Office Of Inspector General

Semiannual Report

April 1, 1979 - September 30, 1979

Made Pursuant To Section 5 Of Public Law 95-452

October 31, 1979
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INTRODUCTION

This is the second Semiannual Report of the NASA Office of Inspector General since the office was created by Public Law 95-452. The initial report was transitional in nature, outlining the steps taken by NASA management to implement the Act in preparation for the appointment of an Inspector General, and pointing to the challenges ahead. The audit and investigations activities summarized in the report essentially reflected the work of predecessor organizations brought together by the Act.

To a large extent, this second report is also transitional since the IG confirmation and appointment process was completed in July, and I actually took office on August 1, 1979. In the succeeding two months, I have visited most of the IG field offices to review operations, meet the staff, and discuss the substance of audits and investigations underway. Based on these discussions, discussions with Headquarters IG staff, and my own assessment of needs, I have given high priority to the following management activities and work has begun on each:

- Organization design to effectively implement the IG Act
- IG Resource planning for FY 80 and 81
- Recruiting key staff
- Developing strengthened audit procedures
- Developing IG internal management controls and planning for a computerized information system to support audit and investigations staffs

These initiatives are described in detail in Chapter I of this report. Chapter II describes IG auditing activities for the period April-September 1979, including a report on the status of the significant
findings and recommendations contained in the previous report and the set of new significant items identified in this reporting period. Investigative activities are similarly detailed in Chapter III. A complete list of audit reports issued in this period is contained in the Appendix.

Eldon D. Taylor
Inspector General
CHAPTER I
ORGANIZATION AND MANAGEMENT

A. Background - The nomination and confirmation process was completed at the end of July and the Inspector General began his appointment at NASA on August 1, 1979. During the period between passage of Public Law 95-452 and the appointment of an Inspector General, the NASA policy was to take those actions mandated by the Act and to preserve maximum flexibility for the new Inspector General. The organization was maintained in the initial form created by Section 9 of the Act and the positions of Assistant Inspector General for Auditing and Assistant Inspector General for Investigations established by Section 3 of the Act were filled on an Acting basis.

Since August 1, a high priority has been given to organization and management of the OIG in order to provide a strong foundation for the substantive work of the office.

B. Organization - The audit and investigations components of the OIG were formerly separate NASA offices with separate reporting channels and separate physical locations. It is essential that they now operate as part of an integrated organizational structure to assure that functions are logically assigned, that audit and investigation activities complement one another, and that there is no duplication of effort. Toward this end, a new IG organization has been designed as depicted in the following chart to take effect on November 4, 1979.
At the regional level, the seven regional audit offices and four investigations offices have been consolidated into three clusters as follows:

(1) Eastern Region

NASA Headquarters (District of Columbia)
Goddard Space Flight Center (Maryland)
Langley Research Center (Virginia)
Lewis Research Center (Ohio)
Wallops Flight Center (Virginia)

(2) Southern Region

John F. Kennedy Space Center (Florida)
George C. Marshall Space Flight Center (Alabama)
National Space Technology Laboratories (Mississippi)
Lyndon B. Johnson Space Center (Texas)

(3) Western Region

Ames Research Center (California)
Jet Propulsion Laboratory (California)
Hugh L. Dryden Flight Research Center (California)

This arrangement provides greater flexibility in the use of limited staff resources and permits the IG to focus audits and investigations activities more effectively in priority areas.

C. Transfer of Security Functions - As part of the initial implementation of the Inspector General Act, the NASA Office of Inspections and Security was transferred to the Inspector General. The activities performed by the security component of the organization involve operating responsibilities such as personnel investigations, security clearances, plant security, and the like. Accordingly, a recommendation was made to the NASA Administrator to reassign these responsibilities elsewhere in the NASA organization. Advance notification of this change was sent to the Chairman of the Committee on Government Operations, of the House of Representatives; the Chairman of the Sub-committee on Space Science and Application of the
Committee on Science and Technology, House of Representatives; the Chairman of the Committee on Government Affairs, U. S. Senate; and the Chairman of the Subcommittee on Science, Technology, and Space of the Committee on Commerce, Science, and Transportation, U. S. Senate.

D. Inspector General Staff Resources - A review of the staff resources assigned to the Office of Inspector General indicated that they are inadequate to reasonably fulfill the requirements of the Act. The NASA Administrator assigned ten additional positions to the IG function for a total ceiling of 86 in FY 80 and agreed to request additional funds and ceiling for the FY 81 budget submission. Because of the long lead times involved in recruitment and selection of auditors and investigators, the IG has also requested authority to recruit in FY 80 for positions to be filled in FY 81.

E. Assurance of Professional Standards for Audits - For over one year, the NASA audit organization has been engaged in a serious internal supervisor-employee dispute over whether certain audit reports meet professional General Accounting Office audit standards. The new Inspector General examined this matter and concluded that it must be resolved as a priority task. Left untended, the dispute would demoralize IG staff members and would impair the credibility of Inspector General audits. This would be an intolerable situation which could inhibit implementation of the Inspector General Act.

Accordingly, the Inspector General commissioned an independent investigation of five disputed audits. The review was performed by an outside investigator under contract with the Office of Inspector General. Following is a list of the audit cases investigated:

Travel Complaint
Audit of White Sands Test Facility SW-9-78
Audit of JSC Metrology Program SW-3-78
Audit of Public Exhibits Program SW-5-78
Audit of Lunar and Planetary Sciences Division SW-6-79
In order to provide a second, "peer review" by a senior NASA auditor, the Inspector General also requested that the audit of the Lunar and Planetary Sciences Division be separately reviewed by the Regional Director of Audits, South Central Region. Neither the contract investigator nor this Regional Director had access to the other’s work.

