

101 - 9/25-1

NASA Manned Spacecraft Center
Houston, Texas
In reply refer to: BU (RHV:ay)
September 20, 1963

MEMORANDUM for those listed on Exhibit D of Attached Report

Subject: Interim Audit Progress and Status Report on IMCC
Contract NAS 9-1261 with Philco Corporation


The attached report pertains to the direct audit activities of Manned Spacecraft Center Contract No. NAS 9-1261 with the Philco Corporation.

The NASA Regional Audit Office, MSC, has been designated the audit focal point, with assist audit services being supplied by cognizant Army, Air Force and Navy audit offices situated at the various geographic locations of the Philco Divisions involved in contract performance.

Mr. Ralph E. Tippit, NRAO, MSC, has been designated as the Auditor-In-Charge of these audit operations.

This is our initial interim audit status report designed to provide all interested offices and individuals with information as to the audit concept, scope, objectives, problems and status of audit operations to date.

If there are any questions concerning the matters discussed in the report, please contact us.


Thomas J. Cassias, Manager
NASA Regional Audit Office, MSC

Enc:
As stated

NASA REGIONAL AUDIT OFFICE

MANNED SPACECRAFT CENTER

Houston, Texas

INTERIM AUDIT PROGRESS AND STATUS REPORT
INTEGRATED MISSION CONTROL CENTER (IMCC)

PHILCO CORPORATION

WESTERN DEVELOPMENT LABORATORIES DIVISION

Palo Alto, California

CONTRACT No. NAS 9-1261

Date of Report:
September 20, 1963

NASA REGIONAL AUDIT OFFICE, MSC
Report No. MSC 5-64

NASA REGIONAL AUDIT OFFICE
MANNED SPACECRAFT CENTER
Houston, Texas

T A B L E O F C O N T E N T S

INTERIM AUDIT PROGRESS AND STATUS REPORT
INTEGRATED MISSION CONTROL CENTER (IMCC)
PHILCO CORPORATION
WESTERN DEVELOPMENT LABORATORIES DIVISION
Palo Alto, California

CONTRACT No. NAS 9-1261

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MANNED SPACECRAFT CENTER
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INTEGRATED MISSION CONTROL CENTER (IMCC)
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CONTRACT No. NAS 9-1261

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Statement of Comparison of Original Proposal With Revised Estimate, Negotiated Amounts - PHILCO IMCC CONTRACT No. NAS 9-1261	EXHIBIT A
Statement of Analysis of Anticipated Additional Funding PHILCO IMCC CONTRACT No. NAS 9-1261	EXHIBIT B

NASA REGIONAL AUDIT OFFICE
MANNED SPACECRAFT CENTER
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Palo Alto, California

CONTRACT No. NAS 9-1261

Exhibits

Assist Audit Requests

Distribution of NASA Regional Audit Office, MSC,
Report No. MSC 5-64

Reference

EXHIBIT C

EXHIBIT D

1. INTRODUCTION AND BACKGROUND

a. Contract Origin

(1) The need for an Integrated Mission Control Center (IMCC) at the Manned Spacecraft Center arose with the development of the Project Gemini and Project Apollo concepts, in that future manned space flight envisions the simultaneous control of two or more space vehicles. The earlier Project Mercury, in maintaining control of only one space vehicle, utilized the combined facilities of Goddard Space Flight Center, Greenbelt, Maryland, and the Launch Operations Center, Cape Canaveral, Florida. It was deemed impracticable by NASA management to attempt to modify existing facilities to fulfill the new requirements; therefore, Mr. James E. Webb, NASA Administrator, on July 9, 1962, approved the MSC request for authority to procure the Integrated Mission Control Center by means of a negotiated contract.

(2) Prior to developing the NASA estimate to support program approval and establish initial funding requirements, a study contract (Letter Contract NAS 9-366) was awarded to Philco Corporation, Western Development Laboratories Division, Palo Alto, California. The study encompassed preliminary design and concept development of a communications system and facility for Operation's control of Manned Space Flight. As an added task under the letter contract, Philco was requested to estimate the costs for this facility. The ultimate figure developed totaled \$26,661,900. This was exclusive of interface equipment needed for the recovery control center integration and integration with the ground operations support system. The estimate for this latter phase was developed by MSC and aggregated an additional \$12,100,000 which produced a total Government estimate figure of \$38,761,900. This total was subsequently adjusted upward to \$38,800,000 which was the amount contained in the procurement plan that was sent forward to NASA Headquarters and was approved on October 30, 1962, by Dr. Robert C. Seamans, Jr., Associate Administrator. The contract itself was approved on March 26, 1963, by Ernest W. Bracket, Chief, Office of Procurement, NASA Headquarters.

b. Contractor Selection

Prior to requesting proposals, MSC distributed a letter to 103 companies, advising them of the intent to issue a Request For Proposal (RFP) and inviting them to submit documentation as to their capability to perform the task described. Nineteen contractors submitted material which was subjected to an intensive technical and financial evaluation, with the result that nine were considered unqualified. Two of the nine unqualified contractors submitted written requests for RFPs, after being notified of their unqualified status. These two contractors, plus the ten that qualified, were then provided the RFPs on November 9, 1962. A Source Evaluation Board received the proposals on December 10, and conducted extensive research including evaluations of the technical and business performance of each contractor on prior contracts, ending with a presentation to the Director, Office of Manned Spacecraft on January 24, 1963, and to the NASA Administrator on January 25, 1963. An announcement was made on January 28, 1963, that it was the decision of the Administrator to negotiate for the IMCC contract with the Philco Corporation.

c. Negotiations and Award of Contract

(1) Formal negotiations with Philco Corporation began on February 4, 1963, on the basis of the contractor's proposal for \$31,403,630 in estimated costs and \$2,495,000 fixed fee. Simultaneously, a joint effort between Philco and MSC began and the work statement, because of redirected effort, was completely rewritten. As a result of the changes in the work statement and the redirected effort, the contractor increased the proposed estimated cost to \$35,084,787. The original proposal, revised estimate and final negotiated amounts are shown on Exhibit A, attached and are summarized as follows:

	<u>ORIGINAL PROPOSAL</u>	<u>REVISED ESTIMATE</u>	<u>NEGOTIATED</u>
Estimated Cost	\$31,403,630	\$35,084,787	\$31,697,565
Fixed Fee	<u>2,495,000</u>	<u>2,495,000</u>	<u>2,100,000</u>
Total Cost & Fee	<u>\$33,898,630</u>	<u>\$37,579,787</u>	<u>\$33,797,565</u>

(2) On March 21, 1963, MSC awarded a CPFF contract (NAS 9-1261) to Western Development Laboratories Division, Philco Corporation, a subsidiary of Ford Motor Company, for the design, fabrication, installation and operation for one year, after completion, of the IMCC at Clear Lake, Houston, Texas. Although the final negotiated amounts were not segregated or identified by Philco and Ford divisions, the original proposed schedule of contract performance, as set forth below, is considered as a reasonably accurate projection of divisional effort.

