



B-159451

REPORT TO THE CONGRESS

A Case History Showing Need For Improvements In The Management Of Overseas Military Construction Contracts

B-159451

Department of Defense

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

OCT. 28, 1970

~~7-15706~~ / 092258



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

B-159451

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

This is our report on a case history showing need for improvements in the management of overseas military construction contracts.

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

Copies of this report are being sent to the Director, Office of Management and Budget, and to the Secretary of Defense.

Comptroller General
of the United States

D I R E C T

WHY THE REVIEW WAS MADE

The Department of Defense (DOD) early in 1966 directed a U.S. Navy construction contractor, a joint-venture organization, to obtain equipment, materials, and personnel sufficient to complete a large and complex \$960 million construction program to support the buildup of U.S. military forces in the Republic of Vietnam. One purpose was to enable the contractor to build simultaneously numerous ports, depots, cantonments, and airfields. (See pp. 6 and 7.)

At the height of the Navy contractor's mobilization in May 1966, DOD departed from that plan and authorized the Air Force to hire a separate contractor to build one fighter-plane base at Tuy Hoa, north of Cam Ranh Bay. The estimated cost of the project was \$52 million, under a cost-type contract.

In view of the Navy's substantial contractor construction forces, including necessary equipment, then available in Vietnam, the General Accounting Office (GAO) examined into the justification for the Air Force's engaging a separate contractor to build a single airfield.

FINDINGS AND CONCLUSIONS

Essentially, the Air Force's justification was that the airfield was needed so urgently that no other course of action could be considered. Records showed that from June 1966 onward, the Navy was faced with an excess of construction capability. Thus, GAO believes that the Navy contractor, with a known construction capability and equipment already purchased for the Tuy Hoa project could have completed the air base in the time required. (See pp. 6, 20, and 79.)

The Navy had proposed to DOD that the Tuy Hoa project be constructed by its contractor combine as a part of its assigned responsibility. The Navy pointed out to DOD that any increase in construction capability should be achieved by taking advantage of existing logistics management, equipment, and material of its joint-venture construction contractor. (See pp. 6 and 107.)

DOD subsequently authorized the Air Force to proceed with the Tuy Hoa project. It was completed on schedule.

DOD stated that the cost was approximately that of other airfields of similar size built in Vietnam. GAO believes, however, that had the Navy proposal been followed, several million dollars in added costs would have been avoided. Those added costs consisted of:

- Duplicate equipment purchases: Under the Air Force contract, a sub-contractor purchased heavy construction equipment for about \$9.5 million. Similar equipment, valued at about \$7.4 million, had already been bought by the Navy's contractor for the same job. Most of that equipment had been shipped to Vietnam before the Air Force contractor's purchases were made. (See p. 7.)
- Premium prices paid: The Air Force construction equipment was bought without obtaining competitive bids; without using the Government supply system; and from equipment dealers or other third parties instead of direct from the manufacturers. (See p. 26.)
- Duplicative overhead and administrative costs: The Air Force and its contractor incurred about \$3.9 million in overhead and administrative costs to establish a logistics pipeline and construction contract management staff for the project. GAO believes that much of this cost could have been avoided since the Navy and its contractor already had such facilities. (See pp. 12 to 14.)
- Disproportionate fee payment: The Air Force paid its contractor a fee rate more than double the rate paid on other DOD cost-type construction contracts in Southeast Asia. (See p. 45.)

RECOMMENDATIONS OR SUGGESTIONS

GAO proposed to the Secretary of Defense that DOD

- use a single military construction agent in any one overseas geographic area and that contractor capability be increased as the construction agent requires;
- make sure that contractors operating under cost-reimbursable contracts receive adequate instructions on procurement procedures, and
- ensure parity in construction contractor fees.

AGENCY ACTIONS AND UNRESOLVED ISSUES

DOD stated that its policies were in agreement with the GAO proposals and were considered to be operative in the case of the Tuy Hoa project but that it approved the Air Force proposal as a specific exception.

GAO believes, however, that duplicative contract costs can be avoided in the future if an assessment is made of the cost advantages and

disadvantages of augmenting the capability of a single contractor or using multiple contractors.

GAO recommends that for the future the Secretary of Defense

- direct military construction agents to submit for DOD consideration the military justification and a detailed estimate of the duplicate overhead and equipment costs expected if more than one cost-type construction contractor is considered for a geographic area (see p. 25.)
- consider strengthening administrative procedures on cost-reimbursable contracts, particularly in connection with procurement, in a manner similar to the guidance now being developed by the Navy (see p. 44.)
- require, in cost-type construction contracts, that military construction agents obtain advance approval from the Office of the Secretary of Defense for fee rates that are an exception to those prevailing in a particular overseas geographic area (see p. 55.)

MATTERS FOR CONSIDERATION BY THE CONGRESS

It is believed that this report will be of assistance to the Congress in its review of Department of Defense plans for future contingencies in military construction.

C o n t e n t s

	<u>Page</u>
DIGEST	1
CHAPTER	
1 INTRODUCTION	4
2 ADDED COSTS INCURRED BY USING AIR FORCE TURNKEY CONTRACTOR	6
Duplicate equipment purchases	7
Navy equipment not transferred to the Air Force for use at Tuy Hoa	9
Duplicate overhead and administrative costs	12
Contractor's U.S. overhead costs	12
Air Force turnkey project overhead costs	14
Agency comments	18
Conclusions and recommendation	24
3 PROCUREMENT ACTIVITIES	26
Lack of subcontractor procurement policy and procedures	26
Uneconomical procurement of equipment, materials, and supplies	29
Competitive bids not obtained	29
Purchase of equipment from dealers at high prices	30
Higher costs incurred because of procurement through third parties	32
Government supply contracts not used by subcontractor	33
Acquisition of used equipment at high prices	35
Air Force appraisal of equip- ment purchases	36
Agency comments	41
Conclusion and recommendation	43
4 CONTRACTOR'S FEE	45
Performance incentive fee	47
Interim incentive fee	48

CHAPTER	<u>Page</u>
	51
	54
	55
5	57
	61
	62
6	63
7	67

APPENDIX

I	71
II	77
III	106
IV	110

ABBREVIATIONS

CINCPAC	Commander in Chief, Pacific
DCAA	Defense Contract Audit Agency
DOD	Department of Defense
GAO	General Accounting Office
GSA	General Services Administration
MACV	Commander, United States Military Assistance Command, Vietnam

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CHAPTER 1

INTRODUCTION

The General Accounting Office has made a review of a U.S. Air Force contract, No. AF 62(111)-714, with Walter Kidde Constructors, Inc., of New York, N.Y. The contract, designated as a "turnkey" contract provided for the construction of an airfield and port facilities at Tuy Hoa, Republic of Vietnam. A turnkey-type contract is one that normally makes the contractor responsible for the entire operational endeavor from initiation to completion of a project. In this case the contractor was responsible for the planning, design, procurement of equipment, materials and labor, logistic support, and actual construction of the airfield and port facilities. The major subcontractor, B. B. McCormick & Sons, Inc., of Jacksonville Beach, Florida, was responsible to the contractor for the construction of runways, taxiways, roads, building foundations, and other horizontal facilities at the Tuy Hoa airfield site.

We performed this work as a part of our continuing review of the United States Government's construction activities in Southeast Asia. In particular we examined into the management aspects of control exercised by both the contractor and the Air Force on this project, because at the time of award of this contract the Department of Defense (DOD) already had a multimillion-dollar contractor and a Government administrative organization operating to support the military construction effort in Vietnam.

A letter contract between the Air Force and the contractor was signed on May 31, 1966. The contract provided that the contractor complete the various elements of work, computed from the date the contract was signed, as shown below:

1. Complete all designs in 90 days (August 29, 1966).
2. Complete mobilization of forces, material, and equipment ready to start work on the interim airfield facilities in 120 days (September 28, 1966).

3. Complete construction of interim airfield facilities in 210 days (December 27, 1966).
4. Complete all remaining airfield construction in 360 days (May 26, 1967).
5. Complete construction of port facilities in 450 days (August 23, 1967).

On June 1, 1966, B. B. McCormick & Sons, Inc., the major subcontractor entered into a cost-plus-fixed and incentive fee letter agreement with the contractor to assist in the purchase of the necessary equipment for construction of runways, taxiways, roads, and other horizontal work.

The contract with Walter Kiddie Constructors, Inc., was definitized effective April 10, 1967, as a cost-plus-fixed and incentive fee contract with total estimated design and construction costs of \$50,477,697. The fixed fee and incentive fee amounted to \$2,159,657 and \$975,000, respectively. As of June 1968 the contractor had been reimbursed approximately \$55,909,000 which included payment of about \$1.56 million for certain nonconstruction support services costs such as off-loading ammunition and delivery of cement for use by military troop construction units.