Both investigations were still underway at the close of this semi-annual reporting period. Upon receipt of the reports of investigation (scheduled for mid-October) a determination of appropriate action will be made. In the meantime, none of the disputed findings and recommendations have been included in Chapter II of this report. Details of the resolution of this matter will be included in the next Semiannual IG Report.

F. NASA Audit Policies and Procedures - The existing NASA internal regulations defining the policies and procedures for the conduct of the NASA audit program need revision, not only to reflect the new role and organizational relationships of the Inspector General, but to clarify and focus responsibilities better, to assure that the production of audit reports is not unduly delayed by the process of review and coordination, to provide an orderly and efficient procedure for resolution of findings and recommendations at issue, and to establish a system for management tracking and follow-up of open actions. A conceptual outline of a new regulation has been discussed with management and a draft issuance is being developed. The issuance of these redefined policies and procedures will be an important foundation for improving the quality and effectiveness of the NASA audit program.

G. Inspector General Management Information System—The merger of audit and investigations activities that were formerly in separate organizations, with different operating procedures, and even separate physical locations creates a need for careful analysis to establish appropriate internal management controls and systems. Better communication is also needed between auditors and investigators, between field offices and their Regional Directors and between the Regions and the Headquarters. A modern information system is needed to track the status of audits and investigations in progress, to maintain an inventory of recommendations and the status of their resolution, and to support auditors and investigators in their survey work by permitting rapid retrieval of data from prior reports by various subject or
program classifications. The OIG is carrying out a methods and procedures analysis to define these requirements in detail, to design an integrated management information system. In planning for the system, which is scheduled to be implemented early in 1980, we have drawn on the experience of other Inspectors General by examining samples of their reports, record formats, input forms, etc.
CHAPTER II

AUDIT ACTIVITIES

A. Introduction - During the six months ending September 30, 1979, the Office of Inspector General issued 32 reports of internal audits conducted by OIG auditors at NASA Headquarters and at field installations throughout the country. The audit staff also participated in investigations such as those initiated by GAO hotline referrals and NASA employee complaints received during this period. Reports of 37 audits of NASA contractors conducted by the Defense Contract Audit Agency were also received in this period. Currently, NASA has approximately 9,600 active prime contracts with about 2,500 contractors. Complete listings of internal audits and contractor audits issued through September 30, 1979 are contained in the Appendix.

Paragraph B below summarizes the status of management actions on the matters reported in the April 30, 1979 Semiannual Report. The significant findings and recommendations reported in the subsequent six months ending September 30, 1979 follow in paragraph C. In both cases, the discussion is organized around the three new regional clusters of the Office of Inspector General.

B. Status of Management Actions on Matters Reported in the April 30, 1979 Semiannual Report.

1. EASTERN REGION

   a. Audit of Payroll Operations and Time and Attendance Policies and Practices - Internal controls in the reporting and certification of time and attendance of employees required improvement to assure time reported as worked is reliable and properly certified by a supervisor and to assure that overtime work is properly authorized. Revised instructions on time and attendance policies and procedures are expected to be issued by December 1979. Also, training seminars will be conducted for timekeepers. These actions satisfy the recommendations.

   b. Audit of the Magnetic Tape Certification Facility - This audit identified the following problem areas:

   -- approximately 143,000 tapes currently in storage could be released for potential reuse under newly established criteria
- new digital tapes were being purchased at a rate of $75,000 a month

- immediate release of eligible digital tapes from storage would substantially reduce the requirement for the purchase of new digital tapes and would provide more efficient use of the tape certification facility

--- tapes with questionable value were being recertified at the facility for future reuse

Over 50,000 digital tapes have been released from storage since May 1979. These tapes are being recertified and have effectively supplemented the requirements for digital tape. All magnetic tape that is recertified at the facility is currently being effectively utilized. This represents a potential savings of approximately $250,000. These management actions satisfy the audit recommendations.

c. Audit of Word Processing Activities - At one installation the audit of the use and management of word processing systems costing about $486,000 showed limited use and productivity because of insufficient training of operators, limited applications available and obsolete equipment.

As we recommended, the Center has performed a center-wide review of word processing systems, has excessed or reassigned the word processing systems to improve usage, and has strengthened the procedures and controls over word processing systems justification and acquisition. The actions taken, including implementation of the NASA Headquarters' word processing systems handbook, satisfy the audit recommendation.

d. Review of Progress Payments - The audit disclosed that a contractor had been overpaid about $3.3 million in progress payments under a fixed-price contract. The overbilling resulted from the contractor's failure to compute progress payment billings in accordance with established accounting practices. In response to the audit recommendation and action of the Contracting Officer,
the contractor submitted a revised invoice, thereby reducing the Government's cash outlay. Corrective action has been completed.

2. SOUTHERN REGION

a. Audit of Special Purpose Mobile Equipment - The usage of special purpose mobile equipment (SPME) did not justify the amount of preventive maintenance being performed. Most of the equipment was near or had passed the expected life of economical use, and repair costs exceeded the original acquisition cost. Management is completing corrective actions which include reviewing ways of reducing the amount of preventive maintenance performed; developing a five year replacement plan and budget; and developing a plan and instructions on tracking equipment utilization. These actions satisfy the audit recommendations.

b. Audit of Automatic Data Processing Tape Management Practices - At a computer complex in one of the Centers, management emphasis and attention was needed to achieve maximum magnetic tape use and more effective control. Also, savings could have been achieved in some procurement actions by reduction of quantities or by elimination of procurements.

A new and improved tape management procedure has been developed and issued. This procedure covers categories of tapes, retention and control of tapes in libraries, tape library recordkeeping and tape retention/rejection criteria. The Center did not agree that there had been unnecessary procurement actions. However, it advised that future procurements would be carefully reviewed. These actions should effectively correct the problems.