Philco Houston Operations	\$10,745,652
Western Development Laboratories	10,745,527
Communications & Electronics	1,158,472
TECH REP	2,472,108
Aeronutronics Div., Ford Motor Co.	<u>6,281,871</u>
	<u>\$31,403,630</u>

(3) Subsequent to the contract award, two supplemental agreements were issued. Supplemental Agreement No. 1 was concerned with specifications and did not affect the estimated costs or fee. Supplemental Agreement No. 2 incorporated Letter Contract NAS 9-366 into NAS 9-1261. As mentioned, this letter contract provided for the basic design and concept development of the IMCC. Estimated costs and fees from Letter Contract NAS 9-366 were transferred as follows:

	<u>Estimated Cost</u>	<u>Fee</u>	<u>Contract Total</u>
Contract NAS 9-1261	\$31,697,565	\$2,100,000	\$33,797,565
Letter Contract NAS 9-366	<u>1,213,087</u>	<u>85,000</u>	<u>1,298,087</u>
	<u>\$32,910,652</u>	<u>\$2,185,000</u>	<u>\$35,095,652</u>

(4) Other supplements appear imminent, since the Form 533 report for June 30, 1963, lists estimated costs and fee to completion, at \$36,767,565 (excluding Supplement 2), thus reflecting a current need for additional programmings of funds, approximating \$2,970,000 (see Exhibit B for details). Also the PERT report of August 23, 1963, shows schedule slippages of approximately sixteen weeks and the aggregate for additional funds could go as high as \$5,000,000. A target date of September 30, 1963, has been set for costing all line items and work sub-divisions (Form 533); consequently, the contractor is currently developing revised estimates of costs to completion which are expected to be in sufficient detail to permit technical and managerial appraisal. Support from cognizant DOD auditors in the form of requests for validation of data developed by the various Philco Divisions has already been requested by the audit focal point (see Exhibit C).

d. Assignment of Audit Responsibility

On March 21 and 22, 1963, the question of whether NASA Regional Audit Office, MSC, should perform the audit in Houston on a direct basis or whether the services of DOD would be secured was discussed with MSC procurement officials and the Assistant Director for Administration. As reported in the MSC Regional Audit Office memorandum of April 2, 1963, to Mr. Raymond Einhorn, Director, Audit Division, the recommendation was that performance and control of the audit by the NASA Audit Division was preferable in this instance and that one auditor should be assigned immediately on a full-time basis with another to be assigned later. R. E. Tippit, of the NASA Regional Audit Office, MSC, was assigned as Auditor-In-Charge to conduct the audit.

2. AUDIT APPROACH

a. Audit Scope

Our preliminary survey of the contractor's Houston, Texas, organization and contemplated division of work for this contract, revealed that approximately one-third of the estimated contract cost would be incurred within the next six months. Because of the administrative and technical complexities of this audit, compounded by widely separated geographical performance locations, the need for coordination and liaison-type visits to the contractor's plants and cognizant auditors was readily apparent. These factors also focused attention on the point that if our audit was to be properly responsive to MSC management, the contracting officer and project offices, the audit scope should encompass all facets of contract performance and determination

of allowability, reasonableness and allocability of costs incurred by all of the Philco-Ford divisions involved. In addition, provision would have to be made for audits of corporate costs allocated by the Philco Corporation and by the Ford Motor Co. to this contract. Therefore, Philco Houston Operations will be audited by the NASA Regional Audit Office, MSC, on a direct basis, with assist audits provided by the U. S. Army Audit Agency for the Aeronautics Division (Newport Beach, California), the Air Force Auditor General for the Western Development Laboratories (Palo Alto, California), and the Navy Audit Office for the Communications & Electronics Division, TECH REP Division and Philco Corporate Office (Philadelphia, Pennsylvania). In determining the reasonableness and propriety of costs, the total audit effort will include reviews and evaluations of the contractor's accounting system, estimating and procurement practices, reliability of financial management data and reports and examinations of incurred and projected performance costs, utilizing PERT and Companion Cost Reporting, and tests designed to evaluate internal controls. The foregoing, as well as matters relating to organization, administration, audit concepts and objectives, were discussed and coordinated with Headquarters, Audit Division, NASA's Western and Goddard Regional Audit Offices, the Contracting Officer and with the MSC Control Systems Project Offices, prior to making necessary proposed audit liaison visits to the cognizant DOD audit offices.

b. Audit Concept

The audit encompasses the concept of current review and reporting of information to the audit focal point (NRAO-MSA) from all contract performance locations, utilizing common administrative ground rules to achieve a coordinated and uniformly comprehensive audit coverage. This concept necessitated the immediate furnishing of sufficient information (NASA Procurement Regulations, PERT handbooks, contract copies, audit program guidance and the like) to the cognizant DOD auditors to enable them to provide adequate assist audit services. Complete and timely exchange of information between the cognizant DOD auditors, the MSC audit focal point and our audit of MSC procurement activities is therefore vital to the successful implementation of this concept.

c. Audit Objectives

Aside from the aspects discussed, the prime audit objective is to enhance contract management by providing, concurrently, means by which sound appraisals and decisions may be made by NASA management, the project manager and the contracting officer. Therefore, audit emphasis included the initiation of reviews by cognizant DOD auditors on making appraisals of the reliability and utility of the contractor's NASA PERT and Companion Cost Reports. In this regard, the cognizant DOD auditors have been requested to provide interim audit status reports to the focal point, as of September 30, 1963.

3. SUMMARY OBSERVATIONS

a. An overrun situation is already indicated, due to schedule slippages and refinement of cost projections. Estimates are that as much as \$5,000,000 in additional funds may be required to complete the program Par. 1c(4) .

b. Complete and timely assist audit services for the NASA audit focal point, from cognizant DOD audit offices located at various Philco Divisions in different geographical locations is most essential to the successful accomplishment of the audit. Because of a heavy backlog of work and prior commitments, question exists as to whether the USAF Auditor General's Office at Philco's Western Development Laboratory will be able to respond, unless added manpower resources are supplied Par. 4b(3).

c. Costs claimed through July 31, 1963, aggregate \$2,008,101.00 with \$116,413.00 having been suspended. Questions relative to the suspended costs have been referred to the contractor for appropriate study and comments Par. 4f.

d. The contract is being incrementally funded; C of F funding increments appear sufficiently ample to carry the contract into the fourth quarter, 1963, rather than the second quarter as originally planned. R&D funds, however, will require additional increments, approximating \$1,500,000.00, to carry this phase of the work through the third quarter, 1963, Par. 4g(2).

e. We are in the process of ascertaining the cost impact that may be expected as a result of Philco-Ford organizational changes made subsequent to the award of the contract. Our preliminary opinion is that the mergers will not exercise a significant cost impact Par. 4g(3).

f. Concerted audit attention will be given the contractor's bidding and proposal and IR&D expenditures, since preliminary findings indicate that such expenditures for the Aeronutronics Division are at an abnormally high rate. We have reason to believe this condition exists also in other Philco Divisions. Par. 4g(4).

g. Other existing and potential problem areas that are or will be given priority coverage are listed in paragraph 5.

