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REPORT TO THE CONGRESS

Improved Accounting Control Over Equipment At The Kennedy Space Center

B-169658

National Aeronautics and Space Administration

BY THE COMPTROLLER GENERAL OF THE UNITED STATES

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AUG. 11, 1970

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D C 20548

B- 169658

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

This is our report on improved accounting control over equipment at the Kennedy Space Center, National Aeronautics and Space Administration.

Our review was made pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

Copies of this report are being sent to the Director, Office of Management and Budget, and to the Administrator, National Aeronautics and Space Administration.

Elmer B. Staats
Comptroller General
of the United States

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WHY THE REVIEW WAS MADE

The National Aeronautics and Space Administration (NASA) and its contractors are accountable for over $1.7 billion worth of Government-owned equipment. About $430 million worth of this equipment is at the Kennedy Space Center.

Accurate and timely information on property is essential for management to maintain efficient and economical operations, to prepare financial reports to the Congress, and to establish responsibility for custody of property.

The Federal Property and Administrative Services Act of 1949 directs the General Accounting Office (GAO) to examine into executive agencies' property accounting systems to determine the extent of their compliance with the property accounting principles and standards prescribed by the Comptroller General and to report to the Congress failures to comply with these principles and standards or to adequately account for property.

This review was made because GAO had reason to question whether the Kennedy Space Center had adequate accounting control over some of the equipment at the center.

FINDINGS AND CONCLUSIONS

The Kennedy Space Center had not established accountability for equipment costing over $320 million until as long as 4 years after it was received. (See p. 9.)

The major reason for the delay in recording promptly equipment in its financial and detailed property records was the absence of unit cost data that should have been provided by other centers or the manufacturers when equipment was shipped to the Center. (See p. 9.)

In some cases receiving reports for use in establishing accounting control were not furnished to the accounting department. (See p. 9.)

In other cases, where equipment had been transferred to the Kennedy Space Center by the Marshall Space Flight Center and the Manned Spacecraft Center, these centers had not complied with NASA's requirements for establishing control over property (See p. 10.)

GAO's review showed that:

--A physical inventory completed in July 1969 was the first complete physical inventory of equipment at the Kennedy Space Center in 7 years. NASA instructions require that a complete physical inventory be taken at least once every 3 years. (See p. 19.)

--Survey reports explaining the loss, damage, or destruction of Government equipment were not being prepared promptly, contrary to NASA instructions. Of the 171 survey reports issued between January 1965 and April 1969, 46 were issued over a year after the loss of equipment had been detected Tardy preparation of survey reports delays the investigation of the loss of equipment since the investigation is made after preparation of the survey report. (See p. 19.)

--Physical inventories of equipment were taken by the individuals having custodial responsibility for the equipment. This procedure seriously weakens the system of internal control because there is no segregation of duties, therefore, management cannot rely upon the results of the physical inventory to satisfy itself that the accounting records are accurate and that the custodian has the equipment. (See p. 20.)

--Listings of equipment to be counted were given to the property custodians for their use in taking the physical inventories. The use of listings is not considered an acceptable practice because of the tendency of inventory takers to look only for items of equipment on the listings rather than to identify and count all equipment. (See p. 22.)

RECOMMENDATIONS OR SUGGESTIONS

The Administrator, NASA, should direct the Kennedy Space Center to issue and implement procedures requiring that:

--All receipts and transfers of equipment be handled through a central receiving and shipping department.

--Documents acknowledging receipt of equipment contain all the information necessary for identification and valuation purposes.

--All documentation on equipment transactions be processed through the accounting and property management offices.

--Physical inventories be taken or supervised by someone other than the custodian of the equipment being counted.

--Physical inventories be taken by counting all equipment in a given area rather than by using listings of equipment

--Complete physical inventories of all equipment in the custody of NASA be taken at least once every 3 years.

--Survey reports for missing or damaged equipment be promptly prepared and processed. (See pp. 16 and 22.)

The Administrator, NASA, should direct headquarters to:

--Establish a task force--composed of headquarters officials involved in the property and supply, financial, and procurement areas--to review equipment accountability at the Marshall Space Flight Center and the Manned Spacecraft Center and to report on the extent of the deficiencies, their basic causes, and the corrective actions needed.

--Revise the NASA-wide requirements for taking physical inventories to include specific guidelines on the means, methods, and personnel to be used. (See pp. 16 and 23.)

AGENCY ACTIONS AND UNRESOLVED ISSUES

NASA has taken corrective action on all of GAO's suggestions, except for two pertaining to the taking of physical inventories.

--The Kennedy Space Center has not issued procedures requiring that physical inventories be taken or supervised by someone other than the custodian of the equipment being counted. (See p. 23.)

--NASA has not issued requirements for taking physical inventories (See p. 25.)

GAO believes that NASA should implement the two recommendations to improve physical inventory procedures.

GAO is asking NASA to keep it informed of the progress being made to improve property accountability at the various NASA centers.

MATTERS FOR CONSIDERATION BY THE CONGRESS

GAO is reporting the results of its review to inform the Congress of the actions taken by NASA to improve accounting control over equipment at the Kennedy Space Center, the Manned Spacecraft Center, and the Marshall Space Flight Center and of the additional actions still required to resolve the deficiencies cited in this report.

CHAPTER 1

INTRODUCTION

The General Accounting Office (GAO) reviewed the manner in which the Kennedy Space Center had complied with the principles and standards established by the National Aeronautics and Space Administration (NASA) to provide financial and quantitative control over NASA-held and contractor-held, Government-owned equipment. Our review was extended to the Marshall Space Flight Center and the Manned Spacecraft Center after we found that these centers had not established accountability for certain equipment when it was acquired. The scope of our review is described in chapter 6.

The National Aeronautics and Space Act of 1958 (42 U.S.C. 2451), which established NASA, authorized the peaceful exploration of space, including both manned and unmanned exploration. The Kennedy Space Center is the major NASA organization responsible for the launching of manned and unmanned space vehicles.