CHAPTER 2

ADDED COSTS INCURRED BY

USING AIR FORCE TURNKEY CONTRACTOR

Our review showed that, as early as January 1966, the Navy's joint-venture contractor had a significant construction capability in Vietnam and further that this contractor had been authorized to and did procure the necessary equipment and materials and mobilized the manpower required to build ports, cantonments, logistics depots, and airfields in Vietnam including one at Tuy Hoa. Notwithstanding this existent capability, the Air Force with DOD approval brought a separate contractor into Vietnam in May 1966 to construct the airfield at the Tuy Hoa site. The new contractor had to acquire the necessary men, equipment, and materials with which to do the job and the Air Force had to set up a contract and project management staff to monitor the contract.

Although the Air Force stated they had an urgent need for an air base at Tuy Hoa and justified the use of another contractor in Vietnam on this basis, our review has shown that there were considerable differences of opinion within the various organizational components of DOD as to the necessity for pursuing this course of action. Records that we examined indicated that the overall military priority established by the Commander, United States Military Assistance Command, Vietnam (MACV), for the air base at Tuy Hoa was not sufficient to warrant the start of the project with the then existing resources of the Navy contractor.

The Secretary of the Navy, in a memorandum to the Secretary of Defense, suggested in March 1966 that the existent capability of its contractor be taken full advantage of for construction of the air base and that if the military priorities required completion within the time desired by the Air Force that the contractor's capability be expanded. Nevertheless on May 27, 1966, DOD authorized the Air Force to use a separate turnkey contractor to build the Tuy Hoa project.

Once the decision was made that the airfield at Tuy Hoa would be built by an Air Force contractor, the Air Force, its contractor and major subcontractor proceeded with dispatch and completed facilities for an operational base within approximately 1 year. A permanent concrete runway was completed by late April 1967 which was about a month ahead of schedule. Even prior to this time, the contractor completed a 9,000-foot aluminum matting runway, a turn-off taxiway, and minimum apron by November 15, 1966. The Air Force was able to commence tactical fighter operations from Tuy Hoa shortly thereafter.

Our review of this project has shown, however, that added costs were incurred by the U.S. Government; and in performing the work under the contract, a number of problems arose. Many of the problems can be related to the lack of experience of the Air Force in administering major construction contracts of this type and to weaknesses in the major subcontractor's equipment procurement policies and practices. The added costs and problem areas are set forth in this and subsequent chapters of the report.

Although our review was not directed toward evaluating the military's arguments pro and con for various courses of action, it did indicate that the Navy's suggestion to take full advantage of its contractor's existent capability and to expand the capability if necessary, would have resulted in a savings of several millions of dollars of construction costs to the Government. Our review showed that, had this suggestion been followed, duplicate equipment purchases and parallel overhead and administrative costs for establishing a second contractor's logistics pipeline in the United States as well as another construction contract management staff within DOD with the added costs implicit in such duplication would have been avoided.

DUPLICATE EQUIPMENT PURCHASES

Our review showed that B. B. McCormick & Sons, Inc., the major subcontractor for Walter Kilde Constructors, Inc., purchased about \$9.5 million worth of equipment after similar equipment valued at about \$7.4 million had been

purchased by the Navy's contractor, RMK-BRJ,¹ to build the same airfield requirement. Most of the RMK-BRJ equipment had been shipped to Vietnam before June 1966, although McCormick was not authorized to begin procurement under the subcontract until June 1, 1966.

Records showed that, as of January 1966, RMK-BRJ planned to build nine airfields in Vietnam including one eventually located at Tuy Hoa. Although the locations of some of the airfield projects were known, the sites for several others were in the process of being selected at that time. To have the construction equipment delivered to Vietnam on a timely basis, however, the Navy contractor was authorized in February 1966 to initiate procurement of construction equipment required to build all the airfields.

Our review showed that RMK-BRJ built seven of the nine airfield projects for which it had purchased equipment. In the case of the remaining two airfields, one of which was Tuy Hoa, Navy records showed that, subsequent to the purchase of the equipment, the Navy learned that its contractor would not construct the airfields.

In anticipation of building an air base subsequently sited at TUY Hoa, RMK-BRJ purchased \$7,441,000 of construction equipment in early 1966. Shipments to Vietnam began in March 1966 and were practically completed by July 1966 with most of the equipment being shipped during April and May 1966. Some examples follow:

<u>Type of equipment</u>	<u>Cost</u>	<u>Shipping date</u>
Asphalt batch plant	\$ 131,000	5-13-66
2-1/2 CY crawler-mounted shovels	150,636	4-29-66
Rex pavers	117,300	4-23-66
D-8 Caterpillars	1,607,076	5-24-66
TS-24 Scrapers	1,016,260	5-24-66
R.T. tractors	464,590	4-20 to 5-24-66

¹The contractor, hereafter called RMK-BRJ, was a joint venture of contractors comprising the firms of Raymond International of Delaware, Inc.; Morrison-Knudsen of Asia, Inc.; Brown & Root, Inc.; and J.A. Jones Construction Company.

With the exception of a \$460,000 rock-crushing plant and two crawler cranes valued at \$131,000, all the RMK-BRJ equipment was shipped to Vietnam. We noted that the crusher and one crane was transferred to Prepositioned War Reserve Stock and a crane was sold to a U.S. Navy contractor working in Thailand. The transfer and sale of this equipment took place after the Air Force was assigned the responsibility for the Tuy Hoa project and had procured its own equipment.

In view of the fact that the Navy contractor had already purchased the construction equipment required to build the Tuy Hoa airfield requirement, we believe that had the project remained the responsibility of the Navy, the \$9.5 million incurred for construction equipment for the Air Force contractor would have been avoided.

Navy equipment not transferred
to the Air Force for use at Tuy Hoa

Our review showed that, once the decision was made in May 1966 to transfer the Tuy Hoa airfield construction responsibility from the Navy to the Air Force, no action was taken to make a similar transfer of the \$7.4 million worth of construction equipment already purchased by the Navy contractor for this requirement. We believe that as a result the Air Force subcontractor's procurement of the \$9.5 million for construction equipment for the Tuy Hoa airfield project duplicated the Navy contractor's purchases for this requirement.

Records showed that, late in April or early in May 1966, the Air Force contacted the Navy regarding the availability of the \$7.4 million of equipment already purchased by RMK-BRJ for the Tuy Hoa project and were informed that such equipment could be taken over. Later in May, however, the Navy advised the Air Force that no equipment was available for transfer due to requirements such as a new runway at one air base, and need to push other work.

Contrary to the Navy's position, we believe that the equipment could have been transferred to the Air Force without impairing its construction capability. This view is based on the previously stated fact that the Navy

contractor had purchased equipment spreads¹ beginning in early 1966, to build nine airfields, but by June 1966 two of these requirements had been transferred from Navy responsibility. It would seem therefore that a sufficient quantity of equipment was available which could have been transferred to the Air Force contractor.

In addition, during our review we found that in May 1966 the Navy requested RMK-BRJ to make a survey of the equipment on hand and on order versus the amount needed to complete their assigned projects so that possible excess equipment could be determined. A list, on the basis of the survey, was prepared in the latter part of June 1966 and showed that about \$3.7 million of equipment was excess to known present and future needs. The list included items similar, and in some cases identical, to those purchased by the Air Force subcontractor. One item was a \$430,000 rock-crushing plant considered to be the most critical piece of equipment needed for the Tuy Hoa project. The equipment was made available to other Navy contractors in Thailand on June 24, 1966, and equipment worth about \$152,000 was subsequently sold to one of these contractors.

We noted that the Commander in Chief, Pacific (CINCPAC), issued a report in March 1967 which analyzed some of the factors that had created cost overruns on construction projects in Vietnam. In connection with the equipment buy for the Tuy Hoa project and a second airfield requirement ultimately not constructed by RMK-BRJ, the Navy stated in essence that the equipment, amounting to about \$17 million, was considered an overbuy, which would not have been made if they had known prior to the time the obligations to procure the equipment were incurred that the Navy and its contractor in Vietnam would not be responsible for completion of the two projects. We also found that, although the value of RMK-BRJ projects more than doubled between May and December 1966, RMK-BRJ did not find it necessary to buy additional equipment until 1968, which would indicate that excess equipment did exist in RMK-BRJ's inventory.

¹A spread consists of the proper number of different types of construction equipment to provide a balanced onsite construction capability independent of other sites or projects.

Thus, it seems that part of or all the equipment needed to build the Tuy Hoa project could have been made available to the Air Force; and, if the Navy was reluctant to transfer the equipment, DOD should have directed the transfer, if the priority of the project required this action.

DUPLICATE OVERHEAD AND ADMINISTRATIVE COSTS

Our review showed that the turnkey contractor and the Air Force incurred about \$3.9 million in overhead and administrative costs much of which could have been avoided had RMI-BRJ constructed the airfield at Tuy Hoa and the Navy's officer in charge of construction in Vietnam managed the project for DOD.

In mobilizing for the construction project at Tuy Hoa, the contractor had to establish a new logistics pipeline to handle the procurement of \$22 million of equipment, materials, and supplies. To ship the contract items to Vietnam, about \$10 million was expended by a second major subcontractor, American Union Transport, Inc., New York, N.Y. In addition, the contractor's work force for this project by December 1966 numbered 1,549 and by April 1967 reached a total of 1,705 personnel consisting of 741 U.S. nationals, 288 third-country nationals, and 676 local Vietnamese.