4. AUDIT PROGRESS AND STATUS

a. Preliminary Survey

In June 1963, a preliminary survey was made of the contractor's Houston, Texas, organization, accounting system and divisional segregation of contract performance, as a means for development of our master audit program. No significant deficiencies were noted in the areas reviewed and a report was not published. There were indications that approximately \$11,000,000 in contract costs would be expended within the next six months. Therefore, we considered it vital that immediate coordination and liaison-type visits be made to the contractor's plants and the cognizant audit offices as discussed in paragraph 2a above. The trips were scheduled and made during the period June 17 through June 26, 1963, by R. E. Tippit of the NASA Regional Audit Office, MSC, Houston, Texas. Mr. Robert S. Rollin, Manager of the NASA North Eastern Area Audit Office, Cambridge, Massachusetts, accompanied him on the East Coast visits.

b. Liaison Visit to West Coast

(1) NASA Western Regional Audit Office, Los Angeles

(a) Mr. Robert H. Voigt of the NASA Regional Audit Office, MSC made advance contact with Mr. Earle Smith, Manager, Western Regional Audit Office, outlining the audit plan and arranging for the visit itinerary. Upon Mr. Tippit's arrival, the audit concept, approach and objectives were discussed in detail with Mr. Smith. These discussions preceded Mr. Tippit's visits to the DOD Resident Auditors at Aeronutronics Division, Ford Motor Company and the Western Development Laboratories Division, Philco Corporation.

(b) After visiting the DOD audit residencies in California as discussed below, a complete briefing was given the Audit Manager of the Western Regional Audit Office. The briefing included survey observations on Philco-Ford operating policies, the status of DOD audit operations and the extent of expected assist audit performance. The contemplated mechanics to be employed in obtaining necessary assist audit services from the various DOD auditors was also discussed. Agreement was reached that the preferable means would be for the Regional Audit Office, MSC, to define the general and specific assistance needed and transmit the assist audit requests directly to the DOD auditors, with copies of the requests and copies of the ultimate DOD audit reports being provided to the NASA Western Regional Audit Office. The procedure agreed upon avoids delays and administrative burden, while at the same time serving to keep the Audit Manager, WRAO, fully informed.

(2) Aeronutronics Division, Newport Beach, California

(a) The Army Audit Agency Office staffing at Aeronutronics Division consists of Mr. John Crehan, Chief Auditor, and a staff of twelve auditors. Considering the volume and nature of Aeronutronics business and the number of open contracts, the audit manpower available appears to be adequate to meet DOD and NASA requirements on a timely basis. While the workload is relatively heavy, audit status is fairly current. The audit scope affords coverage to all phases of the contractor's operations annually on a cyclical basis and oftener when special circumstances so warrant. The audit program was reviewed and discussed with Mr. Crehan, which together with a review of several recent audit reports, indicates that coverage and quality is at a high professional level.

(b) The audit management reports are broad in scope (covering all facets of the contractor's operations), provide pertinent cost data and appear to be fully responsive. Reports of this type are normally submitted annually or when requested and are in addition to special reporting.

(c) Based on the result of discussions with the Army auditors and limited reviews of their workpapers, we believe that the Aeronutronics' accounting and procurement policies are reasonably good, but their estimating policies and practices are in need of improvement.

(d) We discussed the NASA Procurement Regulations and explained the management significance and importance attached to the NASA PERT and Companion Cost Reporting. Mr. Crehan offered full cooperation in providing NASA

MSC with timely audit support, including tests of the validity of data included in the contractor's PERT and Companion Cost Reporting and Form 533's.

(3) Western Development Laboratories, Palo Alto, California

(a) Our contact was Mr. Gilbert E. Kufahl, Chief, USAF Auditor General Branch Office. He advised that Mr. William H. Dunphy was assigned full time to the audit of Western Development Laboratories Division. Mr. Robert Ziegler, the audit supervisor, spends approximately half of his time working with Mr. Dunphy. The audit residency is currently understaffed to the extent it precludes, for all practical purposes, providing NASA with the current audit services needed. This residency is a critical point as far as the audit mission is concerned since it represents approximately one-third of the cost to be incurred under the contract. To illustrate, priority is necessarily afforded current cost proposal evaluations and final contract audit reports and other audit functions have been deferred. Currently, Mr. Dunphy is auditing 1961 and some of 1962 costs. Although his audit approach contemplates an examination of all types of costs and appraisals of the contractor's management efficiency annually, he has been able to work only on the most pressing specific problem areas. Mr. Kufahl stated that he had hopes for assigning another auditor to Western Development Laboratories Division, if and when his personnel ceilings would permit.

(b) Reports issued by the Air Force auditor provide as much pertinent information as might be expected with the manpower available. Audit status reports are normally submitted on an annual basis.

(c) Accounting, estimating, procurement policies, systems and procedures of Western Development Laboratories Division are similar to those of the Aeronutronics Division. The accounting and procurement policies are believed to be acceptable; however, the cost estimates usually contain numerous "clerical errors", which invariably serve to overstate projections.

(d) During a conference with Mr. E. J. Kaphan (Assistant Controller of Western Development Laboratories), Mr. C. E. Wise (Chief Accountant), Mr. R. E. Dufur (Contract Administrator), Mr. William H. Dunphy (Air Force Resident Auditor), and Mr. Douglas T. Cowart (Air Force Acting Contracting Officer), the audit objectives of establishing common administrative ground rules for auditing NASA contract performance at all of the Philco-Ford plants involved were fully discussed, along the lines previously mentioned.

(e) Mr. Kufahl stated that his office would try to provide NASA with the required audit support. He acknowledged that Contract NAS 9-1261 represents approximately 25% of the total business volume of Western Development Laboratories, but indicated that because of the conditions discussed above, backlog and the like, it would be most difficult to provide the coverage requested on a timely basis.

c. Liaison Visit to East Coast

(1) NASA North Eastern Area Audit Office, Cambridge

(a) Mr. Robert H. Voigt, of the NASA Regional Audit Office, MSC, made advance contact with Mr. James D. McNamara, Manager of the NASA Regional Audit Office, GSFC, who suggested that Mr. Robert S. Rollin, Manager of the NASA North Eastern Area Audit Office, visit the cognizant audit locations with Mr. Tippit. In consonance with this arrangement, Messrs. Tippit and Rollin met in Philadelphia to discuss the audit concept, approach and objectives, preliminary to making visits to the cognizant DOD auditors and the contractor's plant.

(b) Mr. Rollin's assistance during the visits was of material benefit in securing commitments from the Navy auditors as to the assistance to be provided. Also, an understanding was reached with Mr. Rollin relative to the manner in which our formalized requests for audit assistance would be processed. It was decided that the most expeditious procedure, considering the time and administrative effort involved, would be to submit the requests directly to the Navy Area Audit Office, with copies provided to the NASA North Eastern Area Audit Office and the NASA Regional Audit Office, GSFC. In addition, Mr. Rollin offered to represent the MSC audit focal point at such future meetings with the cognizant auditors or contractor representatives, as might be necessary.

