supplemental agreements in advancing solid rocket motor technology fell within the meaning of the above category or other categories listed in the **AFPI**. In this connection, a **SAMSO** official informed us that none of the projects being conducted under the **MINUTEMAN** propulsion PIP had been approved for

incorporation into the MINUTEMAN missile and that there had been no firm decision to incorporate these efforts into any weapon system. He advised us that the projects had been directed toward potential application to future weapon systems and that, before this would be possible, additional development, test, and evaluation would be required,

DISCLOSURE AND APPROVAL
PROCEDURES NOT FOLLOWED

Although SAMSO officials cited AFPI 59-500 through 59-505 as authority, we found no evidence that the disclosure and approval procedure requirements for PIP set forth in the AFPI had been followed. The AFPI stipulates that the buying activity is to furnish the following information to higher echelons when proposing product improvement requirements:

1. A description of the item to be improved.
2. A description and justification of the product improvement to be conducted, including name of contractor, purpose and scope of work, and probable use of improved item.
3. Estimated cost of the program by fiscal year.
4. Comments of the buyer and the laboratory.

The AFPI provides that a copy of the above information is to be submitted by Headquarters, Air Force Systems Command, to Headquarters, United States Air Force as backup support and justification for budget requirements,

We were advised by SAMSO officials that the procedure in the AFPI had not been followed because the primary purpose of the PIP contracts was not product improvement but provision for the contractors to maintain a standby pool of engineers and scientists.

As a result, the funds provided for PIP were not specifically disclosed in the documented budget information submitted by SAMSO to AFSC and higher headquarters but were included as part of the funds required for missile procurement.

Since officials at higher headquarters had not received documentary information concerning the PIP at SAMS0, they did not have the opportunity to formally approve or disapprove the practice of financing standby personnel with PIP funds or the use of procurement funds for work of an R&D nature.

Of even more significance, officials at higher headquarters were not provided information which would have enabled them to determine whether the R&D effort being performed under the PIP was necessary or of higher priority than other unfunded R&D projects.

AGENCY COMMENTS

In a letter dated June 5, 1968, we advised the Secretary of Defense of our findings and proposed that program and procurement officials be impressed with the need for (1) full disclosure in program budget submissions of significant provisions for product improvements to allow for ready detection and critical evaluation by budget approval officers and (2) procuring R&D effort from RDT&E funds rather than from funds appropriated for the procurement of approved equipment.

We also proposed that, to avoid recurrence of circumstances such as discussed in this report, the Air Force clarify the provisions of AFPI 59-500 through 59-505. In addition, we suggested to the Secretary that he might wish to examine these matters to determine whether there were similar situations in other Air Force programs and other organizational elements within DOD.

In a letter dated September 26, 1968 (see app. 111), the Assistant to the Deputy Assistant Secretary (Procurement), Department of the Air Force, commented on our findings on behalf of the Secretary of Defense. His comments included the following:

"Under the then existing definitions in AFPI 59-503(d), it was our belief that production funds were properly useable for the procurements in question.

* * * * *

"We agree that the disclosure and approval procedures of AFPI Section 59, Part 5 were not followed for the procurements you cite. *** These procedures are now being followed."

The Assistant to the Deputy Assistant Secretary also commented that, since our review DOD has revised DOD Instruction 7220.5 which clearly delineates the circumstances for **use** of RDT&E funds and production funds for product improvement purposes. He further commented that section 59, **part** 5, of AFPI was being revised and updated, and would

reemphasize the need for submission of a **copy** of the product improvement proposal to Headquarters, United States Air Force. In addition, he commented that compliance with the DOD Instruction and the AFPI should preclude recurrence of the incidents discussed in our report.

In our opinion, the revised 'DOD Instruction 7220.5 clearly indicates that projects such as those discussed in this report should be financed with RDT&E appropriations. Therefore, we agree that proper implementation of it and appropriate revisions to section 59, part 5, of AFPI should preclude recurrence of circumstances such as those discussed in this report. The AFPI revisions, however, had not yet been approved in February 1969.

The Assistant to the Deputy Assistant Secretary also commented that the Army and Navy had advised that they had no knowledge of any pending deviations of the type discussed in this report and that the Air Force Systems Command and Air Force Logistics Command had been instructed to make a review to determine whether there were other instances of the circumstances we described. We were subsequently informed that the reviews had been completed and that similar conditions had not been found.

CONCLUSIONS

In our opinion, SAMSO's procedures were inappropriate in that (1) the cost of retaining contractor personnel in a standby status and having them perform R&D work unrelated to the basic contracts' scope was classified as product improvement, (2) the disclosure and approval procedures for product improvement set forth in the **AFPI** were not followed, and (3) the costs of such R&D work were being paid from procurement funds rather than RDT&E funds.