This audit also showed that improvements were needed in the following elements of computer security:

- access to computer facilities and data storage areas
- controls and protection of Privacy Act Information
- periodic risk management and analyses requirements
-- development of formalized contingency plans

-- off-site back-up data storage requirements

Management has taken actions which should effectively improve these areas and the audit recommendations are closed.

c. Audit of Office Moves and Modifications—Office moves and modifications at one installation were estimated at about $80,000 in FY 1978. An audit showed the responsibility for space management was fragmented between two different Directorates; the approval/disapproval authority for moves and modifications was being accomplished with less than adequate justifications; and costs were not adequately considered in the review and approval process.

The functional responsibility for all physical space management has been assigned to one office. One office now handles the budget functions and has established a single point-of-contact to receive, review, coordinate, and approve requests for office moves and modifications. The on-site support contractor accumulates and reports cost for moves and modifications, and amounts paid to commercial movers are now managed and controlled against a specific budget line item. These actions satisfy the audit recommendations.

d. Audit of Reliability and Quality Assurance Activities—This audit showed the following problems:

-- criteria established for prompt recognition and reporting of problems associated with spacecraft hardware were not being applied as prescribed by the Center's Problem Reporting and Corrective Action System. Delays in the reporting of hardware failures by contractors could result in program slippage of critical spacecraft hardware.

-- quality assurance support of a key Center laboratory could be
improved through the
assignment of additional
personnel and through a
revision of that laboratory's
Safety, Reliability, and Quality
Assurance Support Plan.

-- there was no assurance that all
Center procurement requests were
being forwarded to Safety,
Reliability, and Quality Assurance
(R&QA) for screening to assure
that R&QA provisions were being
placed in Center procurements.

The Center has taken actions to correct these problems.
However, the reported condition concerning delays in the
timely recognition and reporting of hardware failures by a
contractor continues to exist. By letter dated March 1,
1979 the Center informed the contractor of the problem
reporting deficiency. However, the contractor has not yet
established a position or taken action. We will report on
the status of action on this matter in the next semiannual
report.

e. Audit of Calibration of Systems and
Equipment - There were about 2,100 line items of equipment,
valued at about $10 million, assigned to one laboratory
which were not in an active calibration status. Some of
the equipment should have been in the active periodic
calibration cycle. Also, the follow-up system for items
past due for calibration was generally ineffective.

Audit follow-up activities have revealed
that Center actions taken did not effectively resolve the
deficiencies reported. These same deficiencies will be
included in a follow-on audit report now being prepared
for issuance. We will report on the status of this audit
in the next semiannual report.

f. Joint Report on Review of Word
Processing Operations - The audit disclosed that a con-
tractor's management of word processing activities needed
strengthening to assure effective, efficient, and
economical operations. The audit indicated that signifi-
cant progress in implementing and controlling word
processing activities could best be achieved through the
establishment of a single organizational element having
centralized authority and responsibility for all aspects
of word processing. Implementation of a centralized program would provide an estimated cost avoidance of $567,000 annually.

The NASA Center and the contractor have adopted the recommendations for centralization.

g. **Review of Interactive Computer Graphics (ICG) Utilization** - The audit disclosed that a contractor has effectively used ICG equipment in electrical drafting operations, but the use of this equipment should be made in other operations. The auditor recommended that ICG also be used in the electrical, mechanical and fluid design disciplines, and in all drafting functions. It was estimated that an annual cost avoidance ranging from $.5 to $1 million could be achieved, depending upon future engineering and drafting workload requirements.

Since the contractor did not agree with the audit recommendation, this matter was submitted to NASA management for follow-up and appropriate action.

NASA management agreed with the audit recommendation. Additional computer graphics equipment has been budgeted to augment existing capability. Corrective action taken.

h. **Evaluation of Claim for Additional Funding for Pension Plans** - The audit disclosed that the contractor's pension cost claim in the amount of $1.3 million was for unfunded past service liabilities which had not been amortized as of the completion date of the contract. It was recommended that the contractor's claim not be accepted since the recoupment of these past service costs as a close-out cost in one year would not meet the allowable cost criteria set forth in the NASA Procurement Regulation. Also, such costs are not acceptable for other reasons including noncompliance with the contractor's disclosed accounting practices and applicable Cost Accounting Standards. The contractor does not agree with the auditor's recommendations. Therefore, it has been submitted to NASA's management for follow-up and appropriate action.

NASA management supports the audit recommendation and plans a final resolution of this matter concurrent with the resolution of certain items in another audit report.
3. WESTERN REGION

a. Audit of Support Services Contract - At one Center the audit of support services activities consisting of 37 active contracts valued at $47.4 million and 25 inactive contracts valued at $36.9 million showed the need for more effective controls and procedures in timely closing of physically completed contracts; timely procurement planning for follow-on contracts; placement of work orders; and monitoring contractor employees time and attendance.