(2) Navy Area Audit Office, Philadelphia

(a) Navy Audit personnel contacted were Mr. C. Y. Murch, Director of Contract Audit Division, Mr. B. H. Comroe, Assistant Director and Mr. Mark Huber, Chief Auditor at Philco Corporation. After our audit approach and DOD audit assist requirements were explained, the Navy auditors raised some questions as to why Contract NAS 9-1261 assist audit services should be different from those provided routinely on DOD CPEFF type contracts. We discussed NASA Audit Division concepts and objectives and the emphasis afforded the need for achieving consistent administration and audit, pointing out the differences that exist between DOD audit services and stressing that NASA was the audit focal point, in this instance. We explained further the importance of the contractually required PERT and Companion Cost Reporting and the use of such data as a concurrent audit take-off point. We stressed that considerable audit attention would be devoted to enhancing means for early detection of schedule slippages and cost overruns. Therefore, it was basically prerequisite that we assure ourselves and the contracting officer of the accuracy of the PERT and Companion Cost data submitted by the contractor and for major subcontractors. Mr. Murch then promised full audit support on the Philco contract, and requested that our audit requirements be formalized and that his office be furnished copies of the contract, NASA Procurement Regulations and NASA PERT and Companion Cost System Handbook. These requests were complied with at the time our formal request for assist audit was submitted.

(3) Philco Corporation, Philadelphia

(a) Mr. Huber, Chief Auditor, advised that all audit effort

pertaining to Philco Corporation in the Philadelphia area is directed from the Navy residency office located in the Communications and Electronics (C & E) Division plant. Two auditors are assigned to the TECH REP Division and the remaining eight are assigned to the C & E Division. Two or three of the auditors assigned to the C & E Division are utilized on a short-term basis for the annual audit of the Philco corporate expenses. We believe Navy Audit Office staffing is adequate to provide NASA with the necessary assist audit services for this contract, on a current basis since the audit workload is only moderately heavy, with a slight backlog. Their audit scope appears sufficiently broad to produce acceptable results and is programmed on an annual cyclical basis.

(b) The reports issued by the Navy Audit Office are reasonably broad in scope and generally appear to provide adequate cost data. Audit status reports are submitted only when requested; otherwise, final audit reports are made several months after completion of contract performance.

(c) The accounting, estimating and procurement policies of the TECH REP and C & E Divisions are substantially the same as those of the Western Development Laboratories Division. Their cost estimating practices, while appearing to be more reliable than those of WDL and Aeronutronics Divisions, nevertheless seem to need improvement.

(d) A conference was held with Mr. R. K. Beach (C & E Division Controller), Mr. Thomas Regan (Assistant Controller), and Mr. Huber (Navy Chief Auditor), for the purpose of acquainting them with the NASA Procurement Regulations, special contract cost clauses, and the NASA audit objectives for establishing common administrative ground rules for auditing NASA contract performance at all of the Philco-Ford plants involved. Again, as at the other Philco-Ford plants, we emphasized the importance of obtaining realistic data in the NASA PERT and Companion Cost reports, not only as an important management tool but also as an aid in accomplishing the audit. Mr. Beach stated that, although Philco had not previously handled a contract with PERT and Companion Cost reporting requirements or our type of coordinated audit approach, he considered both points to be advanced management techniques which should prove beneficial to both the Government and to Philco.

d. Requests for Assist Audits

(1) Assist audit requests have been prepared to confirm our discussions with the cognizant DOD auditors and provide added guidance for use in developing their assist audit programs. The requests gave consideration to the contractor's policies and procedures at each plant, and were necessarily premised on the assumption that the Air Force would be able to provide adequate audit support at their residency at Western Development Laboratories in Palo Alto, California.

(2) The requests were directed to appropriate DOD audit organizations, with copies furnished to all other DOD and NASA offices and personnel concerned with this contract. Copies are attached and identified as Exhibit C of this report.

e. Audit Focal Point Master Audit Program

(1) The survey phase of the program is virtually complete and has been coordinated with our continuing inhouse procurement reviews. The master audit program is in process of development and its completion is partially dependent upon the responsiveness of the cognizant DOD auditors to the requested assist input (Exhibit C).

(2) The program as conceived is consistent with and implements the audit scope, concept and objectives discussed in paragraph 2 above and is aimed at achieving the audit objectives highlighted in the requests for audit assistance, as contained in Exhibit C. Summarizing, the program places emphasis on such salient matters as those listed below, which will be used as aids in the development of opinions as to the reasonableness and propriety of Philco cost generations:

(a) Tests of contractor's systems and procedures for the development of historical costs and forecast data in preparing proposals for changes, modifications and financial management reports. This includes the procedures used by the contractor in preparing company-wide budgets. Involved also is the periodic comparison of incurred costs with such budgets.

(b) Assessment of the coordination, liaison and communication between the contractor's own organizations, with its subcontractors, with NASA project offices, contracting officers and the technical people that have been delegated certain administration in the field.

(c) Early detection and evaluation of excessive or unusual increases in overhead rates. This includes also the review of rates used for off-site locations.

(d) PERT and Companion Cost and Form 533 reporting, as previously discussed (see Exhibit C), which involves the comparison and analyses made of plans for physical performance versus actual physical performance and forecasted versus actual cost. Such reviews must be accomplished on a continuing basis so as to provide earliest possible notice of probable task slippage or stretchout and attendant impact on costs and funding.

(e) Other programmed activities include reviews of contract changes and bases for increases or decreases in fees; bases for increases or decreases in estimated costs; attendance at periodic contractor and NASA meetings on work progress and discussion of problem areas as they relate to costs; attendance at DOD audit coordination meetings; reviews of contractor's surveillance over subcontractor operations and attendant financial reporting by subcontractors, with particular attention directed to funding situations and the attention being afforded by Philco to subcontractor's problems; reviews of contractor's proposed organizational and systems changes and evaluations as to cost impacts; adequacy and timeliness of various interim reporting; bases for proposed sharing and loading of IR&D as compared to actual; property administration and accountability and GAO activities.

f. Contract Costs Claimed

(1) The following is a summary of costs claimed, questioned and approved for payment through July 31, 1963.

<u>Description</u>	<u>Claimed</u>	<u>Questioned</u>	<u>Approved</u>
Contract NAS 9-1261	\$1,062,093	\$116,348	\$ 945,745
Letter Contract NAS 9-366	<u>946,008</u>	<u>65</u>	<u>945,943</u>
	<u>\$2,008,101</u>	<u>\$116,413</u>	<u>\$1,891,688</u>

(2) The \$116,348 is covered by a suspension issued by the Contracting Officer relative to certain costs that were claimed direct (labor and travel) which seemingly should have been included as a part of overhead. The contractor's formal reply is pending.

(3) The claimed column represents costs incurred through June 30, 1963.

g. Resumé of Audit Effort Through July 31, 1963.

(1) PERT and Form 533 Reporting

Initial audit effort has been directed at surveillance and review of Philco PERT and Form 533 reports and subcontracting activity. This included the review of NASA project management utilization of PERT and Form 533 reports, the arrangement for appropriate DOD audit and pricing evaluations of subcontractor's proposals; review of the contractor's price analyses of subcontract proposals, and reviewing the progress of negotiations between the contractor and the subcontractors and the furnishing of audit counsel to the NASA Contracting Officer. In addition to other matters that were satisfactorily resolved, a NASA-DOD procurement procedural weakness was noted. Involved was the disclosure of pricing evaluation data to a subcontractor which placed the prime contractor's negotiator at a severe disadvantage. This resulted in protracted negotiations, added travel costs and in general posed difficulties in attaining the negotiation objectives. Our comments and recommendations on this problem, which is not an isolated one, were submitted to Headquarters, NASA Audit Division on August 6, 1963, for the purpose of pursuing the development of NASA procurement policy on this subject.