To achieve this mobilization the contractor had to establish project offices at various locations to administer the procurement, personnel hiring, and shipping activities. In addition, the Air Force also had to establish a contract and engineer management staff to monitor this project with offices in Vietnam and the United States.

Following are examples of duplicative costs incurred by the introduction of a second contractor into the United States military construction program in Vietnam.

Contractor's U.S. overhead costs

We found that the contractor and his major subcontractors, B. B. McCormick and American Union Transport, incurred home office overhead and other administrative costs for their operations in the United States amounting to about \$2.7 million. This amount included the cost of purchasing, personnel processing, contract administration, shipping arrangements, and accounting. For example, B. B. McCormick established a field office at Jacksonville, Florida, to administer purchasing of equipment, hiring of personnel, and other miscellaneous activities related to the project.

About \$633,805 in administrative expenses were incurred at this office for salaries and wages, utility and rental costs, and travel costs. In addition to the administrative costs for this field office, McCormick was allowed about \$256,000 for overhead expenses for his home office.

In addition to the home office overhead costs, the contractor incurred other overhead costs of about \$137,000 for the operations of offshore procurement support offices in Taipei and Saigon and for a ship-staging operation at Brookley Air Force Base in Mobile, Alabama.

During the same period that the Air Force contractor was incurring the above costs, RMK-BRJ, the joint-venture U.S. Navy contractor had mobilized personnel, equipment, material, and supplies necessary to complete about \$40 million of construction a month in Vietnam. To perform work at this level RMK-BRJ expanded their work force from 26,100 in January, to 51,044 by July 1966; increased their incountry equipment to over 4,700 pieces of construction equipment and procured \$84 million worth of material, supplies, and equipment in a relatively short period of time.

To accomplish this mobilization, RMK-BRJ maintained their home office in Saigon with field offices in San Bruno, California, Manila, Philippine Islands, and Seoul, Korea. The San Bruno office was responsible for U.S. procurement, personnel recruitment, and export shipping functions. The magnitude of the RMK-BRJ's San Bruno operation is indicated by the fact that by August 1966 about \$402.9 million had been committed for procurement and 952,000 tons of equipment, materials, and supplies had been surface-shipped to Vietnam at a cost of \$34 million.

The RMK-BRJ Saigon office, in addition to being responsible for the overall management of its contract work, also made local and offshore procurements. As of September 1966, this office had committed about \$155.5 million for non-United States procurement within Vietnam or from foreign suppliers.

At the time the Air Force contractor was mobilizing to perform the Tuy Hoa airfield project, RMK-BRJ was in the process of reducing its contract staff due to a cut back in

construction funds. The Air Force contractor had hired about 600 U.S. nationals between June and December 1966 and transported them by air to Vietnam, while RMK-BRJ's work force was reduced to about 42,000 personnel by December 1966. Included in this phase down was the release of 695 U.S. nationals. Thus RMK-BRJ had released more U.S. nationals from their work force during this period than the Air Force contractor had hired.

In view of the functions performed by the Navy contractor's management and administrative staffs both in Vietnam and the United States as well as the field offices in other Far Eastern countries, we believe a large but indeterminate portion of the approximate \$2.9 million in overhead and administrative charges incurred for the turnkey contractor's U.S. operations and the offshore procurement support office could have been avoided had the project remained the responsibility of the Navy.

Air Force turnkey project overhead costs

Our review indicated that the Air Force incurred administrative overhead costs of about \$1 million for Project Turnkey. To provide Air Force management control over this contract, a turnkey project administration group was established and staffed as follows:

Turnkey program director--turnkey division

This group which was located at Headquarters, 7th Air Force in Saigon, functioned as a staff element for the Turnkey program director and acted as an intermediary for the program director with other Air Force turnkey offices involved in design, procurement, and construction mobilization activities associated with the contract. This group also provided assistance to the contractor's representatives in Saigon. This office had a work force of eight military and two civilians as of September 1966.

New York turnkey office

This office was responsible for establishing design criteria and monitoring contractor engineering procedures; approving fund expenditures; procurement procedures and

practices; and contractual changes and contractor mobilization. The Air Force work force at this office fluctuated; for example, in June 1966 there were 29 assigned--consisting of 21 military and eight civilians. In September 1966 the total assigned was 11 and consisted of seven military and four civilians.

Resident engineer

This office was responsible for execution and direction of construction surveillance at the Tuy Hoa site; for initiation of design changes where needed; and for ensuring contractor compliance with reporting requirements and approved offshore procurements. The Air Force work force at this location as of September 1966 totaled 24 and consisted of 21 military and three civilians.

During the time that the Air Force established the above management organization to administer this contract, the Navy's personnel staffing in Vietnam for the RMK-BRJ contract averaged 465 personnel consisting of 132 U.S. military and civilian personnel, 231 Free World journeymen and 102 local Vietnamese. The Navy's Officer in Charge of Construction was responsible for administering specific construction and architectural and engineering contracts for the U.S. military services and other Federal offices and agencies. His functions consisted of establishing construction schedules, supervision, general direction, inspection, and acceptance of construction work, including the preparation of engineering drawings and specifications, and all aspects of contract administration and management of funds assigned.

To carry out these functions, the Navy's Officer in Charge of Construction by July 1966 had the following organizations (1) a Deputy, (2) separate departments for administration program management, financial management and comptroller, construction, engineering, and material, all of which were located in Saigon, and (3) a Director, Deputy Director, and complementary staff for each of four construction districts (Da Nang area, Cam Ranh area, Qui Nhon area, and the Saigon-Delta area).

In addition to the above staff, the Navy had a staff known as the Resident Officer in Charge of Construction, in

San Bruno, California, whose responsibility was to monitor the RMK-BRJ and several other Pacific area Navy contracts. As of July 1966, this staff consisted of 65 employees who had the responsibility to see that the contractor's procurement and shipping practices were performed properly.

In view of the fact that the Air Force administration group established to control the turnkey contract included staffs which duplicated the functions of the existing Navy staff, we believe that much of the \$1 million in Air Force administrative costs incurred on this project could have been avoided had the Navy retained responsibility for the airfield construction at Tuy Hoa.

Our review has shown that the mobilization of a separate contractor and a second construction agency to perform and monitor a limited amount of construction work at a time when a multimillion-dollar contractor capability already existed incountry resulted in added costs to the Government. The duplicate administrative and overhead costs resulting from the use of a second contractor are compounded by the introduction of a second construction agency. Our review further showed that alternative courses of action were suggested for construction of the air base that would have eliminated the added costs.

The establishment of contractor project offices at various locations to administer procurement, personnel, and shipping activities and agency contract and engineer management staffs to monitor the project must of its very nature be more time consuming and costly than expanding existing organizations and results in unnecessary duplication of overhead costs. Our review clearly demonstrated the existence of these duplicative costs. When these costs are added to the cost of mobilizing employees in the United States for transfer to Vietnam at the same time that the existing Navy contractor was releasing employees in Vietnam for return to the United States, the total additional costs are in the millions of dollars.

In our draft report, we proposed to the Secretary of Defense that overseas military construction responsibility

be assigned to only one construction agent in any particular geographic area and that the agent selected should augment contractor capability as required.

Agency comments

The DOD comments on this section primarily concern the selection of the turnkey concept, equipment purchases, and comparability of costs. For simplicity of presentation, we have summarized their views and included an evaluation thereof in the following section.

Selection of the separate turnkey concept

DOD provided a chronology summarizing the sequence of events which led to the selection of the turnkey concept for the Tuy Hoa construction. Much of this information was included in our draft report and is presently included in appendix III of this report.

In essence DOD commented that the question whether there was disagreement among the involved DOD components on the need for an air base and the execution concept best suited to the conditions at Tuy Hoa depends upon the time of reference. DOD stated that, although the Commander in Chief, Pacific, and MACV originally opposed the Air Force turnkey proposal in February and March 1966, by late April 1966, MACV concluded that an additional airfield was desirable and recommended that a decision be made to proceed with developing an airfield at Tuy Hoa without delay.

DOD stated that, in early May 1966, CINCPAC and MACV agreed to the use of the Air Force turnkey contractor at Tuy Hoa and at the same time recommended that a parallel runway be built at Chu Lai as an acceptable alternative to a site at Hue using the Navy's contractor.

According to DOD the principal alternative available to MACV for constructing the Tuy Hoa air base was to direct its accomplishment under the Navy contractor. DOD added that the capability clearly existed for execution of the project in the required time frame under the Navy contract had MACV decided to realign construction priorities, but the proposed turnkey contract permitted the initiation of Tuy Hoa air base construction immediately without diverting existing capability from other priority work and augmentation of the overall MACV construction capability.

DOD commented that during 1966 rapid changes in the tactical situation caused continual changes in plans and related facilities requirements and further stated that the need for flexibility accompanying an expanded construction capability, not cost per se, dictated the selection of the turnkey approach at Tuy Hoa.