The Center has established and implemented several procedures and controls which will provide more effective administration of these areas. Actions on the recommendations are completed.

b. Audit of Management of Aircraft Spares and Repair Parts - One cost-plus-a-fixed-fee (CPFF) type contract was observed where the responsibility for approval of contract cost vouchers had not been delegated to the cognizant government auditor. As a result, billings in excess of $5.6 million had been processed without assurance as to the propriety or allowability of the charges. In a related matter, the accuracy of Contractor Monthly Financial Reports had not been validated for almost three years. The appropriate audit delegation has been made and all vouchers are being reviewed and approved by the cognizant auditor. Validation of the monthly financial reports will be performed periodically. Management actions are complete.

c. Audit of Controls and Procedures for Safeguarding Computer Operations - The following improvements were needed at a computer facility to safeguard automatic data processing (ADP) equipment and magnetically stored data valued at over $14 million. Management has completed actions which should provide the required improvements. A focal point was established for computer security and guidelines were issued on preparing risk analysis and security plans. The controls over access to and use of the computer have also been improved. Management actions are complete.

d. Report on Energy Conservation - A contractor's annual energy cost amounted to $3.2 million of which about 88 percent was for the consumption of electrical energy.
An estimated $194,000 could be saved annually if the audit recommendations are accepted to set thermostats for heating/cooling to the NASA guidelines, and if illumination levels were maintained at the NASA recommended ranges. Further reductions in energy consumption could be realized if low energy lamps were used.

The contractor agreed to study the audit recommendations. This matter was referred to NASA management for follow-up and appropriate action.

Contractor and NASA management actions are responsive to the audit recommendations. Technical determination has been made--feasible and cost-effective to modify existing buildings for thermostat control.

e. Report on Subcontract Administration
Operations and Financial Reporting - This audit showed that substantial subcontract cost growth has occurred; the prime contractor repeatedly understated the estimates at completion for subcontract work; there is a lack of verifiable documentation supporting the prime contractor's adjustments to subcontractors' "estimated at completion" costs (EAC); and there is a need for prime contractor awareness and aggressive management action on business management problems at a number of subcontractor locations.

It was recommended that the contractor reconcile the estimates submitted by the subcontractors with the EAC's reported to NASA; maintain a record of the reconciliation; support all adjustments with verifiable documentation; and explain all adjustments to EAC's in the financial reports submitted to NASA. Also, the auditor recommended that the prime contractor initiate action to obtain appropriate audit reports related to subcontract performance.

This report was forwarded to the NASA lead Center for follow-up to assure corrective action and to the NASA Headquarters Program Office with a suggestion that Program and Project Office conduct a special management and technical review and assessment of significant contract changes including effectiveness of engineering change procedures and practices.

Actions by the contractor and NASA are partially responsive to audit recommendations. NASA management concurs with the basic audit recommendations
and has initiated action to assure that they are fully implemented. Also, NASA management has initiated other actions including special management reviews directed toward improving a number of areas. Such independent actions are also partially responsive to the audit suggestion. However, additional action is still needed regarding the special management and technical review previously suggested by audit.

f. Report on General and Administrative (G&A) Expenses Noncompliance with Cost Accounting Standard (CAS) 410 - Based on the DCAA auditor's opinion, the Defense Contract Administration Service (DCAS) in March 1978 determined that the contractor's use of a single element direct labor base to allocate divisional G&A expense for 1978 was in noncompliance with the Standard. In June 1978 the Armed Services Board of Contract Appeals (ASBCA) accepted the contractor's use of a direct labor base to allocate G&A for FY 1977. However, this ASBCA case was for a period prior to the establishment of CAS 410. In February 1979 the DCAS reversed the prior determination of noncompliance with CAS 410. Notwithstanding the DCAS reversal, the audit position is that the contractor is in noncompliance with CAS 410. The estimated 1978 cost to NASA of the noncompliance is about $1 million.

Because of this apparent difference of opinion and the dollar impact, it was recommended that this matter be pursued by NASA management. This would include further discussions with appropriate DOD representatives.

NASA actions are only partially responsive to the audit recommendations. As of September 30, 1979, the cognizant contracting officer had not notified the contractor of his noncompliance with CAS 410, notwithstanding the DCAA/NASA OIG audit opinion. NASA OIG audit has recommended that the Director of Procurement take an active role in this case.

g. Report on Manpower Utilization - The ratio delay techniques used in the audit showed that nonproductivity (idle time) was about 34 percent in selected departments. The auditor estimated that if the level of nonproductivity for these departments was reduced, annual cost avoidance for excess nonproductivity could be as much as $3.7 million.
It was recommended that the contractor establish a program to improve supervisory monitoring of employee work and activities, appoint alternate supervisors during vacation periods, and evaluate supervisor performance.

Because of prior reports on this issue, NASA Headquarters management requested Center management to follow-up on the matter. A Center review team assessed the contractor's manpower allocation procedures and methods for measuring and controlling productivity. The results of the team review were reported to NASA Headquarters management including the measures taken to increase contractor personnel awareness of the need to improve productivity.

Contractor and NASA actions are partially responsive to audit recommendations. Additional action is needed in the area of improved surveillance techniques.


1. EASTERN REGION

   a. Review of NASTRAN Activities - This review of selected NASTRAN (NASA Structural Analysis) computer software activities disclosed some improper or questionable use of the program by a NASA contractor who was involved in developing and maintaining the software. The use is believed to constitute a breach of contract which could require financial adjustment or other remedial action. The questionable use generally occurred because of changes and interpretation of the contract clause, "Rights in Data--Special Situations," which covers computer software Developed or used by NASA contractors.

   It was recommended that NASA program, technical, legal and procurement representatives advise program management of the future actions to be taken regarding other than NASA approved marketing of NASTRAN. Recommendations were also made regarding recovery of any financial damages and a technical review to determine the extent of improper use of NASTRAN and the amount of financial damages. NASA Headquarters legal and procurement representatives concurred with the recommendations and are developing a course of action to resolve the questionable usage.

   b. Audit of Logistic Operation - An audit of logistics operation (office supply, warehousing and
purchasing function) at one NASA installation disclosed the need for several management improvements to provide the basic internal controls needed. The major problems and management's actions are summarized below.

-- Supply items were being procured at substantially higher prices from commercial sources than prices available from GSA.

-- Inventory records and supply activity data to support inventory valued at $250,000 were not being adequately maintained.