(2) Funding Status

Incremental funding of \$9,452,900 (\$7,502,900 C of F and \$1,950,000 in R&D) was provided at the inception of the contract. Although this amount was originally anticipated as being sufficient to cover incurred costs only through the second calendar quarter of 1963, our reviews indicate that the C of F funding will carry the contract into the fourth quarter of 1963, but the R&D portion will require \$1,500,000 additional funding, through the third quarter. The Contracting Officer is currently in process of providing for the \$1,500,000 in additional R&D funds. Full funding of the contract will require funds from

Fiscal Year 1963 thru 1966. Project programming shows a need for \$37,797,000 in total contract requirements, of which \$33,797,000 is for contractor performance (\$10,040,000 C of F and \$23,757,000 R&D) and \$4,000,000 is for Government Furnished Equipment.

(3) Organizational Changes

Subsequent to the award of the contract, three organizational changes took place within the Philco-Ford complex. The Sierra Electronics, Inc. Division of Philco Corporation (Palo Alto, Calif.) was absorbed into the Lansdale Tube Division (Philadelphia) in May 1963. The Computer Division was merged into the Communications & Electronics Division in June 1963. Aeronutronic Division of Ford Motor Company (Newport Beach, Calif.) became a division of Philco Corporation on July 1, 1963. Preliminary conclusions are that we do not expect the Sierra Electronics' or Computer Division's merger to materially affect the NASA contract, while the Aeronutronics transfer should result in only slightly lower overhead rates.

(4) IR&D and Bidding and Proposal Expenses

The contractor's bidding and proposal expense appears abnormally high for all divisions; the U. S. Army Audit Agency Residency (Aeronutronics Division) has questioned the reasonableness of these costs. We suggest that reviews similar to those made by the USAAA should be initiated by the other cognizant DOD resident auditors at other contractor locations. Guidance in this regard is contained in our assist audit requests, provided to the various cognizant DOD auditors involved (see Exhibit C). Moreover, it seems that the bidding and proposal expenses at the various Philco Divisions are not a part of IR&D sharing arrangements; thus the opportunity exists for cost switching between IR&D bidding and proposal expenses, as well as other overhead classifications. The U. S. Army Audit Residency Office at the Aeronutronics Division has made a study on this matter and recommends that IR&D and bidding and proposal expenses be considered simultaneously in evaluating the contractor's proposed sharing arrangements for IR&D. We concur in this recommendation and therefore suggest that the other DOD audit offices in the Philco complex review their respective IR&D areas in the light of the USAAA's experience at Aeronutronics Division.

(5) Other Areas of Attention

(a) Other audit activity during this initial phase embraced the following:

(1) In reviewing overhead provisions in Philco Houston inter-divisional purchase orders issued to Aeronutronics Division, the objective was to satisfy ourselves that the rates utilized gave effect to administrative support provided by Philco Houston to the Aeronutronics engineers permanently assigned to Houston.

(2) Losses on sales of employees' homes charged to the contract by Aeronutronics Division, was called to the attention of the USAAA auditors for obtaining corrective action and appropriate adjustments.

(3) We are in the process of reviewing Philco-Ford inter-divisional pricing policies and practices to prevent possible pyramiding of costs and profits.

5. GENERAL

a. Exhibit D attached is a listing of report recipients. We would appreciate being informed of any significant development which would have a cost or financial impact so that prominence could be given such matters in our master audit program, with dissemination as appropriate to cognizant DOD audit offices located at the various Philco Divisions.

b. A subsequent interim audit status report will be issued on or about January 31, 1964. Formal and/or informal audit counsel will be furnished the Contracting Officer on a continuing basis and will embrace also the assist data supplied by cognizant DOD auditors on the basis of the initial September 30, 1963, reporting date (Exhibit C attached).

c. We learned that the U. S. General Accounting Office is currently conducting a review of Letter Contract NAS 9-366 [Pars. 1a(2) and 1c(3)], for background informational purposes. Upon inquiring into this with GAO representatives, we were told that their review is very limited, of short duration and should not involve any duplication of audit effort.

Statement of
Comparison of Original Proposal With Revised Estimate, Negotiated Amounts -
PHILCO IMCC CONTRACT No. NAS 9-1261

<u>Description</u>	<u>Original Proposal</u>	<u>Revised Estimate</u>	<u>Negotiated</u>
Labor	\$ 7,781,840	\$ 8,949,252	\$ 8,759,954
Burden	6,828,304	8,085,277	7,412,563
Overtime Labor	123,420	123,420	123,420
Material	10,916,795	12,375,204	10,410,167
Subcontracts	1,141,472	-0-	-0-
Travel	498,521	522,826	460,633
Services	145,004	-0-	-0-
Other Direct	265,878	510,631	508,402
Computer	<u>57,750</u>	<u>56,250</u>	<u>56,250</u>
	27,758,984	30,622,860	27,731,389
G&A - Divisional	<u>1,030,070</u>	<u>1,162,139</u>	<u>1,058,407</u>
	28,789,054	31,784,999	28,789,796
G&A - WDL	<u>2,614,576</u>	<u>3,299,788</u>	<u>2,907,769</u>
Total Cost	31,403,630	35,084,787	31,697,565
Fee	<u>2,495,000</u>	<u>2,495,000</u>	<u>2,100,000</u>
Total	<u>\$33,898,630</u>	<u>\$37,579,787</u>	<u>\$33,797,565</u>

Statement of
Analysis of Anticipated Additional Funding

PHILCO IMCC CONTRACT No. NAS 9-1261

<u>Description</u>	<u>Negotiated</u>	<u>Estimate at Completion</u>	<u>Amount of Change</u>	<u>Reference</u>
Labor	\$ 8,759,954	\$ 9,259,954	\$ 500,000	Note 1
Burden	7,412,563	7,912,563	500,000	Note 1
Overtime Labor	123,420	123,420		
Material & Subcontracts	10,410,167	12,197,167	1,787,000	Note 2
Travel	460,633	460,633		
Other Direct	508,402	508,402		
Computer	<u>56,250</u>	<u>56,250</u>		
	27,731,389	30,518,389	2,787,000	
G&A - Divisional	<u>1,058,407</u>	<u>1,058,407</u>		
	28,789,796	31,576,796	2,787,000	
G&A - WDL	<u>2,907,769</u>	<u>2,907,769</u>		
Total Cost	31,697,565	34,484,565	2,787,000	
Fee	<u>2,100,000</u>	<u>2,283,000</u>	<u>183,000</u>	
	<u>\$33,797,565</u>	<u>\$36,767,565</u>	<u>\$2,970,000</u>	

Auditor's Explanatory Comments

1. Labor and Burden - Contractor's rough estimate of additional engineering effort resulting from refinement of design concepts.
2. Material and Subcontracts - Additional costs for subcontracting of items which under the initial proposal were to have been produced by Philco. Philco's initial estimates and the concepts presented were unrealistic and Philco's ability to accomplish the task was questioned.