DOD concluded by stating that our proposal concerning the use of a single construction agent in overseas areas is in consonance with the existing Office of Secretary of Defense's policy which was considered to be operative in the case of the Tuy Hoa project. DOD added that approval of Air Force execution of this project on a turnkey basis was granted after consideration of the merits of this case as a specific exception to the Office of the Secretary of Defense policy which designates the Naval Facilities Engineering Command as the DOD construction agent in Southeast Asia.

Air Force comments on this section and our evaluation thereof are included in appendix II.

GAO evaluation

We recognize that the disagreement between the DOD components as to who should construct the air base at Tuy Hoa was eventually resolved prior to the approval of the turnkey concept in May 1966. The agreement among the DOD components on this matter, however, does not, in our opinion, change the basic position that the use of equipment already in Vietnam and augmentation of the contractor's work force to the degree necessary to construct the Tuy Hoa project would not have interfered with existing project priorities. This action would have resulted in a savings of several millions of dollars of construction costs to the Government.

In regard to the DOD comment concerning the CINCPAC recommendation that a parallel runway be built at Chu Lai, we noted that the CINCPAC proposal did not indicate which construction entity would accomplish the project. Moreover, we found that subsequently the parallel runway was not constructed, but as an alternative, a much smaller crosswind runway was completed by a Navy construction battalion.

In connection with the DOD statement that the turnkey concept permitted the immediate initiation of the Tuy Hoa project, it should be noted that the actual construction at Tuy Hoa did not begin until August 1966 or about 2 months after the turnkey contract was signed. Thus it seems that, if this time lag in starting the project was acceptable to the Air Force and MACV, the Navy contractor could have, during the same period of time, augmented its capability for the specific purpose of constructing the Tuy Hoa project without interfering with construction priorities established for other projects.

The DOD contention that the use of a separate contractor was essential to provide needed flexibility appears to us to be in conflict with the DOD justification for the use of RMK-BRJ under a cost-type contract, i.e., to provide flexibility.

Comparability of costs

DOD commented that the turnkey approach was not approved on the merits of expected cost advantage and that elements of cost were incurred by reason of having established an independent construction capability with its full United States to Vietnam support train. DOD added that it was reasonable to surmise that some of these costs might have been avoided under the Navy's contract and construction agent but that the related costs were accepted in order to accomplish the airfield construction.

DOD furnished a schedule showing costs of four base complexes in Vietnam and the scope and cost breakout for major categories of construction such as airfield pavements, barracks, etc.

In connection with the schedule, DOD stated that any cost comparison between contractors is likely to be tenuous due to differences in such areas as scope of project, accounting systems used, incidence of interruption of work, etc., and that therefore it is not realistic to say that the overhead and administrative expenses would have been totally avoided if the project had been executed by the Navy and its contractor. Air Force comments on this section and our evaluation thereof are included in appendix II.

GAO evaluation

The DOD comment that the costs related to the establishment of an independent construction capability were accepted in order to accomplish the airfield construction is essentially the same as their comment concerning the selection of the turnkey contractor. Our evaluation of this matter is included on page 19 of this report.

In connection with the schedule of comparable costs furnished with the DOD comments, we noted that the schedule reflects Air Force funding of projects at the air bases but does not show clearly that, although each air base may have consisted of two runways, the true difference in scope was reflected in the support facilities required to support different numbers and types of squadrons, more or less housing, storage, port facilities, and other types of facilities. In addition, it is apparent that certain facilities, such as hospitals, petroleum facilities, storage areas, etc., were funded in part or in the whole by the other military services but were utilized in part or whole by the Air Force. Thus, the costs of the other air bases reflected on the DOD schedule were not truly comparable with Tuy Hoa where substantially all the site improvements were funded by the Air Force.

Our audit did not show, nor does our report imply, that all overhead and administrative costs would have been avoided if the Navy contractor had been utilized in lieu of the turnkey concept. We set forth in our report those types of costs which we believe were duplicated. As an example, the overhead and administrative costs incurred by the turnkey contractor outside of Vietnam were considered duplicative costs because the Navy contractor had not only a U.S. procurement staff but also had procured equipment, materials, and supplies for several air bases, one of which was eventually sited at Tuy Hoa.

Equipment purchases

DOD commented that our report implied a lack of coordination and cooperation between DOD components and cited the duplicate equipment purchases. In addition, DOD stated that our report failed to take into account the dynamic

nature of the construction operations existing in Vietnam in 1966 and provided a chronological history of the equipment purchases by the Navy, the need for the immediate buy, and subsequent utilization of Air Force equipment.

DOD stated that orders to proceed with Tuy Hoa using the Air Force turnkey concept were accompanied by orders to proceed with a parallel runway at Chu Lai and also that an air base at Hue/Phu Bai would remain under consideration. DOD added that, on the basis of these orders, the Navy equipment was not deemed available for allocation to Tuy Hoa; therefore, the Air Force had no alternative but to obtain equipment from other sources.

DOD believes that the construction equipment acquired both by the Air Force and the Navy has been and is being effectively used in execution of the Southeast Asia construction program and that, in general, unnecessary equipment buys have not been made in terms of the overall program. In this regard DOD cited a March 1967 CINCPAC cost study which concluded among other things that the RMK-BRJ Tuy Hoa equipment purchases were part of an "overbuy." DOD added, however, that this conclusion was not subsequently borne out because new construction projects assigned to the Navy's Officer in Charge of Construction, Vietnam, as well as normal equipment wear and tear, resulted in the need to initiate additional equipment procurements in early 1968.

DOD concluded that the Air Force equipment for Tuy Hoa is not considered to be duplicative or unnecessary cost to the Vietnam construction program. Air Force comments and our evaluation thereof are included in appendix II.

GAO evaluation

We believe that a lack of coordination and cooperation is indicated in that, even while the Navy contractor's buildup was occurring, the Air Force began in February 1966 to explore the possibility of introducing a separate contractor construction capability into Vietnam which included the related equipment, materials, and logistics support.

We recognize that the construction operation on Vietnam during 1966 was subject to almost continual revisions

due to the buildup of military forces and the readjustments necessary to meet the changing tactical situations which existed at that time. The Navy and its contractor, RMK-BRJ, foresaw the need for both equipment and materials for future air bases in Vietnam and proceeded in February 1966 to place orders amounting to about \$143 million, including equipment valued at \$48 million for airfield construction. The major portion of the equipment ordered in connection with construction of the air base eventually sited at Tuy Hoa was in transit to Vietnam before May 31, 1966, the date the Air Force awarded the construction contract.

With respect to the DOD comment that unnecessary equipment buys have not been made in terms of the overall program, we believe that our report has shown that such purchases were made in 1966 by the introduction of the Air Force contractor. In this regard the CINCPAC cost study referred to in the DOD comments showed that the RMK-BRJ equipment buy included \$17 million for Tuy Hoa and a second jet-capable airfield that was subsequently not constructed by the Navy contractor. This study stated:

"*** The equipment spreads for these two bases were redistributed to support other projects, however, much of this equipment would not have been bought if it had been known that the bases would not be built."

In addition, we question whether the construction equipment purchased for the Vietnam construction program has been effectively utilized for this program considering that in December 1966 the Navy took action to transfer about \$2 million in excess construction equipment to the Prepositioned War Reserve Stock. Two additional equipment transfers, with a total value of \$5.5 million, were made during April and June 1967.

The fact that the Navy was required to initiate additional equipment procurements in 1968 for the construction program in Vietnam does not in our opinion change the issue in our report that, had the Tuy Hoa project remained the responsibility of the Navy contractor in 1966, the \$9.5 million incurred for construction equipment for the Air Force contractor would have been avoided.

In connection with the statement that the Navy-procured equipment was not available to the Air Force because of the requirement for the parallel runway at Chu Lai and the possibility of another airfield at Hue/Phu Bai, our review showed that the order authorizing the Chu Lai runway did not indicate which construction entity, i.e., Navy contractor or troop construction, would be responsible for this project. Moreover, as shown in our report, although the Navy contractor purchased equipment required to build nine airfields, actual work was performed on only seven. Thus it seems that the equipment, procured by the Navy for two of the nine construction projects, was available and could have been diverted to the Air Force.

DOD stated that the Hue/Phu Bai site was to remain under consideration; however, we noted that, in approving the turnkey project, the Joint Chiefs of Staff concluded that construction of a jet-capable airfield at Hue/Phu Bai was not politically feasible at that time (May through June 1966). Considering the dynamic nature of the construction program as reported by DOD, we believe that it would have been more economical and efficient to transfer the equipment from the Navy contractor to the Air Force for use at Tuy Hoa than to hold the equipment for possible use at a future time.

Conclusions and recommendation

We believe that our report clearly demonstrates the pitfalls that can be encountered when more than one construction agent, and more than one cost-type construction contractor, operates in the same overseas geographic area. Under these conditions duplicative overhead and mobilization costs will be incurred. The increases in overall costs by such a practice have been recognized by the Committee on Appropriations, House of Representatives. In its report on fiscal year 1970 appropriations the Committee stated:

"*** the Committee has no intention of funding the additional personnel and other overhead expenses which would be involved in another construction agency. The Committee therefore directs that no personnel, either military or civilian, shall be hired nor any expenses incurred by the

Air Force or the Defense Agencies in connection with the establishment of any additional construction agencies in the Department of Defense."