A NASA report for fiscal year 1969 showed that NASA had a total of about $1.7 billion worth of Government-owned equipment in its custody at NASA installations and in the custody of contractors. (See app. II.) Financial records of the Kennedy Space Center showed that there was about $82 million worth of Government-owned equipment in the custody of NASA and $348 million worth in the custody of contractors at the Kennedy Space Center at December 31, 1969.

Section 205(b) of the Federal Property and Administrative Services Act of 1949 (40 U.S.C. 486 (b)) authorizes the Comptroller General to prescribe principles and standards of accounting for property, to cooperate with executive agencies in the development of property accounting systems, and to approve such systems when they are deemed adequate and in conformity with the prescribed principles and standards.

Section 205(b) of the act also provides that GAO examine the property accounting systems established by the executive agencies to determine the extent of compliance with the principles and standards prescribed by the Comptroller General and report to the Congress any failure to comply with such principles and standards or to adequately account for property. By letter dated June 20, 1969, the Comptroller General advised NASA that its accounting principles and standards and system design were in conformity with the principles and standards prescribed by the Comptroller General and, accordingly, were approved.

The principal NASA officials responsible for the activities discussed in this report are listed in appendix III.

CHAPTER 2

NASA PROCEDURES FOR

CONTROLLING GOVERNMENT EQUIPMENT

NASA requires that its installations and contractors establish financial and quantitative records of Government-owned equipment in their possession. Each installation is responsible for developing procedures to implement the requirement.

The financial records consist of general ledger accounts which contain the cumulative cost of all equipment that meets certain criteria. The quantitative records consist of the detailed property records which identify each individual item of equipment, its location, and its cost. The financial records and the quantitative records are maintained by different organizational units as part of the system of internal control. Each record serves as a check on the accuracy of the other, and the two records are required to be reconciled periodically.

The next two sections of this chapter contain a brief description of the procedures for financial and quantitative control of equipment in the custody of NASA installations and NASA contractors.

NASA-HELD EQUIPMENT

NASA instructions provide that the costs of equipment meeting certain criteria be recorded in the accounting records as assets (capitalized), rather than as expenses, when the equipment is received. An item which meets all the following criteria shall be capitalized. The item must:

--have an estimated service life of more than a year,

--be readily and continuously identified as an item of equipment when in use and not be incorporated into other equipment or systems,

--generally have a unit cost of $200 or more, excluding freight and installation costs, and

--not be consumed during an experiment.

Each NASA installation is required to maintain (1) uniform general ledger accounts showing the cumulative cost of capitalized equipment by groupings--such as electronic, photographic, and other such major categories--and (2) detailed property records identifying each item of equipment, its location, and its cost. The general ledger accounts are established and maintained by the financial management officer, and the detailed property records are established and maintained by the property officer. NASA instructions provide that each installation reconcile the balances in the detailed property records with the balances in the financial accounts at least semiannually.

When equipment is transferred from one NASA installation to another for other than a short-term loan (more than 6 months), NASA requires that accounting control of the equipment be transferred to the receiving installation.

CONTRACTOR-HELD EQUIPMENT

Contractors are required by NASA to maintain financial accounts and detailed property records for Government-owned equipment in their possession. NASA installations must maintain financial accounts for this equipment, but they are not to maintain detailed property records. NASA considers the contractors' detailed property records to be the official property records.

NASA requires property accounting systems of the contractors to conform to certain basic principles and standards. The NASA property administrator is responsible for reviewing contractor operations to ensure that Government-owned property is controlled and utilized in accordance with contractual requirements.

Contractors are required to submit reports twice a year to NASA that show the cumulative cost of Government-owned equipment in their possession. These reports show (1) the total cost at the beginning of the reporting period,

(2) the total cost of acquisitions, (3) the total cost of disposals, and (4) the total cost at the end of the reporting period. The contractors' reports are used by NASA installations to record acquisitions by contractors and to verify the amounts of Government-owned property transferred to the contractors.

CHAPTER 3

IMPROVEMENTS IN PROCEDURES FOR

RECORDING EQUIPMENT TRANSACTIONS

The Kennedy Space Center had not recorded equipment costing over $320 million in its financial and detailed property records when the equipment was received. About 70 percent of this equipment had not been capitalized in NASA's records at June 30, 1969, even though the equipment had been received at various times during the period June 1965 through December 1968.

Accurate and timely financial and quantitative information on property is essential for use by management to achieve efficient and economical operations, to prepare financial reports to the Congress, and to establish responsibility for custody of the property.

The principal reason why the accounting and property management offices of the Kennedy Space Center had not recorded the transactions in their financial and detailed property records was that the documentation to record the transactions was either incomplete or not received.

EQUIPMENT NOT RECORDED WHEN RECEIVED

The following table shows the general categories and cost of equipment which, until recently, had not been recorded in the financial or detailed property records.

Cost of Equipment not Placed
Under Accounting Control When Received

Equipment	Estimated or actual cost
Ground support equipment for S-IC stage, Saturn V	$234,394,000
Command and lunar module simulators and associated equipment	39,448,000
Digital and analog conditioning and sampling units, communication equipment, and other items	2,662,000
Computer systems, operational display systems, digital data analysis systems, and other items for the Saturn V	38,050,000
Alphanumeric line printers and other items procured by the Kennedy Space Center	405,000
Miscellaneous items	5,185,000
Total	$320,144,000

As of December 31, 1969, the Kennedy Space Center and NASA contractors had recorded about $295 million worth of this equipment, were in the process of recording $16 million worth of additional equipment in their financial and detailed property records, and were obtaining the data necessary to record the equipment comprising the $9 million balance.

SOME REASONS WHY THE EQUIPMENT HAD NOT BEEN RECORDED

We identified a number of reasons why either the Kennedy Space Center or its contractors had not recorded the above equipment in their financial and detailed property records when it was received. In some cases where the equipment had been transferred to the Kennedy Space Center from the Marshall Space Flight Center or the Manned Spacecraft Center, the Kennedy Space Center had not established accounting control over the equipment partly because the other centers had not done so when they acquired it. We therefore extended our review to these two centers and determined that they had not complied with NASA's requirements for establishing control over property.