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER
HOUSTON 1, TEXAS

EXHIBIT C

IN REPLY REFER TO: BU (RET/RHV: eth)

July 24, 1963

Mr. Gilbert Kufahl, Chief
USAF Auditor General Branch Office
1069 East Meadow Circle Drive
Palo Alto, California

SUBJECT: Assist Audit Request - Contract No. NAS 9-1261
Western Development Laboratories Division of Philco Corporation

Dear Mr. Kufahl:

As discussed during the visit of Mr. R. E. Tippit (Regional Audit Office, MSC) on June 18-19, 1963, we have been assigned focal audit point responsibility for the subject contract which is being performed at various geographic locations. The accomplishment of our project-oriented audit objective will require coordinated assist audits of various Philco Divisions including pre-award pricing and audit of cost type subcontracts of \$250,000 or more which is to be performed by WDL in Palo Alto, including also your assistance in coordinating the audit effort at Newport Beach and Philadelphia.

The U. S. Army Audit Agency residency at Newport Beach, and the U. S. Navy Audit Office in Philadelphia have been requested to furnish you with copies of their interim audit reports. Copies of our requests to those offices are enclosed for your information and use. We are also attaching an outline of the specific matters for which information is needed from the WDL, USAF Audit Residency, as an aid in the preparation of your audit plan for this contract. The audit concept, approach and objectives were discussed with Mr. Dunphy, Resident Auditor, Palo Alto. The attachments to this request consist of an outline of the salient matters on which assist audit input is desired. The listing, however, merely highlights the aspects that are important to our master program and should not be construed as restrictive, since they constitute only our minimum needs, as viewed from our position.

The basic contract includes a requirement for the employment of NASA PERT and Companion Cost Reporting. For this management technique to be effective in averting schedule slippages, projecting overrun situations (as differentiated from scope changes), and highlighting potential problem areas, the reliability of cost and time estimates and the validity of cost reporting (Form 533) are two essential prerequisites. Accordingly, we request that your audit actions embrace the full use of the data generated by the required PERT-Cost implementations. It is also imperative that the Contracting Officer be provided with information as to the accuracy and reliability of the contractor's and major subcontractor's reporting, all of which constitutes an essential prerequisite to the decision-making process. Consequently, we request that interim audit reports on these and

July 24, 1963

Mr. Gilbert Kufahl, Chief
USAF Auditor General Branch Office
Palo Alto, California

other audit findings be provided us quarterly, beginning September 30, 1963, and whenever the Resident Auditor encounters circumstances or problems that will materially affect contract costs and performance.

Copies of your interim audit reports should be sent to the following:


- a. National Aeronautics and Space Administration
Regional Audit Office, MSC
Houston 1, Texas
- b. National Aeronautics and Space Administration
Control Systems Procurement Office, MSC
Mr. James Stroup, Contracting Officer
Houston 1, Texas
- c. National Aeronautics and Space Administration
Western Regional Audit Office
11545 West Olympic Boulevard
Los Angeles 64, California
- d. San Francisco Contract Management District
Western Contract Management Region
USAF Systems Command
Douglas T. Cowart, Contracting Officer
1069 East Meadow Circle
Palo Alto, California

We are also enclosing a copy of NASA Procurement Regulations and extracts from the contract for your guidance in determining allowability and reasonableness of contract costs claimed.

We wish to express our thanks to you, Mr. Dunply and Mr. Cowart, for the courtesies shown and assistance provided Mr. Tippit while at Palo Alto which contributed materially in enabling us to obtain the required information for our survey of Philco Corporation.

Your assistance and cooperation in providing the assist services and reporting requested will be greatly appreciated.

Sincerely,


Thomas J. Cassias, Manager
NASA Regional Audit Office, MSC

July 24, 1963

Mr. Gilbert Kufahl, Chief
USAF Auditor General Branch Office
Palo Alto, California

Enc. 7:

1. Assist Services Desired
2. Assist Services Desired of U. S. Army Audit Agency
3. Assist Services Desired of Navy Audit
4. NASA Procurement Regulations
5. Contract NAS 9-1261
6. Philco Corporation IR&D Agreement - 1963
7. NASA PERT and Companion Cost System Handbook

cc: APCB - Mr. James Stroup
APC - Mr. Dave Lang
A - Mr. W. L. Hjernevik
Mr. Douglas T. Cowart

USAF Auditor General
Resident Auditor
Western Development Laboratories Division of Philco Corporation

July 24, 1963

ASSIST SERVICES DESIRED

1. Costs Claimed

a. Comparison of costs billed by other divisions as reported in DOD interim audit reports to WDL cost ledgers.

b. Verification of contract direct costs incurred at WDL - Palo Alto to the extent necessary to determine that such costs are allowable, reasonable and allocable, and are consistent with the contractor's practice in charging other costs of the same nature.

c. Determination that factors used in the contract billings, such as those for payroll fringe benefits and overhead rates, are allowable, reasonable and properly allocable to this contract. For example, the Technical Proposal expense of \$1,496,735, through May 31, 1963, accounts for 31.02% of the 131.29% Plant Overhead Rate. The reasonableness of the Technical Proposal expense level appears questionable.

2. Reliability of Contractor's Reporting of:

a. Engineering estimates or reports used in preparing periodic PERT and companion cost reports to Philco Houston Operations.

b. Cost data, including distribution of costs to NASA Form 533 line items, used in PERT Companion Cost Reports to Philco Houston Operations.

3. Contractor's Current Cost Trends

a. Significant change in overhead rates experienced, or probable rate changes resulting from changes in business volume, accounting system or reorganization of division or department functions.

b. Material change in labor costs, or changes resulting from new personnel policies, new union contracts, or additional employee benefits.

4. Audit Problem Areas

a. Major unresolved differences between the USAF Auditor General and the contractor.

b. Unresolved audit recommendations relative to such matters as accounting, estimating or purchasing system reforms.

July 24, 1963

USAF Auditor General
Resident Auditor
Western Development Laboratories Division of Philco Corporation

ASSIST SERVICES DESIRED (Continued)

5. Other

a. Please provide us with copies of the most recent accounting, purchasing and estimating system reports.

b. Information as to audit problems relative to IR&D determinations, and other special matters as the Sierra Sales arrangement.

c. As appropriate, make reviews of facilities, equipment and special tool acquisitions as to authority, cost classification and accountability.



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER
HOUSTON 1, TEXAS

IN REPLY REFER TO BU (RET/RHV:eth)

July 24, 1963

Mr. Maurice Rowe, Manager
Los Angeles District
U. S. Army Audit Agency
125 South Grand Avenue
Pasadena, California

Subject: Assist Audit Request - Philco Houston Operations
Purchase Orders Issued to Aeronutronics Division
Under Contract No. NAS 9-1261

Dear Mr. Rowe:

As discussed during a recent visit by Mr. Tippit of this regional office, we have been assigned focal point audit responsibility for the subject contract which is being performed at various geographic locations. The accomplishment of our project-oriented audit objective will require assist audits of various Philco Divisions, including purchase orders and subcontracts awarded to the Aeronutronics Division, with particular emphasis afforded those subcontracts exceeding \$250,000.