In view of the above statement of the Committee and the directions made to DOD, we are not making a recommendation with regard to the use of more than one construction agent; but in our future overseas reviews of military construction programs, we will consider the extent to which the Committee's stated wishes were followed by DOD.

In recognition, however, that the use of more than one cost-type contractor in one overseas geographic area creates costly duplication of overhead and logistics support systems and that such factors add to the overall U.S. defense costs, we recommend that the Secretary of Defense direct the military construction agents contemplating the introduction of more than one cost-type construction contractor in a geographic area to submit an estimate of any duplicate overhead and equipment costs expected to be incurred to DOD for its consideration along with the military justification for such action.

CHAPTER 3

PROCUREMENT ACTIVITIES

Our review of procurements showed that, although the turnkey contractor's purchases of about \$8.4 million were generally made in accordance with normal procurement procedures and practices, the subcontractor's procurement practices evidenced weaknesses in the application of basic principles of management control generally recognized as needed to ensure that waste and inefficiency do not occur. The amount expended by the subcontractor, B. B. McCormick & Sons, Inc., for purchases of heavy construction equipment, materials, and supplies made at its Jacksonville, Florida, office totaled about \$13.7 million.

An additional smaller amount of about \$980,000 was spent by the contractor's field office in Taipei, Taiwan, principally for food and miscellaneous construction supplies.

Our review showed that, whereas the turnkey subcontractor purchased about \$9.5 million in construction equipment primarily between June and August 1966 and paid premium prices justified by the subcontractor on the basis of short equipment supply and required early delivery date, the Navy contractor had already purchased similar equipment valued at about \$7.4 million for the same airfield requirement and shipped much of it to Vietnam by July 1966.

We believe that the payment of premium prices could have been avoided had better procurement procedures and practices been inaugurated at the inception of the contract.

The following information presents the deficiencies noted in the subcontractor's procurements.

LACK OF SUBCONTRACTOR PROCUREMENT POLICY AND PROCEDURES

Subsequent to award of the subcontract, the Air Force and the contractor learned in July 1966 that the subcontractor had no written operating policy and procedures to govern the procurement of equipment, materials, and

supplies. By this time the subcontractor had made purchase commitments for about 82 percent of the total requirements. We believe that this initial weakness in management control of procurement resulted in unnecessarily high cost to the Government for equipment, materials, and supplies.

On June 13, 1966, the Air Force advised the contractor that the subcontract was approved subject to certain changes being made therein, one of which was to require that all the subcontractor's purchases be approved in advance by the contracting officer. On June 20, 1966, a guide describing the supporting data to be submitted with purchase orders was issued by the contracting officer.

The contractor and the Air Force made their first review of the subcontractor's purchasing activities during the period of July 7 to 11, 1966, or about 37 days after the subcontract was awarded. They found that the bulk of the purchases were verbally negotiated by the subcontractor with few or no records maintained. As of July 13, 1966, the subcontractor had made purchase commitments totaling about \$11 million, none of which had received prior approval of the contracting officer.

Another inspection of the subcontractor's purchasing functions was made by the prime contractor and the Air Force during the period August 1 to 3, 1966. The memorandum of inspection stated that the subcontractor's purchasing was not accomplished in accordance with good buying procedures; purchase order files lacked complete and proper documentation to substantiate the purchases; there was no written evidence of competition; arithmetic errors were common; and terms and conditions of the purchase orders were not explicit. The memorandum also stated that the subcontractor's procurement files reflected what might be characterized as a "whirlwind, crash buy program." It was further stated that the subcontractor, under direction of the contractor, had started a program to reconstruct the purchase order transactions and prepare, for each purchase order file, appropriate documentation to substantiate the actions taken.

The subcontractor's efforts to obtain procurement documentation resulted in many vendors' submitting price certification information which was prepared after the purchases had been consummated.

Our review of the subcontractor's purchase order files indicated that the subcontractor's procurement procedures were at least as deficient as reported by the Air Force and the prime contractor; and we believe that the lack of written procurement policies and procedures resulted in unnecessarily high cost to the Government for materials and equipment, as discussed in the subsequent sections of this report.

UNECONOMICAL PROCUREMENT OF EQUIPMENT, MATERIALS, AND SUPPLIES

The subcontractor procured equipment, materials, and supplies valued at about \$13.7 million at premium prices which resulted in additional cost to the Government because (1) competitive bids were not obtained, (2) purchases were made from dealers at prices higher than the subcontractor would have had to pay had it purchased from manufacturers, (3) purchases were made through third parties acting as agents for the subcontractor at higher costs, and (4) the Government supply system was not used. In addition, included in the above amount were purchases of about \$1.7 million for used equipment which the subcontractor obtained from its own inventory and from dealers. These purchases were made at relatively high prices which in one case exceeded the price of new equipment.

Competitive bids not obtained

Our review of the subcontractor's procurement files showed that, with the exception of two cases, competitive bids were not solicited before purchases were made and that prices obtained were based upon single quotations. We were unable to compute the total increase in cost resulting from the lack of competition; however, we believe it to be substantial in as much as (1) in one case a purchase of \$159,000 was made at about 8 percent above dealer list price, (2) other purchases were made at dealer list price, and (3) the maximum discounts obtained from dealers were only 12 percent below dealer list prices.

Several major manufacturers of heavy construction equipment informed us that they generally gave discounts in excess of 20 percent to the Government and its authorized contractors under competitive bidding.

By contrast, we noted that RMK-BRJ obtained competitive bids, at discounts ranging from 12 to 27 percent below dealer list prices. Some of the prices quoted to RMK-BRJ for similar equipment through competition, are shown below.

<u>Type of equipment</u>	<u>List price</u>	<u>RMK-BRJ price</u>	<u>Amount below list</u>	<u>Percent below list price</u>
Tractor, crawler-bulldozer	\$ 59,183	\$ 44,308	\$14,875	25.13
Motor grader	23,921	18,162	5,759	24.07
Crane	27,595	21,688	5,907	21.41
Tractor scraper	99,435	72,229	27,206	27.36
Wheel tractor	56,422	42,304	14,118	25.02
Tractor-bulldozer	<u>57,000</u>	<u>41,354</u>	<u>15,646</u>	<u>27.45</u>
Total	<u>\$323,556</u>	<u>\$240,045</u>	<u>\$83,511</u>	<u>25.81</u>

Purchase of equipment from dealers at high prices

The subcontractor purchased about \$7 million of new heavy construction equipment from dealers at prices higher than they would have had to pay had the purchases been made from the manufacturers. The subcontractor paid prices at least 8 to 20 percent more than would have been required had the equipment been purchased directly from the manufacturers even under noncompetitive conditions. In this regard we noted one case in which the subcontractor received a discount of about 18 percent on a purchase of trucks through a manufacturer's branch outlet.

Although it is not possible to precisely calculate the excess cost to the Government from not procuring direct from manufacturers, we believe the amount to be substantial on the basis of the following examples.

Our test of 10 purchase orders--valued at about \$1.4 million out of total orders amounting to \$2.4 million which the subcontractor ordered from a local dealer who in turn ordered them from the manufacturer--showed that discounts obtained by the subcontractor from the local dealer ranged from 7 to 12 percent below list prices. Had the purchases been made direct from the equipment manufacturer instead of using the local dealer, discounts ranging from 20 to 25 percent could have been obtained, and an additional savings of about \$208,600 on the 10 items or 15 percent could have been realized. This manufacturer has informed

us that it usually offers discounts of at least 20 percent, even on noncompetitive purchases, to the Government and its authorized contractors.

Another example involved the acquisition of three tractors from a local dealer. The dealer's list price for three tractors totaled \$218,766, with a discount of about 7 percent being given to the subcontractor. The manufacturer of these tractors has informed us that it normally gives a trade discount of 20 percent and a cash discount of 2 percent on purchases made directly by the Government and its contractors. Had this procurement been made from the manufacturer, an additional reduction in price of about \$31,668, or 14 percent, would have been obtained.

When the subcontractor purchased soil cement equipment from a dealer, a discount of \$24,962 was obtained, representing a 10-percent discount from the list price of \$249,616. We found that the manufacturer of this type of equipment normally offers a discount of at least 20 percent on purchases by the Government or its authorized contractors. If the subcontractor had placed the order directly with the manufacturer, an additional saving of 10 percent, or \$24,962, could have been realized.

Additional freight and handling charges

In addition, we noted the following cases in which the subcontractor's procurement of heavy construction equipment from dealers instead of manufacturers resulted in additional freight and handling charges. The prices at which the dealers sold the equipment to the subcontractor included freight charges from the manufacturer's plant to the dealer's place of business and from the dealer's place of business to the port of embarkation at Jacksonville, Florida. We noted also that the subcontractor was charged for loading, unloading, and escort service. We were unable to compute the exact amount of the additional charges, but we believe two orders involving the procurement of equipment for \$1,094,689 demonstrate that the additional costs were substantial.