Following are some examples that demonstrate the inadequate implementation by the Kennedy Space Center of property accounting requirements and the resulting loss of accounting control over equipment. Related deficiencies in property accounting at the Marshall Space Flight Center and the Manned Spacecraft Center are also discussed.

Saturn V launch control equipment

We identified various items of Saturn V launch control equipment costing over $38 million which had been furnished to one contractor at the Kennedy Space Center during the period June 1965 through March 1968 but which had not been recorded in either the Kennedy Space Center's financial records or in the contractor's detailed property records. The following listing gives a general description of the items.

Quantity	Description	Cost
11	Computer systems	$21,284,000
4	Saturn V operational display systems	4,000,000
6	Saturn V discrete control systems	3,006,000
5	Digital events evaluators	2,500,000
	Saturn V digital data acquisition systems equipment	7,260,000
		$38,050,000

Kennedy Space Center officials told us that the equipment had not been recorded in the records of NASA or the contractor because (1) transfer vouchers prepared by the Marshall Space Flight Center showed that the costs of the items had been recorded as expenses rather than as capital assets and (2) the equipment was in the possession of a contractor at the Kennedy Space Center which, under previous reporting procedures, was not required to report this type of property.

Marshall Space Flight Center officials advised us that the equipment had not been capitalized or recorded in their property records because (1) the funds for the equipment had been allocated under an object class code normally used for expenses rather than under the object class code used for the acquisition of capital assets, (2) the equipment had been purchased for use as special test equipment in specific programs and NASA procedures did not require special test equipment to be capitalized, or (3) the equipment had been shipped by the manufacturer to the Kennedy Space Center and NASA procedures provide for the receiving installation to enter in its records property that is to be held over 6 months, regardless of which NASA installation funds the cost of the property.

In our opinion, the Marshall Space Flight Center's initial determination--to fund the purchase of the ground support equipment under an object class code for expenses rather than under the object class for the acquisition of capital assets--should not have been a criterion for determining whether the items should have been capitalized, inasmuch as matters pertaining to object classifications established for budgetary purposes are not part of NASA's criteria for capitalization (see p. 6), which the equipment otherwise met.

The statement by Marshall Space Flight Center officials that the equipment transferred to the Kennedy Space Center had been purchased for use as special test equipment and, as such, did not have to be capitalized was apparently based upon a misinterpretation of the NASA-wide requirements concerning the capitalization of special test equipment. The Marshall Space Flight Center's interpretation of the capitalization criteria for special test equipment had previously been brought to the attention of NASA management by GAO and, as a result, the criteria for capitalization were clarified in November 1968.

NASA procedures do require that the installation receiving property purchased by another installation record the property in its records; however, transfer vouchers prepared by the Marshall Space Flight Center did not contain sufficient detail for recording purposes and there was no indication that the Kennedy Space Center attempted to obtain the data.

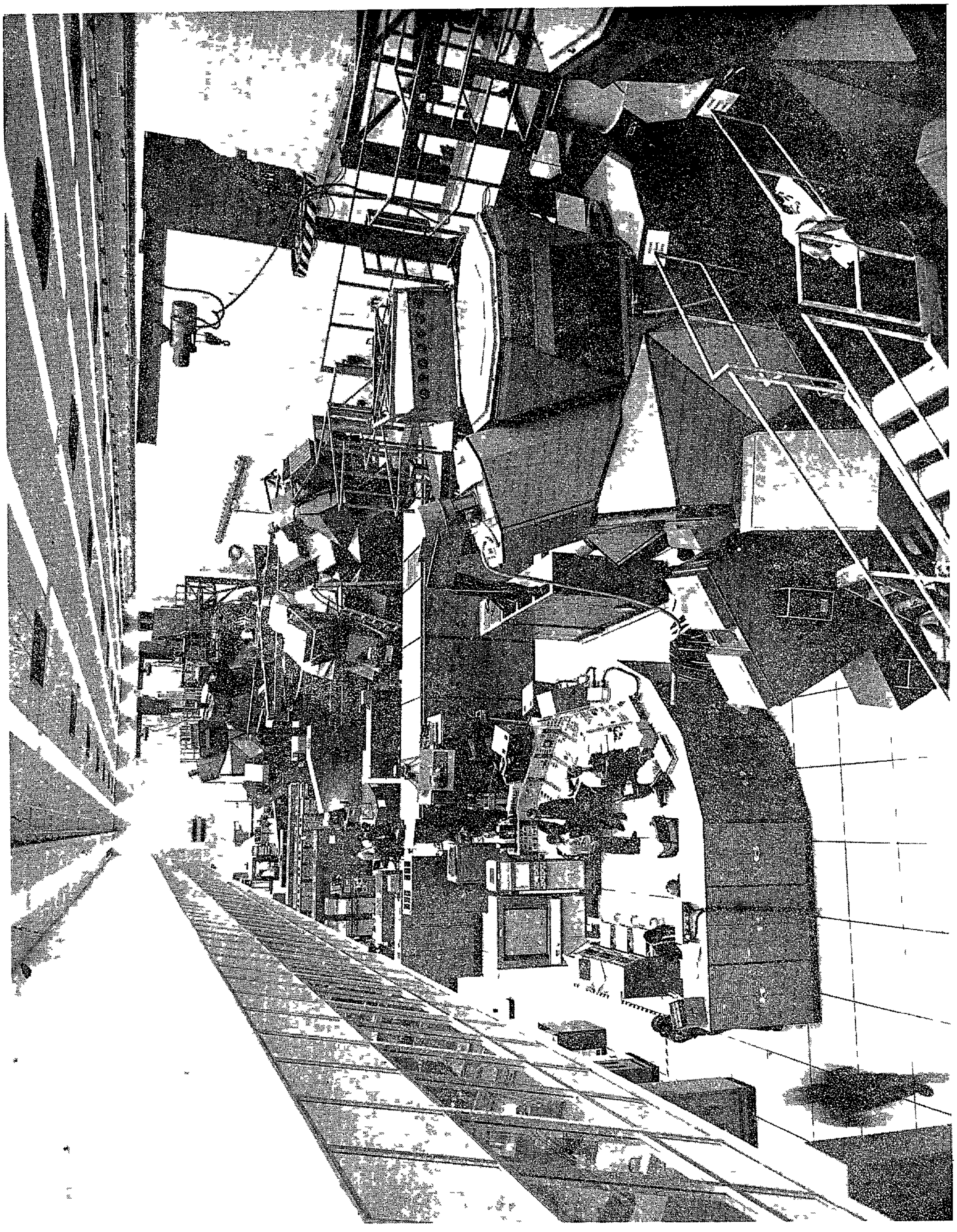
Simulators and associated equipment for the Apollo Program