The audit concept, approach and objectives were discussed with Mr. John Crehan, Resident Auditor. The attachment to this request consists of an outline of the salient matters on which assist audit input is desired. The listing, however, merely highlights the aspects that are important to our master program and should not be construed as restrictive, since they constitute only our minimum needs, as viewed from our position.

The basic contract includes a requirement for the employment of NASA PERT and Companion Cost Reporting. For this management technique to be effective in averting schedule slippages, projecting overrun situations (as differentiated from scope changes), and highlighting potential problem areas, the reliability of cost and time estimates and the validity of cost reporting (Form 533) are two essential prerequisites. Accordingly, we request that your audit actions embrace the full use of the data generated by the required PERT-Cost implementations. It is also imperative that the Contracting Officer be provided with information as to the accuracy and reliability of the contractor's and major subcontractor's reporting, all of which constitutes an essential prerequisite to the decision-making process. Consequently, we request that interim audit reports on these and other audit findings be provided us quarterly, beginning September 30, 1963, and whenever the Resident Auditor encounters circumstances or problems that will materially affect contract costs and performance.

Copies of your interim audit reports should be sent to the following:

Mr. Maurice Rowe, Manager
Los Angeles District
U. S. Army Audit Agency
125 South Grand Avenue
Pasadena, California

July 24, 1963

1. National Aeronautics and Space Administration
Regional Audit Office, MSC
Houston 1, Texas
2. National Aeronautics and Space Administration
Control Systems Procurement Office, MSC
Mr. James Stroup, Contracting Officer
Houston 1, Texas
3. National Aeronautics and Space Administration
Western Regional Audit Office
11545 West Olympic Boulevard
Los Angeles 64, California
4. USAF Auditor General
Wm. H. Dunphy, Resident Auditor
Western Development Laboratories Division of Philco
3875 Fabian Way
Palo Alto, California
5. San Francisco Contract Management District
Western Contract Management Region
USAF Systems Command
Douglas T. Cowart, Contracting Officer
1069 East Meadow Circle
Palo Alto, California

The enclosed contract extracts and NASA Procurement Regulations will provide guidance for determining allowability of costs on this contract. We are also enclosing a copy of Invoice No. ARD-25389 (\$3,049.00) of 9-10-63 from Aeronutronics for loss on sale of employee homes (an unallowable cost under the contract terms). The contractor apparently has not instituted accounting controls to provide for inter-divisional billings in accordance with the contract terms.

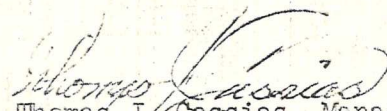
We wish to extend our sincere thanks to Mr. John Crehan for his courtesy and the whole-hearted cooperation extended to Mr. Tippitt during his visit to the Aeronutronics Division.

Mr. Maurice Rowe, Manager
Los Angeles District
U. S. Army Audit Agency
125 South Grand Avenue
Pasadena, California

July 24, 1963

Your cooperation in providing the assist services and reporting requested will be greatly appreciated. We will appreciate also any suggestions you or Mr. Crehan may have relative to coordination matters and the audit activities discussed.

Sincerely yours,


Thomas J. Cassias, Manager
NASA Regional Audit Office, MSC

Enc. 5:

1. Assist Services Desired
2. NASA Procurement Regulations
3. Contract NAS 9-1261
4. Copy of Aeronutronic's Invoice No. ARD-25389
5. NASA PERT and Companion Cost System Handbook

cc: A - Mr. W. L. Hjernevik
APC - Mr. Dave Lang
APCB - Mr. James Stroup

U. S. Army Audit Agency
Resident Auditor
Aeronutronics Division of Philco Corporation

July 24, 1963

ASSIST SERVICES DESIRED

1. Costs Claimed

a. Reasonableness and propriety of direct elements of cost billed to Western Development Laboratories and to Philco Houston Operations.

b. Determinations that factors used in billings, such as those for payroll fringe benefits and overhead rates, are allowable, reasonable, and properly allocable to this contract.

2. Reliability of Contractor's Reporting of:

a. Engineering estimates or reports used in preparing periodic PERT and Companion Cost Reports to Philco Houston Operations.

b. Cost and progress reporting data, including costs shown on NASA Form 533 line items, used in PERT Companion Cost Reports to Philco Houston Operations.

3. Contractor's Current Cost Trends

a. Significant change in overhead rates experienced, or probable rate changes resulting from changes in business volume, accounting system changes, or reorganization of Aeronutronics Division functions.

b. Material changes in labor costs, or changes resulting from new personnel policies, new union contracts, or additional employee benefits.

c. Changes to or deviations from "make or buy".

4. Audit Problem Areas

a. Major unresolved differences between the U. S. Army Audit Agency and the contractor, such as withholding of records or reasonableness of contractor's level of effort on bidding and technical proposal work.

b. Unresolved audit recommendations relative to such matters as accounting, estimating, or purchasing system reforms.

c. Pre-contract award costs.

U. S. Army Audit Agency
Resident Auditor
Aeronutronics Division of Philco Corporation

July 24, 1963

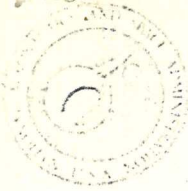
ASSIST SERVICES DESIRED (Continued)

5. Other

a. Please provide us a copy of latest IR&D agreement and discussion of audit problems involved, if any.

b. Copies of the most recent accounting, purchasing, and estimating system reports would also be helpful to us.

c. As appropriate, make reviews of facilities, equipment and special tool acquisitions as to authority, cost classifications and accountability.



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER
HOUSTON 1, TEXAS

IN REPLY REFER TO: BU (RET/RHV:eth)

July 24, 1963

Mr. C. Y. Murch, Director
Contract Audit Division
U. S. Navy Area Audit Office
1409 North Broad Street
Philadelphia 22, Pa.

Subject: Assist Audit Request - Contract No. NAS 9-1261
Western Development Laboratories Division of Philco Corporation

Dear Mr. Murch:

As discussed with you during the visit of Messrs. R. S. Rollin (North Eastern Area Audit Office) and R. E. Tippit (Regional Audit Office, MSC) on June 25, 1963, this is to confirm assignment to this office of focal point audit responsibility for the subject contract which is being performed at various geographic locations. The accomplishment of our project-oriented audit objective will require assist audits of various Philco Divisions including the portions of this contract which are to be performed by the TECH REP and the Communications and Electronics Divisions of Philco Corporation. This includes subcontract pre-award pricing evaluations with particular emphasis afforded cost-type subcontracts of \$250,000 or more, the audit of cost and review of PERT and Companion Cost Reporting.

The audit concept, approach and objectives were discussed with Mr. Mark Huber, Resident Auditor. The attachment to this request consists of an outline of the salient matters for which assist audit input is desired. The listing, however, merely highlights the aspects that are important to our master audit program and should not be construed as restrictive since they constitute only our minimum needs, as viewed from our position.

The basic contract includes a requirement for the employment of NASA PERT and Companion Cost Reporting. For this management technique to be effective in averting schedule slippages, projecting overrun situations (as differentiated from scope changes), and highlighting potential problem areas, the reliability of cost and time estimates and the validity of cost reporting (Form 533) are two essential prerequisites. Accordingly, we request that your audit actions embrace the full use of the data generated by the required PERT-Cost implementations. It is also imperative that the Contracting Officer be provided with information as to the accuracy and reliability of the contractor's and major subcontractor's reporting, all of which constitutes an essential prerequisite to the decision-making process. Consequently, we request that interim audit reports on these and other audit findings be provided us quarterly, beginning September 30, 1963, and whenever the Resident Auditor encounters circumstances or problems that will materially affect contract costs and performance.