Four tractors were purchased through a dealer at Jacksonville, Florida, who acquired three of the tractors

from a dealer in Los Angeles, California, and one from a dealer in Kansas City, Missouri. Freight charges from the manufacturer's plant to Los Angeles and Kansas City and then to Jacksonville were included in the unit prices of the tractors purchased by the subcontractor. The additional transportation costs amounted to about \$16,400 more than would have been incurred if shipped directly from the manufacturer's plant to Jacksonville.

The other case involved the purchase by the subcontractor of two payloaders from a dealer at Commerce City, Colorado. The equipment had been shipped to the dealer from the manufacturer's plant located near Chicago, Illinois. An additional charge of \$10,183 representing freight charges from Commerce City to Jacksonville, Florida, was added to the price that the subcontractor paid the dealer for the equipment. Moreover, the subcontractor was also charged \$474 for unloading and preservice equipment checks at Commerce City, \$885 for reloading and blocking material, and \$454 for permits, escorts, and wire charges in connection with transporting the payloaders to Jacksonville, Florida.

Higher costs incurred because of procurement through third parties

The subcontractor made extensive use of third parties who acted as its agents to procure equipment and spare parts at prices which exceeded those charged by dealers or manufacturers. This method of purchasing is undesirable because it had the effect of transferring the subcontractor's purchasing responsibility to third parties, and results in the inclusion of another level of expense in the final price. Although we were unable to determine the extent of the additional costs incurred by dealing through third parties, we believe that the following examples demonstrate that substantial additional costs were incurred.

One local firm in the Jacksonville area which was not an authorized dealer, sold the subcontractor, for about \$548,000, a specific brand of rock-crushing equipment. We identified two items of equipment, and supporting spare parts, which the local firm acquired from an authorized rock-crushing equipment dealer and sold to the subcontractor

for about \$172,900. The spare parts were sold to the subcontractor at dealer's list price and the equipment was marked up about \$12,300 above dealer list price.

Another case involved a firm located in Los Angeles, California. The subcontractor authorized the firm to acquire several items, including three Allis-Chalmers forklifts. The firm obtained and sold the three forklifts to the subcontractor at the dealer list price which totaled \$23,659. The manufacturer of the forklifts gives discounts on purchases made directly by the Government or its contractors amounting to at least 24 percent from dealer list price.

Government supply contracts not used by subcontractor

Our review showed that the subcontractor purchased over \$2.1 million of items from local dealers when similar items were available through General Services Administration (GSA) contracts at greatly reduced prices. We were unable to determine the total amount of additional costs incurred by purchasing in the open market instead of through existing Government supply sources; however, we believe it to be substantial as evidenced by a detailed examination of purchase orders for spare parts.

The subcontractor purchased about \$1.82 million of spare parts for rockcrushers, motor graders, scrapers, generators, tractors, and trucks. We examined 17 procurement actions totaling \$552,542 for spare parts and found that the subcontractor could have saved about \$116,568 had the 17 orders been obtained through GSA contracts. At this rate of saving, which was about 21.4 percent on net purchases, we believe that the subcontractor could have achieved significant savings on its purchases of spare parts in the amount of \$1.82 million because much of the subcontractor's construction equipment was manufactured by firms which had GSA contracts such as Allis-Chalmers Manufacturing Company, Euclid Division of General Motors, Caterpillar Tractor Company, Iowa Manufacturing Company, and White Trucks.

GSA Federal Supply Schedule contracts include all types of heavy construction equipment spare parts, hand tools, and miscellaneous items. Government agencies and authorized cost-type contractors can place orders with the manufacturers and generally obtain significant discounts from dealer list prices. All that is required for a contractor to use the Federal Supply Schedule contracts is that the contracting officer authorize their use and certify to the manufacturer that the order has been placed in behalf of the Government and that title to property bought is vested in the Government.

The following table compares the prices paid by the subcontractor with prices available through GSA contracts and shows the savings that could have been obtained had the Government source of supply been used.

<u>Spare parts</u>	Sub- contractor <u>price</u>	GSA contract <u>price</u>	<u>Savings available</u>	
			<u>Amount</u>	<u>Percent</u>
Loader parts	\$ 32,764	\$ 25,558	\$ 7,206	22
Tractor parts	166,165	129,261	36,904	22

In many cases we noted that the subcontractor submitted spare parts orders to local dealers who in turn placed the orders with manufacturers that had supply contracts with GSA, and the manufacturers shipped the items directly to the subcontractor.

Acquisition of used equipment at high prices

The subcontractor acquired about \$1,755,000 worth of used equipment, of which about \$480,000 worth was taken from its own inventory. Some items were acquired at prices in excess of those paid manufacturers by RMK-BRJ for similar new equipment.

Used equipment purchased from dealers

During the period of June 15 through July 11, 1966, the subcontractor purchased nine used tractor-scrappers at prices ranging from \$65,000 to \$80,500 each; and during the same period, the manufacturer of this type equipment had promised delivery of 51 new units to RMK-BRJ at a price of \$72,229 each. We noted that 10 of these tractor-scrappers were considered to be excess to RMK-BRJ's needs in May 1966, and an additional 27 units were excess to needs by August 1966.

In addition, the \$631,000 paid by the subcontractor for the nine used tractor-scrappers was considerably higher than the wholesale value of \$310,000 for nine such units listed in the Green Guide of new and used equipment values. The Green Guide, published by the Equipment Guide-Book Company, Palo Alto, California, is designed for use as a general market reference and shows prices which are national averages.

Another purchase by the subcontractor of used equipment, which appeared to be at unusually high prices, involved four passenger buses. Two 1957, and one each 1958 and 1959, models were acquired at a total price of \$11,650. A comparison of the prices paid for these items with prices contained in a 1966 trade association publication, which listed dealers average wholesale/retail prices and with estimates obtained from a dealer, showed that the total average price for similar used equipment was about \$4,600 for all four buses.

Procurement of subcontractor-owned
used equipment

The subcontractor withdrew from its own inventory and transferred to subcontract inventory used equipment at a cost to the subcontract of about \$480,000. The used equipment was purchased by the subcontractor for a total of \$407,591, during the period 1958 through 1966, and had a net book value after depreciation of only \$186,418 at the time of transfer. We also noted that the sales price for some of the equipment exceeded the national average price of similar equipment as shown by the Green Guide of used equipment values.

The following schedule compares the invoiced prices for some of the used equipment with prices paid by the subcontractor and average retail prices shown in the Green Guide. The average wholesale prices shown in the Green Guide are also included in the schedule; if the subcontractor had used this guide as the basis for charges to the Government, the wholesale prices probably would have been applicable since retail prices normally include an amount for profit and the subcontractor would realize profit under the subcontract in the form of the prescribed fees.

<u>Description</u>	<u>Cost to Government</u>	<u>Subcontractor's cost</u>	<u>Average price per Green Guide</u>	
			<u>Wholesale</u>	<u>Retail</u>
American crane draglines:				
1956 model	\$ 65,000	\$ 35,000	\$ 16,250	\$ 28,000
1961 "	65,000	32,277	22,950	37,925
Caterpillar D-9 tractor	26,785	56,394	9,675	17,475
International backhoe tractor	5,400	2,933	3,125	5,325
White trucks with 9-yard mixers--1964 models	<u>209,000</u>	<u>177,533</u>	<u>137,995</u>	<u>156,695</u>
Total	<u>\$371,185</u>	<u>\$304,137</u>	<u>\$189,995</u>	<u>\$245,420</u>

Air Force appraisal of equipment purchases

Our review showed that the subcontractor's equipment purchases were reviewed by the Civil Engineering Construction Operations Group from Headquarters, Air Force Logistics

Command. This team visited the subcontractor's facilities in mid-July 1966 for the purpose of inspecting the condition of the equipment and furnishing the contracting officer a certification as to the fair and reasonable value of this equipment.

In making its appraisals, the Air Force team indicated that it used the Green Guide; although in some cases this source could not be used in its evaluation due to the supply and demand situation.

The Air Force team indicated that the value of a particular item may be less than the Green Guide figures if it is in poor mechanical condition. For a machine lightly used and in excellent condition, the price may be considerably higher than the guide figures and still be a good buy. With respect to the used equipment which the subcontractor obtained from its inventory, the Air Force team considered the items to be in good to excellent condition and the prices charged by the subcontractor generally to be fair and reasonable based on current market conditions and the short lead time imposed on project turnkey.

In connection with used equipment purchased from dealers, the Air Force team generally indicated that the market conditions influenced the prices which the subcontractor had to pay for the equipment. For example, the team's appraisal of the purchase of nine used motor scrapers showed that the prices paid were premium of what should be reasonable but that the time frame of the project could not be met in any other way. On the basis of the short lead time for implementation of this project, the team considered the prices to be reasonable and best obtainable at that time.

The new equipment purchases made by the subcontractor were generally rated as excellent by the Air Force team on the basis of the acute shortage of heavy construction equipment. In its appraisal the team compared the invoice prices with new equipment retail prices taken from the manufacturer's catalogs and stated that the prices paid by the subcontractor included a reasonable discount.