-- Space was being used at the warehouse to store publications that could be shipped directly from the printer to the user.

Management conducted a thorough study of the logistics operations in order to respond to our recommendations. While the study results agreed with many of the recommendations, and corrective actions have been initiated, there were some areas of disagreement. We are assessing the study conclusions and any unresolved significant issues will be included in the next semiannual report.

c. Audit of Word Processing Activities - Improved management was needed, particularly in the controls over purchase and use of equipment and in the evaluation of productivity and utilization. A projected cost savings of $250,000 was not achieved because of the failure to implement fully the findings of a word processing feasibility study. Most of the project cost savings did not materialize because of the limited number of word processing centers established and the failure to reduce clerical personnel. The effectiveness and efficiency of the centers established were adversely affected by staffing at grades substantially below full performance levels. The Center agreed with most of the recommendations.

In response to the audit, NASA Headquarters is reviewing these word processing activities in order to assist in achieving improvements and to resolve problems where disagreements existed between the auditors and the Center. The OIG will follow-up on the Headquarter's actions and report upon them in the next semiannual report.
2. SOUTHERN REGION

a. Audit of Automatic Data Processing Terminals - An audit of the management of ADP terminals disclosed several areas where improvements were needed in the acquisition of terminals. The problem areas included:

-- about $375,000 could have been saved over a four year period if terminals had been purchased rather than leased.

-- acquisition plans were not prepared for 82 terminals and lease vs purchase studies were not prepared on 170 terminals purchased in FY 1977 and FY 1978.

-- Recapture clauses were not included in most lease agreements

-- Terminals were purchased without required approvals from NASA Headquarters and GSA.

-- More timely maintenance and more accurate inventory records were needed.

Management has agreed to initiate corrective action on most of the findings and recommendations. Some recommendations are still being assessed by NASA Headquarters and will be covered in the next semiannual report if appropriate.

b. Audit of Word Processing Resources - One Center had not established policy or defined organizational responsibilities in order to provide for effective management of word processing activities. This contributed toward weaknesses in:

-- identification and assessment of word processing requirements

-- identification and selection of resource capabilities to meet the requirements
- periodic assessment of the effectiveness and efficiency of existing activities
- periodic assessment of productivity and utilization of equipment
- identification of future requirements and the capabilities to meet them.

Center management agreed with most of the recommendations. NASA Headquarters is reviewing this activity in order to assist in achieving improvements and to resolve problems where disagreements exist with the audit recommendations. The Headquarters actions will be covered in the next semiannual report.

c. Report on Review of Word Processing Applications - The audit disclosed that the use of text editing equipment in the Operations Control Section could result in labor cost savings of $78,000 annually; expanded utilization of text editors at key contractor locations, on a time-sharing basis, could result in an estimated cost avoidance of $51,000 annually; and more effective use of machine dictation equipment could result in an annual cost savings of approximately $81,000.

It was recommended that the contractor utilize a text editor in the preparation of Data Requirements List Item No. 15 (a contractual reporting requirement) and coordinate with responsible NASA representatives to determine the type of text editing equipment best suited for the needs of the Operations Control Section; utilize text editors at key contractor locations on a time-sharing basis and coordinate with affected NASA representatives to determine the type of equipment required to best satisfy the workload requirements at specific locations; and existing shorthand dictation and handwritten input practices should be substantially reduced and replaced by more effective use of machine dictation equipment.

Since the contractor was only responsive to the first audit recommendation, the report has been submitted to NASA management to assure corrective action.

d. Report on Evaluation of the Work Order Control System - The audit disclosed that approximately 25 percent of the Special Work Orders physically completed
during a 16 months period were for jobs estimated to require 24 hours or less of direct labor and nominal material charges. Generally, support requests requiring a minimal amount of effort should be processed using Standing Work Orders rather than Special Work Orders. Maximum use of Standing Work Orders would result in an estimated cost saving of $380,000 over the remaining three years of the contract.

The auditor recommended that the contractor ensure that support requests are carefully screened prior to assigning Special Work Order numbers. Support requests requiring a minimal amount of effort in terms of labor and material costs should be controlled and administered by Standing Work Orders. The contractor concurred and is implementing the audit recommendation.

e. Review of Interactive Computer Graphics Utilization - The audit disclosed a potential for substantial expansion of Interactive Computer Graphics (ICG) by the contractor. Future implementation of ICG techniques in the electrical engineering areas could result in an annual cost avoidance of at least $300,000 through increased efficiency/reduced labor requirements.

The auditor recommended that the contractor should implement ICG techniques where feasible, in all engineering disciplines as soon as possible; a study should be made of all engineering functions to determine which operations can be performed more efficiently and economically through use of ICG. The contractor agrees that greater use can be made of ICG by engineering functions.

3. WESTERN REGION

a. Audit of the Institute for Advanced Computation - ILLIAC IV - The audit of this major computer facility located at a NASA Center disclosed several significant problems in the operation and use of the facility. The facility managed by NASA and operated by three contractors has a budget of about $4.2 million, exclusive of support costs covered by the NASA Center. The most significant findings and management actions are outlined below.

-- Failure of the facility to realize anticipated outside revenues of over $1 million annually. Actions being taken to reorganize the operation and to revise the budget are expected to save $0.5 million annually.
Actions have been initiated in all of these areas to achieve improved management.

b. Report on Evaluation of Computer Aided Design (CAD)/Computer Aided Manufacture (CAM) and Micrographics - The review disclosed that the contractor could achieve annual cost avoidance of about $4.5 million by implementing a CAD system to replace certain manual control tasks, and installing a computer managed numerical control system.