During the period June 1965 through December 1967, the Manned Spacecraft Center provided a lunar module simulator and two command module simulators to the Kennedy Space Center. (A picture of the simulators appears on p. 14 .) The cost of the simulators was not capitalized by the Kennedy Space Center at the time of receipt. The Manned Spacecraft Center in October 1968 recorded the equipment in its financial records at a cost of $31.4 million and in December 1968 recorded the transfer of the equipment to the Kennedy Space Center. In October 1968 the Manned Spacecraft Center also recorded two other simulators that it had retained.

We found that subcontract costs of about $8 million attributable to the lunar module simulator at the Kennedy Space Center, and a like amount for a simulator at the Manned Spacecraft Center, had not been included in the recorded costs of the simulators. After we brought this matter to NASA's attention, the financial records at the Kennedy Space Center and the Manned Spacecraft Center each were increased by $8 million in May 1969 to show the additional costs of the simulators.

Although Manned Spacecraft Center employees of the property and accounting branches could not give us a definite reason for not promptly capitalizing the cost of the simulators and related equipment, they told us that the reason might have been that, at the time the equipment was procured, the Manned Spacecraft Center did not capitalize equipment acquired under research and development contracts for which the cost had been allocated under object class codes for expenses.

As noted in the previous section of this chapter, object class coding for budgetary purposes is not part of the NASA criteria for capitalization.



SIMULATORS USED BY ASTRONAUTS PREPARING FOR SPACE FLIGHT

Ground support equipment for S-IC stage of Saturn V

One contractor at the Kennedy Space Center had over 4,400 items of ground support equipment for the S-IC stage of the Saturn V that had an estimated cost of over $234 million which had not been recorded in the financial records of the Center or in the detailed property records of the contractor as of April 30, 1969, even though much of the equipment had been furnished to the contractor in 1966 by the Kennedy Space Center and by the Marshall Space Flight Center.

NASA was responsible for providing unit cost data to the contractor; however, unit cost data had not been provided for most of the equipment and, in those cases where such data had been provided, the contractor had not established property records. A representative of the contractor told us that the cost of the equipment had not been recorded in detailed property records or reported to NASA because the contractor believed that the items were special test equipment and not subject to NASA's reporting requirements.

Although we did not attempt to identify all the reasons why NASA did not furnish unit cost data to the contractor, the following reasons appear to have been contributory to the overall breakdown in property accountability.

1. Equipment had not been capitalized in NASA's financial records.

2. Equipment had been shipped directly to the contractor and did not pass through a central receiving point at the Kennedy Space Center where it might have been identified as the type to be capitalized by NASA and recorded in the contractor's property records.

3. Unit prices were not given to the contractor when equipment was shipped directly to it by equipment manufacturers.

CONCLUSIONS

The importance of adequately accounting for equipment stems primarily from the fact that public funds are invested in such resources. This investment creates the management responsibility to account for these resources and to use all appropriate techniques, including reliable financial information, to procure, use, and manage them properly, efficiently, and effectively. Accurate and reliable financial and quantitative information on equipment resources can be obtained only from a properly designed and operated system of accounts and related procedures.

The problems associated with accountability for equipment at the Kennedy Space Center existed for an extended period of time primarily because NASA did not focus sufficient attention to identify and resolve the problems. One of the basic causes for equipment's not being recorded in the financial and detailed records was the lack of procedures to ensure that the accounting and property management offices received proper documentation on all acquisitions and transfers of equipment.

We proposed that, to ensure the prompt and accurate recording of equipment transactions and to improve financial controls over equipment, the Administrator of NASA direct the Kennedy Space Center to issue and implement procedures requiring that:

1. All receipts and transfers of equipment be handled through a central receiving and shipping department.

2. Documents acknowledging receipt of equipment contain all the information necessary for identification and valuation purposes.

3. All documentation on equipment transactions be processed through the accounting and property management offices.

Since our review also showed that the Marshall Space Flight Center and the Manned Spacecraft Center had not complied with NASA's requirements for establishing control over property, we proposed to the Administrator that:

A task force--composed of NASA Headquarters officials involved in the property and supply, financial, and procurement areas--be established to work with representatives of these two centers to determine and report on the extent of deficiencies in property control, their basic causes, and the corrective actions needed.

NASA COMMENTS AND OUR EVALUATION

By letter dated December 19, 1969, NASA's Acting Associate Administrator for Organization and Management furnished us with NASA's comments on our draft report. The comments, including those prepared by the Office of Manned Space Flight, are included in this report as appendix I.

The Acting Associate Administrator stated that several factors contributed to the property accountability problems at the Kennedy Space Center--the urgency of the Apollo Program, the commingling of NASA and contractor personnel and equipment, and the rapid influx of personnel and equipment required to meet launch schedules.

NASA agreed that there was a need for a central receiving or document center at the Kennedy Space Center to process all receipts and transfers of NASA-acquired equipment. NASA stated that the Kennedy Space Center had prepared a procedure which would provide for a central document center.

NASA stated that the central document center would receive and process the documentation to the accounting office and the respective property office for NASA-acquired equipment, including intercenter shipments, whether or not the property physically passes through the receiving facility.