If properly applied, the revised instruction issued by the DOD and the planned action by the Air Force should preclude further occurrences of the conditions described in this report. We expect at a later date to examine into the extent to which SAMSO has achieved compliance with the revised DOD and Air Force instructions.

SCOPE OF REVIEW

Our review at SAMSO was started because of observations made during an earlier review at one of the contractor's plants. In our review we examined pertinent DOD and Air Force directives, examined selected files and records at SAMSO, and held discussions with responsible Air Force officials. Our review was conducted primarily at SAMSO offices at El Segundo, and Norton Air Force Base, California.

APPENDIXES

APPENDIX I

SUPPLEMENTAL AGREEMENTS PROVIDING FOR
 THE MINUTEMAN PROPULSION
 PRODUCT IMPROVEMENT PROGRAM

<u>Contractor</u>	<u>Contract no.</u>	<u>Supple- mental agree- ment no.</u>	<u>Date</u>	<u>Funds provided for PIP</u>	<u>PIP effort identified as apparent R&D</u>
Aerojet-General Corp.	AF04(694)-308	33	4- 7-65	\$ 2,155,000	\$ 1,152,805
Do.	-734	32	3-16-67	3,159,081	2,013,417
Do.		38	7-25-67	<u>476,000</u>	<u>476,000</u>
				<u>5,790,081</u>	<u>3,642,222</u>
Thiokol Chemical Corp.	-334	5	6- 1-64)	5,000,000	5,000,000
Do.		10	12- 1-64)		
Do.		20	6- 4-65)	2,700,000	2,700,000
Do.		45	8-17-66)		
Do.	-774	5	9-16-65)	2,000,000	1,401,131
Do.		9	1- 1-66)		
Do.	-926	10	12-21-66	<u>2,000,000</u>	<u>2,000,000</u>
				<u>11,700,000</u>	<u>11,101,131</u>
Hercules Powder Company, Inc.	-127	49	1- 1-65	2,300,000	710,047
Do.	-762	18	1-23-67	2,200,000	2,200,000
Do.	-903	19	7-21-67	<u>502,634</u>	<u>502,634</u>
				<u>5,002,634</u>	<u>3,412,681</u>
				<u>\$22,492,715</u>	<u>\$18,156,034</u>

Note: With two exceptions, the supplemental agreements above were funded under missile procurement appropriations (appropriation account 57X3020). The two exceptions, \$30,000 under supplemental agreement 32 to contract -734 and \$7,400 under supplemental agreement 18 to contract -762, were funded under RDT&E appropriation 57x3600.

APPENDIX II

EXAMPLES OF APPARENT RESEARCH AND DEVELOPMENT WORK
PERFORMED UNDER PRODUCT IMPROVEMENT PROGRAM

<u>Contract No.</u>	<u>Supplement agreement No.</u>	<u>Description</u>	<u>Amount</u>
AF04(694)-308 Aerojet-General Corp.	33	Research projects, the objective of which is to advance the state-of-the-art of solid rocket motor technology. This effort is to culminate in written reports of feasibility of new design concepts concerned with the development of high-performance propellants.	\$1,152,805
AF04(694)-734 Aerojet-General Corp.	32	Test-fire two 74-inch-diameter motors, incorporating newly developed case, propellant, and nozzles to demonstrate the latest state-of-the-art in solid rocket technology. (The largest diameter motor used on the present and planned MINUTEMAN is 65-1/2 inches.)	2,013,417
AF04(694)-127 Hercules Powder Co.	49	Research projects, the objective of which is to advance the state-of-the-art of solid rocket motor technology and which will culminate in reports of feasibility of new design concepts relating to high-performance propellant and nozzle.	700,047
AF04(694)-334 Thiokol Chemical Corp.	20	The purpose of this work is to advance the applied state-of-the-art of solid rocket motor technology and will culminate in a report of feasibility of employing a combination of several advance design concepts. The data for the report will stem from the static test firing of 120-inch solid rocket motors.	2,112,848

DEPARTMENT OF THE AIR FORCE
WASHINGTON 20330

OFFICE OF THE SECRETARY

SEP 26 1968

Dear Mr. Bailey:

Reference is made to your letter of June 5, 1968, on "Use by the Air Force of Production Funds for Apparent R&D Projects" (OSD Case #2781), and to our interim reply of July 25, 1968, on the matter.

In our July 25, 1968, letter, we indicated our need for further investigation of the matter and stated we would provide further comments to you on or before September 20, 1968.

Your report states that missile procurement appropriation (57X3020) monies were used to finance certain supplemental agreements, initiated by the Air Force under the Product Improvement Program, which were Research and Development in nature and, therefore, should have been supported with Research, Development, Test and Evaluation (RDT&E) funds.

Your report also states that the disclosure and approval procedures for product improvement programs, as defined in Air Force Procurement Instruction (AFPI) Section 59, Part 5 were not followed.