It was recommended that the contractor:

1. expedite the implementation of a CAD system;
2. use CAD terminal to process material requirements study for engineering orders; (3) perform a feasibility study for the purpose of implementing CAD technology to view and reproduce hard copies of drawings by use of interactive graphic terminal to reduce time required to prepare tool cutting path sketches. The report was submitted to NASA management for corrective action.
c. Audit of Cash Management

Internal controls - The audit disclosed a need for strengthening these controls and improving cash management. More specifically, (1) the system does not provide for adequate safeguards over cash receipts and the cash receipts are not promptly transferred to cashier for deposit; (2) responsibility for depositing cash is not adequately separated; (3) contractor pays vendors considerably in advance of due dates, resulting in additional interest costs to the Government of about $30,000 to $80,000 annually.

It was recommended that the contractor:

should: (1) place a restrictive endorsement "for deposit only" on checks as received and promptly prepare cash remittance list for deposit; (2) separate functions between the distribution of payroll checks and processing of time cards and establish written procedures when bills are due. The report was submitted to NASA management for corrective action.

d. Report on Direct Production Supervision

Labor - The audit disclosed that the ratio of supervisors significantly exceeded the contractor's guideline of 7.5 supervisors per 100 employees. The actual ratio ranged from approximately 10.1 to 15.1. The increase in the ratio occurred when the number of production workers decreased by 1,545 employees (about 42%) but the number of supervisors declined by only 41 employees (about 16%). The related labor and fringe benefit costs for supervisors, in excess of company criteria, amount to about $1.5 million annually.

It was recommended that the contractor establish procedures for its FY 1979 requirements for direct production supervisors in accordance with the contractor's established labor and fringe benefit costs for corrective action.

e. Report on Word Processing

Disclosure of an opportunity to avoid costs of a centralized word processing organization to evaluate document preparation and word processing equipment, and computerized certain manual tasks.

The report was submitted to NASA management for corrective action.
The report was submitted to NASA management for corrective action. It was recommended that the contractor computerize the preparation of manually prepared reports and increase the use of word processing systems and
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For the seven months ending September 30, 1979

A summary of the sources of the complaints or information received are:

A. Investigations Activities

Chapter III
(OIG) exercise its right to impose sanctions. A. The OIG has not, as of the date of this report, taken any action to address the allegations contained in this report.

B. The OIG has not yet determined whether it will pursue any action against the contractor in connection with the allegations.

C. The OIG has not yet made a final decision on whether to refer the matter to the Department of Justice for criminal investigation.

D. The OIG has not yet completed its investigation of the contractor.

E. The OIG has not yet determined whether it will take any action against the contractor.

F. The OIG has not yet made a final decision on whether to refer the matter to the Department of Justice for criminal investigation.

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H. The OIG has not yet determined whether it will take any action against the contractor.

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R. The OIG has not yet made a final decision on whether to refer the matter to the Department of Justice for criminal investigation.

S. The OIG has not yet completed its investigation of the contractor.

T. The OIG has not yet determined whether it will take any action against the contractor.

U. The OIG has not yet made a final decision on whether to refer the matter to the Department of Justice for criminal investigation.

V. The OIG has not yet completed its investigation of the contractor.

W. The OIG has not yet determined whether it will take any action against the contractor.

X. The OIG has not yet made a final decision on whether to refer the matter to the Department of Justice for criminal investigation.

Y. The OIG has not yet completed its investigation of the contractor.

Z. The OIG has not yet determined whether it will take any action against the contractor.

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Z. The OIG has not yet completed its investigation of the contractor.
Dublin, CA continued investigation to questionable expenses. NASA continued investigation to prosecution since 1984 and in 1986 was referred to the FBI for investigation in January 1977. In August 1978, U.S. Attorney for the District of San Francisco decreed the matter was referred to the FBI for investigation.

The disagreeing date on claimed expenses of over $85,000 and contract charges for additonal assurance, charges for additional costs are insufficient. The charges for additional assurance, charges for additional costs are insufficient.

Audit assistance from the Defense Contract Audit Agency, the charges involved several major luxury automobiles, personal use of the President, a new luxury automobile, a new luxury automobile, a new luxury automobile, a new luxury automobile.

DOD, the charges involved several major luxury automobiles, personal use of the President, a new luxury automobile, a new luxury automobile, a new luxury automobile.

In April 1977, Martinez was found guilty of the highest grade: NASP investment. NASP investment. NASP investment.

The matter was referred to the FBI for investigation in January 1977. In August 1978, U.S. Attorney for the District of San Francisco decreed the matter was referred to the FBI for investigation.

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2. WESTERN REGION

Other two are awaiting trial thus far. The other two are awaiting trial. The other two are awaiting trial.

From the Department of Justice, the other two are awaiting trial. The other two are awaiting trial. The other two are awaiting trial. The other two are awaiting trial.
ensure that all illegal or questionable charges were identified. The contractor reimbursed NASA $5,194 for the charges to the contract for the wife’s luxury automobile. The firm has been dropped from the Small Business Administration (SBA) program, its contract with NASA cancelled and the matter was closed.

C. An allegation was received pertaining to the Small Business Administration (SBA) program. The firm also involved allegations that a computer project was mismanaged with funds being wasted as a result and illegal or questionable costs were billed to the SBA, which had been notified by the contractor. The SBA declined prosecution on the bribery allegation and dismissed the case as communicated by the FBI. The alleged contractor, however, was still at fault under the other allegations as filed. The case is pending presentation to a Federal Grand Jury.