The Kennedy Space Center issued a revised supply manual on December 19, 1969, that contained requirements and procedures for the proper preparation of shipping documents. The manual also contained detailed procedures for checking the completeness of the documentation accompanying equipment shipped to the Kennedy Space Center by the equipment manufacturers and a requirement that the purchasing officer provide proper shipping instructions to the manufacturers.

NASA stated that a headquarters team--representing the property and supply, financial management, procurement, and facilities offices--had been designated to assess property accountability operations at all NASA installations. As an initial step, NASA had requested all installations to furnish data as to the status of the various property records and procedures. The team made onsite reviews at the Manned Spacecraft Center and the Marshall Space Flight Center in March and May 1970, respectively. The team had previously reviewed property accountability at two other NASA centers in December 1969 and February 1970, and we were told by the chairman of the team that they planned to visit all installations by June 30, 1970.

We are asking NASA to keep us informed of the progress being made to improve property accountability at the various NASA centers.

CHAPTER 4

NEED TO IMPROVE PROCEDURES

FOR TAKING PHYSICAL INVENTORIES

PHYSICAL INVENTORIES NOT TAKEN AS FREQUENTLY AS REQUIRED

Although NASA instructions require that a complete physical inventory of NASA-held equipment be taken at least once every 3 years, or more frequently if needed, the recent physical inventory at the Kennedy Space Center--initiated in January 1968 and completed in July 1969--was the first physical inventory completed in 7 years. An inventory was started by the Center in 1965 but was not completed.

Periodic physical inventories provide management with a means of checking on the effectiveness of accounting procedures and on the accuracy of the financial and detailed property records. During the recent physical inventory of equipment costing about $60 million, about $660,000 worth of equipment which had been recorded in the financial and detailed property records could not be located. Except for one item of equipment costing about $400, the cost of all the equipment had been deleted from the Kennedy Space Center records at January 8, 1970, after administrative reviews and determinations that the missing items could not be found.

About 200 items of equipment estimated to cost about $216,000--not previously recorded in the detailed property records or financial records--were identified during the physical inventory and subsequently were recorded in the appropriate records.

SURVEY REPORTS NOT PROMPTLY PREPARED

Property custodians were not promptly preparing survey reports for equipment that could not be located, contrary to a Kennedy Space Center instruction. This instruction, which implements a NASA-wide requirement, provides that a survey report be prepared after a determination is made that accountable property is lost, damaged, or destroyed and that an investigation be made after the survey report is prepared.

The survey report serves as supporting documentation for (1) recording, explaining, and investigating the circumstances surrounding the shortage, loss, damage, or destruction of Government property, (2) deleting the property from the detailed property records, and (3) removing the cost of the property from the financial records. Information in the reports is also used to determine whether the loss, damage, or destruction of Government property was the result of negligence, misuse, dishonesty, or willful destruction on the part of NASA employees and their liability, if any, to the Government.

During the period January 1965 through April 1969, 171 survey reports were initiated for equipment that cost about $764,000. Our analysis of these reports showed that 46 reports, or about 25 percent, representing equipment costing about $192,000, had been initiated over a year after the determination was made that the equipment was missing. Tardy preparation of survey reports delays the investigation of the circumstances surrounding the shortage, loss, damage, or destruction of equipment.

PROPERTY CUSTODIANS RESPONSIBLE FOR TAKING PHYSICAL INVENTORIES

Procedures established by the Kennedy Space Center provided that the property custodians take periodic physical inventories of the equipment for which they were accountable. NASA Headquarters had not issued specific requirements on the need for independent verification of the existence and location of accountable property; however, one of the standards for internal management control prescribed by the Comptroller General in the General Accounting Office Policy and Procedures Manual for Guidance of Federal Agencies, is as follows:

"(3) <u>Segregation of duties and functions</u>

"Responsibility for assigned duties and functions should be appropriately

> segregated as between authorization, performance, keeping of records, custody of resources, and review, so as to provide proper internal checks on performance and to minimize opportunities for carrying out unauthorized, fraudulent, or otherwise irregular acts."

The NASA Financial Management Manual provides that the accounting system have internal controls for safeguarding assets, including a system of checks and balances sufficient to disclose conditions not in conformity with legal or administrative requirements. Although certain requirements to ensure internal control have been established in the Financial Management Manual and in NASA Management Instructions, a specific requirement for the independent verification of equipment has not been established.

NASA installations, however, are authorized to issue instructions to implement NASA policies and requirements. During our review of the accounting system, we noted that a headquarters instruction concerning the control of property, issued in October 1963--and still in effect--provides that physical inventories of equipment at the headquarters office be taken by a counter and checker with the assistance of the property custodian.

The Kennedy Space Center's use of property custodians to take physical inventories of equipment for which they are accountable is not in conformity with the standard for internal management control that provides for the segregation of duties and functions.

LISTINGS OF EQUIPMENT
FURNISHED TO COUNTERS

Under procedures established by the Kennedy Space Center, each property custodian received a list of equipment in his custody before he took the physical inventory. The use of listings is not considered an acceptable practice because of the tendency for inventory takers to look only for the items on the listing rather than to identify and count all items and to later compare such items with the detailed property records.

The use of listings of equipment in taking the physical inventories had previously been brought to the attention of Kennedy Space Center officials as a result of a review by NASA Headquarters in 1966. Although NASA Headquarters had been advised by the Kennedy Space Center in April 1967 that corrective action had been taken, the procedure for furnishing the list was still in effect at the time of our review in 1969.

CONCLUSIONS

The Kennedy Space Center procedures for taking physical inventories were not in accordance with either the standards for internal management control prescribed by the Comptroller General or the requirements established by NASA. In our opinion, the infrequent taking of physical inventories by property custodians does not provide management with assurance as to the effectiveness of accounting procedures or as to the accuracy of the financial and detailed property records.

We believe that the delay in the preparation of survey reports for lost equipment is not conducive to (1) the prompt determination of the facts surrounding the loss, damage, or destruction of equipment and the possible liability of NASA employees or (2) the prompt adjustment of the financial and detailed property records.