Although the Air Force team concluded that the prices paid and discounts obtained by the subcontractor were

reasonable considering the supply situation, we believe that our review has shown that substantial added costs have been incurred by the Government due to the manner in which the subcontractor's equipment purchases were made and when these purchases are compared with the prices paid by RMK-BRJ for the millions of dollars worth of construction equipment bought for the military construction program in Vietnam.

In commenting on our observations concerning the subcontractor's procurement activities, responsible subcontractor officials generally agreed that premium prices were paid for some of the equipment but stated that, because of extremely short supply and required early delivery date, they were the best available at the time. They stated also that the use of competitive bids could have forced them to accept a product offered which may not have been suited to the Vietnam terrain. They stated further that equipment purchases were made from dealers and through third parties because no equipment was available from manufacturers' warehouses or production lines except equipment already designated for specific dealers and customers such as RMK-BRJ, and they were prohibited from interfering with manufacturers' commitments to RMK-BRJ.

The subcontractor's officials said that they were not aware of any authority which would allow them to utilize the Government supply system, and since the Air Force and prime contractor did not provide any specific guidelines or instructions regarding procurement procedures to be followed, they considered that their efforts were as good as could be expected under existing circumstances.

With respect to used equipment obtained from the subcontractor's inventory, an official stated that the price data in the Green Guide was not used to establish the prices for these items because this source reflected a market average for the mechanical condition and did not consider the local market supply situation. We were further informed that the value of the used equipment purchased from the subcontractor's inventory was based on a percentage of the estimated remaining life of the used equipment after renovation applied to the replacement cost of a new piece of equipment.

The subcontractor's contention that the time allowed for completion of the turnkey project did not permit obtaining competitive bids implies that normal procurement procedures established to safeguard the Government's interest should, in this case, be waived as a matter of expediency. We believe competition could have been obtained without requiring a long, drawnout process. For example, a simple method used by RMK-BRJ was to contact major heavy equipment manufacturers by telephone and request that oral bids be confirmed by letter. Substantial savings were made on the cost of equipment purchased by RMK-BRJ through this method of obtaining competition.

We do not agree with the subcontractor's statement that the use of competitive bids would have forced it to purchase the low bidders' products, even though, equipment offered may not have been suited for the project. In fact, RMK-BRJ rejected one major manufacturer's product because it was not suitable even though the manufacturer submitted the lowest bid.

Concerning the subcontractor's comments as to the non-availability of equipment from manufacturers which thus forced them to purchase from dealers or third parties, we noted instances involving purchases of equipment and parts at a cost of several million dollars where the subcontractor's purchases from local dealers at their prices were actually shipped directly from the manufacturer to the subcontractor.

Regarding subcontractor officials' statements that they were prohibited from contacting equipment manufacturers who were supplying equipment to RMK-BRJ, our review showed that the Air Force did set up certain ground rules to overcome objections to the turnkey project raised by the Navy; but these rules, in our opinion, did not prohibit the subcontractor from contacting manufacturers in an effort to obtain the best prices available.

In connection with the subcontractor statements concerning the use of the Government supply system, we noted that, on July 29, 1966, the letter contract was amended and provided that the contracting officer could issue an authorization to utilize GSA. Although this revision was made,

it is apparent that its effect was negligible; because by the time the amendment was issued, the subcontractor had already made purchase commitments of over \$11.1 million and about \$9.6 million worth of equipment and supplies had been delivered to the docks at Jacksonville, Florida.

We believe that, had the Air Force authorized the use of GSA supply sources at the time the letter contract was signed and closely monitored the subcontractor's procurement activities, significant savings could have accrued to the Government.

In our draft report, we concluded that added costs had been incurred by the Government for this contract due to the subcontractor's unfamiliarity with procurement procedures to be followed under cost-type contracts. We proposed that the construction agent provide timely guidance to and assist the contractor and major subcontractors in making procurements of materials and equipment and monitor such procurements to ensure that they are made in accordance with applicable policies.

Agency comments

DOD commented that the overall delivery requirements justified the expedient procurement procedures used by the contractor. DOD added that, although mission urgency and general market conditions limited favorable competition, to some extent the Air Force approach to validating the reasonableness of prices for equipment was considered to have provided a prudent control to ensure equitable value received.

DOD stated that its policy provided that government supply sources be used to the maximum extent practicable, but the Air Force experience in attempting to support Southeast Asia requirements through this source was deemed inadequately responsive under the circumstances. DOD added that the implication in our draft report of uneconomical procurement of equipment, materials, and supplies failed to take into account the foreshortened delivery requirements for Tuy Hoa, the variations in market demands with accompanying variations in supply and pricing, and the need for expeditious responsiveness in supply support.

DOD added that the value of benefits realized under the turnkey procurement operations was reasonably consistent with the general structure of prices paid. DOD concluded by stating that our proposal was in agreement with its existing policy which was considered to be in effect for the Tuy Hoa project and that the Air Force comments regarding procurement practices indicated the scope of Air Force efforts to obtain reasonable value under the procurements. Air Force comments on this section and our evaluation thereof are included in appendix II.

GAO evaluation

Although foreshortened delivery requirements may include expedient procurement practices not condoned under normal operations, we believe that, in this case had the equipment purchased by the Navy contractor been transferred to the Air Force for use on the turnkey project, the costly and inefficient practices followed by the subcontractor in obtaining the turnkey equipment could have been avoided.

The fact that the Air Force failed to give timely supervision to ensure that the subcontractor's procurement policies and procedures were established and implemented prior to its making purchase commitments for about \$11 million, and the fact that most of the purchases were approved by the contracting officer many months after the fact, leads us to believe that the Air Force did not exercise prudent control in validating the reasonableness of subcontractor's equipment prices.

The DOD comments concerning government supply sources and their stated inadequacy in terms of response time on procurement requests implies that this is a general condition on all procurement requests to Government sources of supply regardless of supply point, i.e., government or commercial warehouses.

In connection with this review, we are speaking about utilizing Government open-end contracts to procure repair parts direct from manufacturer-designated sources at prices and under terms set forth in the GSA Federal Supply Service contracts. The items available through this type of contract are normally shelf-type items that are also stocked for shipment to commercial dealers and retail outlets. Our review showed that routine purchase orders, those that can be filled from quantities available on the shelf, are normally filled in from 5 to 15 days from receipt of the order.

We believe that it is reasonable to assume that a manufacturer will stock sufficient repair parts to meet consumer demands, whether military or civilian, and that the delivery time stated is in consonance with its experience and also a necessity in its retention of customer goodwill and follow-on orders.

During our audit we found no indication that the subcontractor, who purchased about \$1.82 million of repair parts, actually determined whether spare parts were available under open-end Government contracts for either the initial spares ordered during June, July, and August of 1966 or follow-on replenishment-type orders executed throughout the life of the contract. Moreover, we noted that the Air Force reported that about \$900,000 or almost 50 percent of the spares purchased were on hand at the completion of the

project. An overbuy of this magnitude is, in our opinion, a further indication that the expedient procurement planning and practices of the subcontractor were not consistent with good management practices.

In our opinion, the DOD statement that the Government supply system was inadequately responsive to Air Force demands has limited application to this contract because we found no indication that the subcontractor attempted to procure items in this manner. As a result and as stated in greater detail in our report, it is our opinion that higher prices than necessary were paid by the subcontractor.

DOD's conclusion that the benefits realized under the turnkey procurement operations were reasonably consistent with the general structure of prices paid, in our opinion, seems inconsistent with the discrepancies in the procurement practices set forth in detail in our report.

Conclusion and recommendation

The comment of DOD that our proposal to provide adequate timely guidance to the contractor to ensure that procurements are made in accordance with applicable policies is in agreement with its existing policies implies either that the contractor knowingly disregarded the instructions of DOD or that the DOD policy was not implemented by actually providing the guidance. We believe our review has shown that the latter point is the correct one. The designation of a commercial contractor as purchasing agent for the Government without clear instructions, guidelines, and assistance cannot be expected to result in economical procurements. Many of the sources and techniques available to a Government cost-type contractor are not available to the same contractor in its commercial or fixed-price Government business and what might be a proper procurement in the contractor's ordinary business could be wasteful under the cost-type contract.

We noted during our review that the Navy, in analyzing its weaknesses as a construction agent in Southeast Asia, considered it necessary to provide better administrative controls over future contractual relationships for Navy

and contractor personnel. Toward this objective the Navy is in the process of preparing a four-part manual entitled Cost Reimbursable Construction Contract Manual (NAVFAC P-398). A part of this manual will provide instructions to contractors concerning such matters as the need for establishment of appropriate procurement policies and procedures, the type of requisitioning and purchasing procedures expected to be used in the contractor's procurement activities, and the contractor's authority to use the Government's supply system. It is intended that this guidance will become a part of the contract document, thus requiring the contractor's compliance.

We believe that the Navy's approach to providing guidance to cost-type construction contractors could be adapted and used by other DOD construction agents in the administration of future cost-reimbursable military construction contracts. Accordingly, we recommend that the Secretary of Defense consider strengthening administrative procedures particularly in connection with procurement for all DOD construction agents in a manner similar to guidance now being prepared by the Navy.