D. A major aerospace contractor for the recovery of precious metals from a NASA contractor's property (Saturn engines) for approximately $40,000 in gold was unaccounted for by the subcontractor. After referral to the subcontractor, the contractor was billed for $10,000 in gold, which was recovered by the subcontractor. The subcontractor then filed a civil suit for recovery of the subcontractor's losses, which was dismissed in August 1978, in view of the contractor's bankruptcy. Further remedies are considered available and the matter has been closed.

d. A salvage contractor failed to reimburse NASA for scrap removed from a NASA facility. NASA investigation revealed 30 truckloads of scrap metal, but only four loads, amounting to an estimated loss to the Government of over $9,000. The case is pending presentation to a Federal Grand Jury.

e. The contract for the recovery of precious metals from a NASA contractor's property (Saturn engines) was dropped. The subcontractor was indicted on one count of embezzlement of Government property. The subcontractor pleaded not guilty, and further remedies are considered available and the matter has been closed.
1. **EASTERN REGION**

a. A sole source firm-fixed price painting contract was audited, with the following irregularities being noted:

   - No specifications in the contract.
   - The son of the contract monitor is shown as a contractor employee.
   - The contract was changed lowering the number and amount of experience of the painters, with no downward adjustment to the price.
   - The estimates of square footage to be painted and already painted as determined by the contract monitor were questionable.

b. A NASA official was alleged to have allowed excessive labor hour charges in the negotiation of a new janitorial contract and to have received kickbacks from the subject contractor and other contractors in exchange for his actions. The NASA official and the janitorial contractor were purported to have opened a separate business pricing in the DCAA audit disclosed no evidence of defective pricing in the subject contract, although the result of operations higher than anticipated during negotiations. DCAA investigation conducted to date determined that the actions taken by the NASA Center Procurement Division were appropriate and that no excessive pricing had been negotiated into it. Investigation is continuing.

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2. **SOUTHERN REGION**

a. In April 1979, allegations were received indicating that a contractor had defrauded the Government by mischarging payroll and "pay-offs" to NASA personnel. This matter was brought to the attention of the NASA Installation Officer and the Chief Counsel of the NASA Installation involved. NASA OIG and DCAA have taken audit action.
Preliminary audit results are currently being analyzed to determine if additional investigation need be conducted. The FBI has been informed and is conducting an investigation.

b. A number of states have filed suit alleging that the Portland Cement Association and the cement used in the last 10 years have violated anti-trust laws by artificially fixing prices and creating shortages. One of the defendants in this suit is a major U.S. contractor. However, the MOR contract has been obtained. All pleadings filed in the suit have been
below the level of a major NASA contractor has subcontracted a considerable amount of work modifying the
determination. Investigation is being conducted to determine the

The following pages contain additional information:

C. In June 1979, information was received alleging the sale of valium and other drugs from the health

3. WESTERN REGION

a. Allegations were received which indicated possible acceptance of favors and gratuities by NASA employees from a contractor. An investigation was made, and the contract was terminated.

b. Allegations were received which indicated possible acceptance of favors and gratuities by NASA employees from a contractor. An investigation was made, and the contract was terminated.

c. Allegations were received which indicated possible acceptance of favors and gratuities by NASA employees from a contractor. An investigation was made, and the contract was terminated.

d. Allegations were received which indicated possible acceptance of favors and gratuities by NASA employees from a contractor. An investigation was made, and the contract was terminated.
were brought to the attention of the Director of the Center for Contract Action. The matter is considered closed.

b. Allegations were received in June 1979 from an employee of a major contractor that certain managers were improperly directed the mischarging of employees' time from a fixed-price contract, resulting in approximately $120,000 in improper costs charged to the NASA contract. Investigation by NASA OIG and audit by DCAA is continuing.

c. OIG received information that a contractor was charging the cost of travel for his employee, while on temporary duty, received a travel allowance for his companion and two pets. NASA OIG substantiated these claims and charged the contractor six overheard allowances for the contractor's travel and relocation expenses.

d. During July 1979, the OIG received information that two subcontractors had billed costs for public relations services and charged to the contractor's costs. Investigation disclosed that the subcontractors had夸大 their expenses and that the contractor had reimbursed them.

e. Allegations were received in June 1979 that a contractor under "straw man" conditions" had been charged for costs not allowable under the NASA contract. Investigation has shown that the contractor has not retained any benefits from this action. The matter will be presented to the U.S. Attorney for prosecution.
APPENDICES
April 1 - September 30, 1979

LIST OF INTERNAL AUDIT REPORTS

APPENDIX I
(SC 13-79, May 24, 1979)
Proposal Evaluations - Business and Technical
Data Systems Laboratory (SC 10-79, March 14, 1979)
Computer Techniques (SC 9-79, January 29, 1979)
Automated Payload System Using "ivant Through the
Marshall Space Flight Center

Problems with Scrap Sales (NE 16-79, June 20, 1979)
Interest Funds and Collections (NE 15-79, June 20, 1979)
Revenue Conservation Activities (NE 8-79, March 14, 1979)

Lewis Research Center

Reimbursable Funds (MA 6-79, August 8, 1979)
Interest Fund (MA 11-79, August 7, 1979)
Space Systems Technology (MA 6-79, July 28, 1979)
Technology Utilization and Applications Programs
National Aeronautics (MA 7-79, May 9, 1979)
Unfunded Purchase Requests (MA 5-79, June 2, 1979)

Langley Research Center

May 16, 1979
Multidisciplinary Research Activities (MA 4-79)
(1.973, March 30, 1979)
Computer Software Development and Maintenance
(Supersonic Cruise Aircraft Research Program
February 23, 1979
Aircraft Energy Efficiency Project (MA 12-78)

Langley Research Center
Imprest Fund and Collection Activities (SC 14-79, April 27, 1979)

Barge Operations (SC 15-79, June 11, 1979)

Space Utilization and Energy Conservation, Michoud and St. Louis (SC 12-79, April 27, 1979)