We therefore proposed that the Administrator of NASA direct the Kennedy Space Center to issue and implement procedures requiring that:

1. Physical inventories be taken or supervised by someone other than the custodian of the equipment being counted.

2. Physical inventories be taken by counting all equipment in a given area rather than by using listings of equipment.

3. Complete physical inventories be taken at least once every 3 years.

4. Survey reports for missing or damaged equipment be promptly prepared and processed.

We proposed also that the Administrator direct NASA Headquarters to revise the NASA-wide requirements for the taking of physical inventories to include specific guidelines, similar to those proposed above for the Kennedy Space Center, on the means, methods, and personnel to be used.

NASA COMMENTS AND OUR EVALUATION

NASA's Acting Associate Administrator for Manned Space Flight advised us that NASA agreed that there was a need for more effective inventory procedures which would identify all unrecorded equipment and disclose equipment shortages. He stated that each contractor at the Kennedy Space Center had been directed to inventory and list all equipment under its operation and maintenance responsibility and to give specific emphasis to identifying that equipment for which it was not accountable. He stated also that, in recognition of the multioccupant geographical areas and the resultant commingling of property, the Kennedy Space Center had developed plans that would provide follow-on action and physical detection of any unaccounted-for property that had not been identified by the contractor. He further stated that these actions would substantially have the effect of a "wall to wall, floor to ceiling" type of inventory.

NASA also told us that a new section of the Kennedy Space Center Supply Manual "Instructions for Property Custodians" had been developed that prescribes detailed procedures to be followed in the taking of physical inventories. We noted, however, that the manual still provided that the property custodian be responsible for taking the physical inventory. There was no provision or requirement that an individual independent of the property custodian be present at the time that inventory counts are made, as we had proposed.

Although listings of equipment will still be provided to property custodians on a monthly basis, the manual provides that physical inventory counts and descriptions of the equipment counted be placed on blank cards that are to be checked against the equipment listings after the inventory count is completed.

With respect to our proposal that a complete physical inventory of all NASA-held equipment at the Kennedy Space Center be taken at least once every 3 years, NASA told us that a new cyclical inventory was initiated in April 1969 and that it was scheduled to be completed in 2 years. Provisions for taking biennial physical inventories are included in the revised Kennedy supply manual, and the Property Officer is responsible for developing the inventory schedule and for ensuring that the physical inventories are taken.

Instructions for the preparation and processing of survey reports were included in the revised Kennedy supply manual. The manual now requires the reporting of any loss of Government property within 72 hours of the time the loss is discovered. Further, when the survey report is not issued within 10 working days after the date the loss is discovered, the manual requires that a written explanation of the delay be attached to the survey report. The Property Officer is required to maintain a survey report register and to assign numbers to all reports, verify or ascertain the amount of the loss or damage, process copies of the reports to various Kennedy Space Center officials, and institute follow-up action where necessary.

NASA concurred in our proposal that headquarters revise the NASA-wide requirements for the taking of physical inventories to include specific guidelines on the means, methods, and personnel to be used. NASA stated that it had developed appropriate procedures and instructions for inclusion in the NASA property control handbook which was being developed.

We were subsequently told by the official responsible for development of the handbook that target dates had not been established for completion and release of the handbook.

RECOMMENDATIONS

We recommend that, to improve procedures for taking physical inventories, the Administrator of NASA direct the Kennedy Space Center to issue procedures that require that physical inventories of equipment be taken or supervised by individuals who are not responsible for the custody of the equipment. We recommend also that the Administrator direct the Associate Administrator for Organization and Management to issue the NASA property control handbook and that the handbook include appropriate guidelines on the means, methods, and personnel to be used in taking physical inventories.

CHAPTER 5

INTERNAL REVIEWS OF PROPERTY ACCOUNTING

Subsequent to the start of our review at the Kennedy Space Center in July 1968 and the issuance of our report on the "Need for Improved Compliance by the Goddard Space Flight Center with Established Accounting Procedures for Control of Equipment" (B-164674, August 28, 1968), the NASA Audit Division expanded its program for reviews of property accountability at NASA centers. The Office of Manned Space Flight also initiated reviews at the three centers for which it has management responsibility. Some of the deficiencies in property accountability included in this report were initially identified during the internal reviews.

During fiscal year 1969 and the first 8 months of fiscal year 1970, the NASA Audit Division issued reports on property accountability at the following NASA centers.

Name of center	Date of report
Langley Research Center	Dec. 1968
Jet Propulsion Laboratory	Feb. 1969
Kennedy Space Center	Mar. 1969
Marshall Space Flight Center	Sept. 1969
Ames Research Center	Oct. 1969
Michoud Assembly Facility	Oct. 1969
Kennedy Space Center	Feb. 1970

The Property and Supply Division has also been reviewing property accountability at various centers. The various internal reviews revealed deficiencies similar to those described in this report and as a result corrective actions were initiated.

CHAPTER 6

SCOPE OF REVIEW

Our review included an examination of records and documents at NASA Headquarters, Washington, D.C.; the Kennedy Space Center, Merritt Island, Florida; various NASA contractors at the Kennedy Space Center; Detachment 5, Air Force Contract Management Division, Cape Kennedy, Florida; the Marshall Space Flight Center, Huntsville, Alabama; and the Manned Spacecraft Center, Houston, Texas. Discussions were held with NASA, Air Force, and contractor officials having responsibilities relating to property accountability.

After a preliminary survey, initiated in July 1968, we began a detailed examination in October 1968 and completed it in July 1969.

BEST DOCUMENT AVAILABLE

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APPENDIXES

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
WASHINGTON, D C 20546

DEC 19 1969

REPLY TO
ATTN OF

Mr. Morton Henig
Assistant Director, Civil Division
U. S. General Accounting Office
Washington, D. C. 20542

Dear Mr. Henig:

Enclosed are our comments in response to your draft report to the Congress on the need to improve property accountability at the Kennedy Space Center (KSC). The National Aeronautics and Space Administration (NASA) agrees that the specific discrepancies cited in the General Accounting Office report did exist at KSC 9 to 12 months ago. In the past year, however, KSC has initiated or completed action to correct all of these discrepancies. It should also be noted that substantially all of the equipment cited in your report as not having been properly recorded in accountability records was, in fact, being controlled, maintained, and operated by KSC contractors.