Mr. C. Y. March, Director, CAD
U. S. Navy Area Audit Office
Philadelphia 22, Pa.

July 24, 1963

Copies of your interim audit reports should be sent to the following:

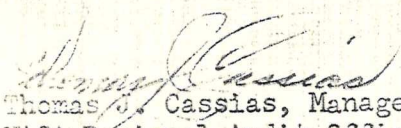
- a. National Aeronautics and Space Administration
Regional Audit Office, MSC
Houston 1, Texas
- b. National Aeronautics and Space Administration
Control Systems Procurement Office, MSC
Mr. James Stroup, Contracting Officer
Houston 1, Texas
- c. National Aeronautics and Space Administration
North East Area Audit Office
30 Memorial Drive
Cambridge 42, Massachusetts
- d. Philadelphia Contract Management District
Eastern Contract Management Region
USAF Systems Command
Mr. Nicholas A. Dalc, Contracting Officer
1411 Walnut Street
Philadelphia 2, Pennsylvania

We are enclosing a copy of NASA Procurement Regulations and extracts from the contract for your guidance in determining allowability and reasonableness of contract costs claimed.

We wish to express our thanks to you and Mr. Huber for the courtesies shown and assistance provided Mr. Tippit while in Philadelphia which contributed materially in enabling us to obtain the required information for our survey of Philco Corp.

Your assistance and cooperation in providing the assist services and reporting requested will be greatly appreciated. We will appreciate also any suggestions you or Mr. Huber may have relative to coordination matters and the activities discussed.

Sincerely yours,


Thomas C. Cassias, Manager
NASA Regional Audit Office, MSC

Enc. 3:
(See Page 3)

cc: (See Page 3)

Mr. C. Y. Murch, Director, CAD
U. S. Navy Area Audit Office
Philadelphia 22, Pa.

July 24, 1963

Enc. 3:

1. Assist Services Desired
2. NASA Procurement Regulations
3. Contract No. NAS 9-1261

cc: APCB - Mr. James Stroup
APC - Mr. Dave Lang
A - Mr. W. L. Hjernevik
Mr. Nicholas A. Dalø

U. S. Navy Audit Office
Chief Auditor
Philco Corporation

July 24, 1963

ASSIST SERVICES DESIRED

1. Costs Claimed

a. Reasonableness and propriety of contract direct costs incurred and billed to other divisions by TECH REP Division and by Communications and Electronics Division.

b. Determinations that factors used in the billings to Western Development Laboratories and Philco Houston Operations, such as those for payroll fringe benefits and overhead rates, are allowable, reasonable, and properly allocable to this contract. In particular, the reasonableness of the contractor's Technical Proposal expense level should be determined.

2. Reliability of Contractor's Reporting of:

a. Engineering estimates or reports used in preparing periodic PERT and companion cost reports to Philco Houston Operations.

b. Cost data, including distribution of costs to NASA Form 533 line items, used in PERT Companion Cost Reports to Philco Houston Operations.

3. Contractor's Current Cost Trends

a. Significant change in overhead rates experienced, or probable rate changes resulting from changes in business volume, accounting system or reorganization of division or department functions.

b. Material change in labor costs, or changes resulting from new personnel policies, new union contracts, or additional employee benefits.

4. Audit Problem Areas

a. Major unresolved differences between the U. S. Navy Audit Office and the contractor.

b. Unresolved audit recommendations relative to such matters as accounting, estimating, or purchasing system reforms.

5. Other

a. As appropriate, make reviews of facilities, equipment and special tooling acquisitions as to authority, cost classification, and accountability.

b. Please furnish us a copy of survey of contractor's estimating procedures and practices.

Distribution of
NASA REGIONAL AUDIT OFFICE, MSC
REPORT No. MSC 5-64

Mr. Walter C. Williams, NASA Deputy Director of
Mission Requirements and Flight Operations
Manned Spacecraft Center - Code DO
Houston 1, Texas

Mr. G. Barry Graves, NASA Assistant Director for
Information and Control Systems
Manned Spacecraft Center - Code I
Houston 1, Texas

Mr. W. L. Hjernevik
NASA Assistant Director for Administration
Manned Spacecraft Center - Code A
Houston 1, Texas

Mr. Paul H. Vavra, Manager
NASA Ground Systems Project Office
Manned Spacecraft Center - Code IGS
Houston 1, Texas

Mr. Joseph A. Kratovil, Chief
NASA Financial Management Division
Manned Spacecraft Center - Code AFM
Houston 1, Texas

Mr. Dave Lang, Chief
NASA Procurement and Contracts Division
Manned Spacecraft Center - Code APC
Houston 1, Texas

Mr. James Stroup
NASA Control Systems Procurement Office
Manned Spacecraft Center - Code APCB
Houston 1, Texas

Mr. A. E. Hyatt
NASA Procurement - Pricing Staff
Manned Spacecraft Center - Code APCP
Houston 1, Texas

Distribution of
NASA REGIONAL AUDIT OFFICE, MSC
REPORT No. MSC 5-64

EXHIBIT D

2 of 3

Mr. George R. Tebbets, Contracting Officer
San Francisco Contract Management Region
U. S. Air Force Systems Command
Contract Support Detachment No. 3
3875 Fabian Way
Palo Alto, California

Mr. Nicholas A. Dalo, Contracting Officer
Philadelphia Contract Management Region
U. S. Air Force Systems Command
1411 Walnut Street
Philadelphia 2, Pennsylvania

Mr. C. Y. Murch, Director
Contract Audit Division
U. S. Navy Area Audit Office
1409 North Broad Street
Philadelphia 22, Pennsylvania

Mr. Gilbert Kufahl, Chief
U. S. Air Force Auditor General Branch Office
1069 East Meadow Circle Drive
Palo Alto, California

Mr. Maurice Rowe, Manager
Los Angeles District
U. S. Army Audit Agency
125 South Grand Avenue
Pasadena, California

Mr. Raymond Einhorn, Director
NASA Audit Division
Washington, D. C. - Code BU

Mr. James Clifford, Manager
Manned Spacecraft Activities
NASA Audit Division
Washington, D. C. - Code BU

Mr. Martin Sacks - Manager
Launch Vehicles Activities
NASA Audit Division
Washington, D. C. - Code BU

Distribution of
NASA REGIONAL AUDIT OFFICE, MSC
REPORT No. MSC 5-64

EXHIBIT D

3 of 3

Mr. Nathan Cutler, Manager
Unmanned Spacecraft Activities
NASA Audit Division
Washington, D. D. - Code BU

Mr. James D. McNamara, Manager
NASA Regional Audit Office
Goddard Space Flight Center
Greenbelt, Maryland

Mr. Earle Smith, Manager
NASA Western Regional Audit Office
Los Angeles, California

Mr. Robert S. Rollin, Manager
NASA North Eastern Area Audit Office
Cambridge, Massachusetts