You conclude that "program and procurement officials should be impressed with the need for (1) full disclosure in program budget submissions to allow for ready detection and critical evaluation by budget approval officers of significant provisions for product improvements and (2) procuring R&D effort from RDT&E funds rather than from funds appropriated for the procurement of approved equipment." You also state that AFPI 59-500 through 59-505 should be clarified to avoid a recurrence of the matters discussed in your letter.

Under the then existing definitions in AFPI 59-503(d), it was our belief that production funds were properly useable for the procurements in question.

Since your review, the Department of Defense has issued revised instruction DODI 7220.5 which clearly delineates the circumstances for use of RDT&E and production funds for "product improvement" purposes. This instruction was implemented by the Air Force under Air Force Regulation 170-3, dated March 28, 1968. The referenced DOD Instruction has been similarly implemented by the Army and the Navy.

APPENDIX III

Page 2

We agree that the disclosure and approval procedures of AFPI Section 59, Part 5 were not followed for the procurements you cite. These procedures are now being followed. This Section and Part of AFPI is being revised and updated, and will reemphasize the need for submission of a copy of the product improvement proposal to Headquarters USAF. More specifically, copies will be submitted to the Directorates of Production and Budget. Compliance with the WD Instruction and the AFPI should preclude recurrence of the incidents discussed in your report.

We have instructed the Air Force Systems and Logistics Commands to make a broad basis review to determine whether there are other instances of the circumstances described in your report. The Army and the Navy advise they have no knowledge of any funding deviations of the type here under consideration.

We appreciate your bringing these matters to our attention and the opportunity afforded to comment on your report.

Sincerely,



LOUIS A. COX
Assistant to
Deputy Assistant Secretary
(Procurement)

Mr. C. M. Bailey
Acting Director, Defense Division
U. S. General Accounting Office

PRINCIPAL OFFICIALS OF
THE DEPARTMENT OF DEFENSE AND
THE DEPARTMENT OF THE AIR FORCE
RESPONSIBLE FOR ADMINISTRATION OF ACTIVITIES
DISCUSSED IN THIS REPORT

	<u>Tenure of office</u>	
	<u>From</u>	<u>To</u>
<u>DEPARTMENT OF DEFENSE</u>		
SECRETARY OF DEFENSE:		
Melvin R. Laird	Jan. 1969	Present
Clark M. Clifford	Mar. 1968	Jan. 1969
Robert S. McNamara	Jan. 1961	Mar. 1968
DEPUTY SECRETARY OF DEFENSE:		
David M. Packard	Jan. 1969	Present
Paul H. Nitze	July 1967	Jan. 1969
Cyrus R. Vance	Jan. 1964	June 1967
ASSISTANT SECRETARY OF DEFENSE (INSTALLATIONS AND LOGISTICS):		
Barry J. Shillito	Jan. 1969	Present
Thomas D. Morris	Aug. 1967	Jan. 1969
Paul R. Ignatius	Dec. 1964	July 1967
<u>DEPARTMENT OF THE AIR FORCE</u>		
SECRETARY OF THE AIR FORCE:		
Robert C. Seamans, Jr.	Jan. 1969	Present
Harold Brown	Oct. 1965	Jan. 1969
Eugene M. Zuckert	Jan. 1961	Sept. 1965
UNDER SECRETARY OF THE AIR FORCE:		
John L. McLucas	Feb. 1969	Present
Townsend Hoopes	Sept. 1967	Feb. 1969
Norman S. Paul	Oct. 1965	Sept. 1967
Brockway McMillan	June 1963	Sept. 1965

PRINCIPAL OFFICIALS OF
THE DEPARTMENT OF DEFENSE AND
THE DEPARTMENT OF THE AIR FORCE
RESPONSIBLE FOR ADMINISTRATION OF ACTIVITIES
DISCUSSED IN THIS REPORT (continued)

	Tenure of office	
	From	To
<u>DEPARTMENT OF THE AIR FORCE</u> (continued)		
ASSISTANT SECRETARY OF THE AIR FORCE (INSTALLATIONS AND LOGIS- TICS):		
Robert H. Charles	Nov. 1963	Present
COMMANDER, AIR FORCE SYSTEMS COMMAND:		
Gen. James Ferguson	Sept. 1966	Present
Gen. Bernard A. Schriever	Apr. 1959	Sept. 1966
COMMANDER, SPACE AND MISSILE SYS- TEMS ORGANIZATION (created July 1, 1967):		
Lt. Gen. John W. O'Neill	July 1967	Present
COMMANDER, BALLISTIC SYSTEMS DI- VISION (became a part of Space and Missile Systems Organization on July 1, 1967):		
Brig. Gen. John L. McCoy	July 1966	June 1967
Maj. Gen. Harry S. Sands, Jr.	July 1964	July 1966
Maj. Gen. Austin Davis	July 1962	July 1964