*These reports have been issued by OIG Regional Offices but may not have been issued by Headquarters before they can be considered final. Any unresolved items that are significant will be included in the next semiannual report.
Report on Evaluation of Proposed Cost Overrun

Experience Requirements (634J-99160004, May 23, 1979)

Report on Review of Labor, Compliance with Educational and

for Subcontractor (1231-96160038, May 21, 1979)

Report on Floor Check and Review of Timekeeping System

(618L-38420065, May 16, 1979)

Report on Floor Checks (1231-9830011, May 17, 1979)

Report on Postaward Review of Cost or Pricing Data

Cost overrun (1231-96210064, May 5, 1979)

Report on Evaluation of Pricing Proposal for Estimated

Report on Reprographic Operations (MR 78-166, April 30, 1979)

Assets (1371-9414005, April 27, 1979)

Report on Review of Capitalization and Depreciation of

Report on Direct Supportation Labor (MR 79-137, April 24, 1979)

Audit Report on Review of Material Requirements and Usage

Audit Report on Energy Conservation (MR 78-211, April 19, 1979)

NASA Form 108 (7231-9415001, April 9, 1979)

Audit Report on Evaluation of Property Management Reporting

(1231-96160014, April 2, 1979)

and Review of Timkeeping Procedures and Practices

(1231-9810007, April 2, 1979)

Gate Checks

Report on Evaluation of Work Order Control System

REPORT TITLE

April 1, 1979 - September 30, 1979

SUBMITTED TO NASA OFFICIALS

CONTRACTOR AUDIT REPORTS

APPENDIX II
Report on Allocation Base for General and Administration Expenses (WR 79-1-1, May 25, 1979)
Report on Review of Cost Allocation Basis (1231-9G130013, June 14, 1979)
Report on Contract Audit Closing Statements (03-9G678, July 5, 1979)
Report on Workshop Practices (1231-9G160072, August 13, 1979)
1231-85178025, September 21, 1979

Report on Review of Institutional Provisional Government Property

1231-9C122066, September 20, 1979

Report on Review of Contractor's Subcontract Administration

(1231-9C126016, August 23, 1979

Report on Physical Observations (Walk Throughs) and Review of Timekeeping and Labor Distribution Procedures and Practices

(1231-9AT40002, August 31, 1979

Report on Review of the Burden of Projects/Demonstration Projects Cost (1231-9AT40003, August 23, 1979

Report on Physical Observations (1231-9AT660055-1, August 23, 1979

Report on Follow-Up Review of Timekeeping Procedures and Practices

(1231-9AT44004, August 28, 1979

Report on Review of Business Meeting--Technical and Employee Activities

(1231-9C126040, August 23, 1979

Report on Review of Prepartion and Control/Program Budgets (1231-8AT110001, August 27, 1979

Report on Review of Budget Preparation and Control/Program
SC 7-79, January 5, 1979 (Status: Open)
The recall and identification of past partici-pating items
The use of contract standards and measurements and
Audit of calibration of systems and equipment including

(SC 6-79, July 24, 1979 (Status: Open)
Audit of reliability and quality assurance activities

January 9, 1979 (Status: Closed)
Audit of office moves and modifications (SC 6-79)

Projects (SC 2-79, October 30, 1978) (Status: Closed)
Audit of automated data processing tape management

(SE 4-78, September 18, 1978) (Status: Closed)
Audit of special purpose mobile equipment

2. Southern Region

Closed: Closed
November 7, 1978 (Status: Closed)
Audit of word processing systems (MA 11-78)

November 18, 1978 (Status: Closed)
Audit of the magnetic tape certification facility

December 29, 1978 (Status: Closed)
Audit of payroll operations and time and attendance policies and practices (NE 20-78)

1. Eastern Region

Sequence as they appear in Chapter II.

The reports are listed in the same
next semannual report. The reports are listed in the same
Chapter II as not yet completed will be carried forward to the
Chapter II. Those reports with significant matters shown in
Chapter II. Those reports with significant matters shown in
recommendations carried forward from the April 1979 Semannual
report, for which the current status has been summarized in
recommendations carried forward from the April 1979 Semannual
report.

SUMMARIZED REPORTS
CARRIED FORWARD FROM PREVIOUS
AUDIT REPORTS WITH SIGNIFICANT MATTERS

APPENDIX III
   Status: Open

   f. Report on GSA Expenses Non-Compliance CAS 410
   Status: Open

   e. Support Administration Operations and Financial
   Status: Closed

   d. Report on Energy Conservation (October 1979)
   Status: Closed

   c. Audit of Controls and Procedures for Safeguarding
   Computer Operations (MM 8-78, August 18, 1978)
   Status: Closed

   b. Audit of Management of Aircraft Spares and Report
   February 24, 1979
   Status: Closed

   a. Audit of Support Services Contracts (MM 6-78)
   Western Region

3. 1979 (February)
   Report for the Honey and Salaries and Pension Plans
   Status: Open

   h. Report on Evaluation of Claim for Additional Funding
   Status: Closed

   g. Report on Review of Interactive Computer Graphics
   Status: Closed

   Status: Closed

   e. Joint Report on Evaluation of Word Processing
   (November 1978)
   Status: Closed

   d. Report on Energy Conservation (October 1979)
   Status: Closed
Robert A. Prosch

That NASA functions effectively and efficiently, working with you to assure, to the best of our abilities, Inspector General is commendable. I look forward to your progress in organizing and staffing the Office of Inspector General submitted under section 5(p) of P.L. 95-452.


TO: A/Administrator

W/Inspector General

Office of the Administrator
20546
Washington, D.C.
Space Administration
National Aeronautics and Space Administration

NOV 28 1979