There were several contributing factors which led to the discrepancies at KSC. The urgency of the Apollo Program, the commingling of KSC and contractor personnel and equipment, and the rapid influx of personnel and equipment required to meet launch schedules all aggravated and intensified the property accountability problems at KSC

As stated in your report, similar problems exist at the Marshall Space Flight Center and the Manned Spacecraft Center. Therefore, consistent with your recommendation, a task force composed of NASA Headquarters officials involved in the property and supply, facilities, financial, and procurement areas has been established to review the problems encountered in property accountability and to recommend solutions. This task force will review property accountability systems at all NASA centers. As you will note in the enclosed comments, KSC and the Headquarters functional offices are concentrating their efforts in the specific areas identified in your report as requiring resolution in order to correct existing problems and preclude their recurrence.

We appreciate this opportunity to comment on your draft report and trust that our response will assure you of our concern and active efforts to solve the problems pointed out in your report.

Sincerely,

Bernard Moritz

Bernard Moritz
Acting Associate Administrator
for Organization and Management

Enclosure

NASA COMMENTS ON GENERAL ACCOUNTING OFFICE DRAFT REPORT TO THE CONGRESS ON NEED TO IMPROVE PROPERTY ACCOUNTABILITY AT THE KENNEDY SPACE CENTER

INTRODUCTION

The specific discrepancies cited in the General Accounting Office (GAO) report did exist at the Kennedy Space Center (KSC) 9 to 12 months ago. However, the actions taken by KSC over the past year have corrected the majority of these discrepancies. It is significant that in acknowledgement of the need to improve property accountability at KSC, a specially organized Center-wide improvement activity was initiated in December 1968 in the form of KSC Ad Hoc Property Accountability Committee. This committee was established to work with a NASA Headquarters team which surveyed KSC property accountability systems in early December 1968. The committee has continued to initiate, coordinate, and monitor activities to improve property accountability with related aspects such as classification, inventories, storage, and disposal at KSC

There were several contributing factors which brought about discrepancies in the property accountability systems at KSC. The complexity and scope of the facilities at KSC, the necessary collocation of contractors with other contractors, collocation of contractors with KSC personnel, and the rapid buildup and influx of personnel and equipment required to meet launch schedules at KSC all aggravated and pyramided the difficulties normally associated with the development of property accountability systems. This myriad of activity peaked during the drive to make Launch Complexes 34, 37, and 39 operational and during testing and launches of the Saturn IB and Saturn V systems in the Apollo Lunar Landing Program

We believe that the actions planned and being taken by KSC and the NASA Headquarters functional offices delineated below, will correct any remaining deficiencies in the property accountability systems at KSC These efforts are being concentrated in the specific areas recommended in the GAO report as requiring resolution in order to correct existing problems and preclude their recurrence.

GAO RECOMMENDATION

A central receiving or document center be established to process all receipts and transfers of equipment and furnish appropriate documentation to the accounting office and respective accountable property officers.

NASA POSITION

NASA agrees that there is a need for a central receiving or document center at KSC to process all receipts and transfers of NASA-acquired equipment and furnish appropriate documentation to the accounting office and respective accountable property officers. KSC has prepared a procedure which will provide for a central document center. This center will receive and process the documentation to accounting and the respective property offices for NASA-acquired equipment, including intercenter shipments, whether the property physically passes through the receiving facility or not.

[See GAO note on p. 38.]

GAO RECOMMENDATION

Establish more effective inventory procedures which would identify all unrecorded equipment and disclose equipment shortages.

NASA POSITION

NASA agrees that there was a need for more effective inventory procedures which would identify all unrecorded equipment and disclose equipment shortages.

[See GAO note on p. 38.]

[See GAO note on p. 38.]

Actions are nearing completion for the evaluation of all government-owned equipment in the possession of each contractor at KSC, in order to identify unaccounted for property and to establish the proper accountability. These efforts have been approached on an individual contractor basis, to place responsibility for detection and resolution within clearly defined lines of authority and responsibility. These actions have been approached in a realistic and economical manner and will substantially have the effect of a "wall-to-wall, floor-to-ceiling" type inventory.

Each contractor has been directed to inventory and list all equipment under his operation and maintenance responsibility, with specific emphasis on identifying that equipment for which he is not currently accountable. These lists are currently being reviewed to determine if any follow-up actions are required Further, in recognition of the multi-occupant geographical areas and the resultant commingling of property, KSC has developed plans that will provide follow-on action of physical detection of any unaccounted for property that has not been identified by the contractor. This effort will encompass a physical search on an area-by-area and room-by-room basis aimed at identifying property that is not properly accounted for so that proper resolution may be made. NASA-held property will also be identified during this physical inventory.

In addition to the area-by-area and room-by-room physical search mentioned above, the following actions have been taken regarding NASA-held property.

1. A new section of the KSC Supply Manual titled, "Instruction for Property Custodians" has been developed which prescribes detailed procedures to be followed and establishes Property Officer's responsibility for audit of each custodial account, to include its inventory and the custodian's maintenance of the hand receipt account

2. The triennial inventory referenced in the GAO report is for personal property accounted for by civil servants on hand receipts. It was completed in July 1969 Resolution of related survey action required will be completed shortly. The new cyclical inventory was initiated in April 1969 and is on schedule. This inventory is to be completed in two years

3. A section of the KSC Supply Manual has been rewritten expanding instructions for the preparation and processing of Reports of Survey. This section requires the reporting of any loss of government property to the Property Officer within 72 hours of

the time the loss is discovered. Further, it requires that a written explanation be attached to the Report of Survey when the period after initiation of the Report of Survey extends beyond 10 working days following the date the loss is discovered. The KSC Supply Branch has established a log which enables close tracking and follow-up of Reports of Survey and status reporting to the initiator.

[See GAO note on p. 38.]

GAO RECOMMENDATION

Because the GAO review at KSC indicated that MSFC and MSC were not complying with NASA requirements for controlling equipment, it was recommended that a task force, composed of NASA Headquarters officials involved in the property and supply, financial, and procurement areas, be established to work with representatives of MSFC and MSC for the purpose of determining and reporting on the extent of the deficiencies, the basic causes of the deficiencies, and the corrective actions needed.

NASA POSITION

NASA agrees with this recommendation and a Headquarters team, representing the property and supply, financial management, procurement, and facilities offices, has been designated to assess property accountability operations at all NASA installations. As an initial step, we have requested all installations to furnish data as to the status of the various property records and procedures. The task force will begin its on-site assessment of this area early in December 1969.

GAO RECOMMENDATION

GAO recommended that NASA Headquarters review the NASA-wide requirements for the taking of physical inventories to include specific guidelines, similar to those recommended for KSC, on the means, methods, and personnel to be used.

NASA POSITION

NASA concurs with the GAO recommendation and we have developed appropriate procedures and instructions for inclusion in the NASA Property Control Handbook which is now being developed.

GAO FINDING

GAO reports that their review and the NASA reviews identified equipment valued at about $358 million that had not been recorded in accordance with NASA's established criteria

NASA RESPONSE

The major portion of the equipment valued at about $358 million cited in the GAO report represents groups of equipment at KSC which were identified as property accountability problems in December 1968. With respect to the launch support equipment for the S-IC stage, Saturn V space vehicle, total accountability was achieved on December 12, 1969 The final dollar value of this equipment, originally estimated at $268,889,000 on page 10 of the GAO draft report, was $234,393,856 Of the remaining $90 million, $11.8 million remains to be entered into the accountability records and efforts are continuing to have this accomplished. It should be noted that substantially all of the $358 million of equipment which is cited as not having been properly recorded in accountability records was, in fact, being controlled, maintained, and operated by KSC contractors in the preparation for testing, and actual launches, of the Saturn IB and Saturn V systems in the Apollo Lunar Landing Program.

Harry H. Gorman
for Charles W. Mathews
Acting Associate Administrator
for Manned Space Flight

GAO note: Refers to material contained in draft report but omitted from final report.

LOCATION OF CAPITALIZED EQUIPMENT OF THE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

AS OF JUNE 30, 1969

NASA center or facility	Total	NASA held	Contractor-held (note a)
	(000 omitted)		
OFFICE OF MANNED SPACE FLIGHT:			
Kennedy Space Center	$ 166,305	$ 81,348	$ 84,957
Western Test Range	3,464	3,464	-
Manned Spacecraft Center	226,051	177,748	48,303
White Sands Test Facility	4,035	-	4,035
Marshall Space Flight Center	277,931	194,893	83,038
Michoud Assembly Facility	40,998	-	40,998
Mississippi Test Facility	23,677	-	23,677
Slidell Computer Facility	5,097	-	5,097
OFFICE OF ADVANCED RESEARCH AND TECHNOLOGY:			
Ames Research Center	60,811	58,434	2,377
Electronics Research Center	20,613	20,341	272
Flight Research Center	36,744	36,650	94
Langley Research Center	114,575	111,395	3,180
Lewis Research Center	89,718	57,349	32,369
Plum Brook Station	10,252	10,252	-
Space Nuclear Propulsion Office	24,133	3,987	20,146
OFFICE OF SPACE SCIENCE AND APPLICATIONS:			
Goddard Space Flight Center	220,576	182,616	37,960
Tracking Stations (Manned Space Flight and Space Tracking and Data Acquisition Networks)	201,326	201,326	-
Jet Propulsion Laboratory	79,515	-	79,515
Tracking Stations (Deep Space Network)	31,291	-	31,291
Wallops Station	38,860	34,954	3,906
HEADQUARTERS	14,867	6,627	8,240
Total	$1,690,839	$1,181,384	$509,455

[a] Includes equipment at NASA's installations and contractors' plants.

PRINCIPAL OFFICIALS OF THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION RESPONSIBLE FOR THE ACTIVITIES DISCUSSED IN THIS REPORT

	Tenure of office	
	From	To
ADMINISTRATOR:		
Thomas O. Paine	Oct. 1968	Present
James E. Webb	Feb. 1961	Oct. 1968
DEPUTY ADMINISTRATOR:		
George M. Low	Dec. 1969	Present
Thomas O. Paine	Mar. 1968	Oct. 1968
Robert C. Seamans, Jr.	Dec. 1965	Jan. 1968
Hugh L. Dryden	Oct. 1958	Dec. 1965
ASSOCIATE ADMINISTRATOR:		
Homer E. Newell	Oct. 1967	Present
Robert C. Seamans, Jr.	Sept. 1960	Sept. 1967
ASSOCIATE ADMINISTRATOR FOR ORGANIZATION AND MANAGEMENT (note a):		
Bernard Moritz (acting)	May 1969	Present
Harold B. Finger	Mar. 1967	May 1969
ASSOCIATE ADMINISTRATOR FOR MANNED SPACE FLIGHT:		
Dale D. Myers	Jan. 1970	Present
Charles W. Mathews (acting)	Dec. 1969	Jan. 1970
George E. Mueller	Sept. 1963	Dec. 1969
DIRECTOR, KENNEDY SPACE CENTER:		
Kurt H. Debus	July 1962	Present
DIRECTOR, MANNED SPACECRAFT CENTER:		
Robert H. Gilruth	Nov. 1961	Present

PRINCIPAL OFFICIALS OF THE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

RESPONSIBLE FOR THE ACTIVITIES DISCUSSED

IN THIS REPORT (continued)

	Tenure of office	
	From	To
DIRECTOR, MARSHALL SPACE FLIGHT CENTER:		
Eberhard F. M. Rees	Mar. 1970	Present
Wernher von Braun	July 1960	Mar. 1970

[a]Position established effective March 15, 1967.