CHAPTER 4

CONTRACTOR'S FEE

Our review showed that the turnkey contract provided for a maximum fee of \$3.1 million which was equivalent to 6.26 percent of the estimated construction and design costs for the Tuy Hoa project. This rate was significantly in excess of the rates used in other DOD cost-plus construction contracts in Southeast Asia for similar construction work. We believe that as a result added costs were incurred by the Government in the fee payments made under this contract.

We noted that, for design and construction of the airfield at Tuy Hoa, the Air Force and the contractor agreed to a fixed fee of \$2,159,657 on the basis of an estimated cost of \$50,477,697. In addition, the Air Force agreed to pay the contractor \$1 million in incentive fees as follows:

Performance incentive:	
Interim facilities	\$ 400,000
Sustained facilities	360,000
Limitation of inflationary impact and success of employee incentive program	100,000
Demobilization of labor force	<u>140,000</u>
Total incentive	<u>\$1,000,000</u>

Thus, on the basis of the total amount of fees agreed to, the maximum fee rate for this contract is equivalent to 6.26 percent of the estimated construction and design costs consisting of 4.28 percent for fixed fee and 1.98 percent for incentive fees.

In our review of contract provisions of other DOD cost-plus construction contractors in Southeast Asia, we noted the following fee rates.

<u>Contractor</u>	<u>Estimated contract cost (millions)</u>	<u>Fixed fee</u>	<u>Incentive award fee</u>	<u>Total fee</u>
		(Percent of contract cost)		
Contractors in Thailand	\$ 90	2.00	0.89	2.89
	43	2.09	0.93	3.02
Contractor in Vietnam (RMK-BRJ):				
1962-66 (note a)	431	3.00	-	3.00
1966 and 1967	835	1.70	0.76	2.46

^aContract fee rate renegotiated effective June 2, 1966, is still effective in 1970.

The incentive award fee which provides an incentive to the contractor for better than minimum acceptable performance is computed on the basis of semiannual performance evaluations made by a Government board. The incentive award fee rates represent the maximum which the contractors can earn; however, we noted that they have always received less than these rates.

Although the cost-plus contracts listed above provided for the construction of facilities such as ports, jet-capable airfields, cantonments, and logistics depots and included the procurement, shipping control, and maintenance of equipment, materials, and supplies, the Air Force turnkey contract, in addition, required design and shipping and off-loading operations. The performance of these additional functions, would not in our opinion, justify the establishment of a higher fee rate for this turnkey contract, since the contractor was reimbursed for the costs incurred to carry out the additional functions.

Contract records showed that the contractor has been paid a total of \$3,134,567 in fees consisting of \$2,159,657 in fixed fee and \$975,000 in incentive fees. The total \$1 million in incentive fees was not paid because an Air Force board after reviewing the contractor's efforts in connection with the employee incentive program determined that this incentive fee should be \$75,000 instead of the full

\$100,000 permitted by the contract. This action was taken because, although the board rated the contractor's efforts as satisfactory, it did note certain deficiencies.

In connection with the other incentive fees paid to the contractor, we have reviewed certain aspects of the performance incentives as discussed below.

PERFORMANCE INCENTIVE FEE

Our review disclosed that the stated urgent need for this air base project and the strategic importance of time were the basic reasons for using the turnkey contractor concept and placing performance incentive fees in the contract. We noted, however, that the contractor did not complete either the interim or the sustained facilities by the dates required in the letter contract. In addition, the performance incentive fee dates were extended permitting the contractor to earn a significant part of the performance incentive for completing the facilities beyond the originally required date.

A comparison of the amount of incentive fee negotiated under terms of the letter contract dated May 31, 1966 with that actually paid under terms of the definitized contract dated April 10, 1967, is shown below.

<u>Incentive fee for</u>	<u>Letter contract</u>		<u>Definitized contract</u>	
	<u>Contract maximum</u>	<u>Should have paid</u>	<u>Contract maximum</u>	<u>Paid</u>
Interim facilities	\$ 350,000	\$ (a)	\$ 400,000	\$400,000
Sustained facilities	350,000	100,000 ^b	360,000	360,000 ^c
Demobilization	-	-	140,000	140,000
Employee conduct	<u>100,000</u>	<u>75,000</u>	<u>100,000</u>	<u>75,000</u>
Total	<u>\$1,000,000</u>	<u>\$175,000</u>	<u>\$1,000,000</u>	<u>\$975,000</u>

^aBased on failure to complete by target date established in letter contract.

^bBased on completion on June 10, 1967, 10 days ahead of target date established in letter contract.

^cBased on completion on June 10, 1967, 14 days ahead of target date established in definitized contract.

Although it is apparent that the contractor was subject to the same incentive fee limitation, \$1,000,000, the change in the basis for computing the incentive fee on April 10, 1967, after a substantial amount of work had been completed, assured the contractor of earning \$800,000 (\$975,000 - \$175,000) more in incentive fees than could have been earned under terms of the letter contract for completing the facility in the same span of time.

The following information summarizes our observations concerning the performance incentive fee paid to the contractor.

Interim incentive fee

Although the letter contract provided that interim airfield facilities be completed by December 27, 1966, and that the contractor be awarded an incentive fee for completing them prior to January 31, 1967, our review showed that \$400,000 was paid to the contractor as an incentive fee even though a significant number of facilities had not been completed by the incentive award date. As discussed in the following paragraphs in order for the contractor to earn an incentive fee in this amount, the contractor would, in accordance with the terms of the contract, have had to complete the interim facilities by December 22, 1966. This it did not do.

The letter contract dated May 31, 1966, provided that the contractor complete construction of the interim airfield facilities as designated in the contract within 210 calendar days from the date of issuance of the Notice to Proceed by the Air Force. The notice was issued on the date the contract was signed. Therefore by December 27, 1966, the contractor was to have completed the interim airfield facilities.

To provide an incentive to the contractor to meet the delivery dates, the letter contract provided that the contractor's fee be increased \$10,000 for each day the completion of the interim airfield facilities preceded the 245th calendar day (January 31, 1967) from receipt of the Notice to Proceed not to exceed the sum of \$550,000.

Our review showed that the contractor was paid an interim performance incentive fee of \$400,000. On the basis of the terms of the letter contract and in order for the contractor to earn this amount of fee, the interim facilities had to be completed 40 days prior to the 245th day after receipt of the Notice to Proceed or by December 22, 1966. We found that, although the contractor had essentially completed certain of the major items (i.e., AM-2 runway--150,000 S.Y.; AM-2 warm-up apron--11,400 S.Y.; arrestors--BAK-12- 2 each; roads--5 miles; AM-2 taxiway--97,296 S.Y.; and runway lighting--1,000 CLF [candle power per lineal foot]) by the December 22, 1966, date, all the items required by the letter contract were not completed by this date.

We noted that many of the items were not finished until January, February, and March 1967. These items included the base communications, the warehouse supply and equipment storage building, subsistence storage, dining hall, squadron operations, petroleum fuel storage tanks, and the control tower. We noted also that other items listed in the letter contract as interim airfield requirements were subsequently deleted from this phase of the project and transferred for completion as a part of the sustained airfield facilities. These items included the approach lighting, taxiway lighting, ground control approach facility, tactical air navigational facility, and the landing field beacon.

To ascertain the basis used by the contracting officer in awarding an interim performance incentive fee of \$400,000 to the contractor despite the fact that all the designated airfield facilities were not completed as required, we reviewed available Air Force and contractor records.

We noted that, rather than adhering to the terms of the letter contract to determine the amount of interim fee earned, the Air Force and the contractor negotiated an interim fee. This negotiation resulted in the contractor being offered a \$400,000 incentive fee for achieving what the Air Force described as an operational interim airfield by November 15, 1966. The contractor was given a second chance to earn the remaining \$150,000 of the interim performance incentive fee when the Air Force applied \$10,000 of this amount to the

incentive fee on the sustained facilities and \$140,000 for timely demobilization of the work force.

The contractor, in accepting this Air Force proposal, agreed to cancel all contractor claims for excusable delays and time extensions because of changes made in scope of the interim airfield.

Review of contract records did not reveal detailed support showing how the Air Force determined that the contractor should be awarded the \$400,000 incentive fee. Instead we noted that in December 1966, in negotiations to definitize the contract, the question of the project delivery schedule and its relationship to performance incentive fees became a major point of contention between the Air Force and the contractor. The contractor maintained that it was entitled to an extension of about 115 days due to excusable delays, which it later reduced to 85 days, to complete the interim facilities. The Air Force, after evaluating all claims submitted by the contractor determined that an 18-day extension was all that could be granted.

Although the letter contract required that excusable delays be determined by critical path method schedules (a management analytical technique which seeks to determine the expected times of completion of the total construction project and of the related subprojects) and that the schedules were to be negotiated by the contractor and the Air Force, we could find no evidence that such negotiations had occurred.

Rather, we found that, although the contractor had based its excusable delay claims on a critical path method schedule, the Air Force contended that since the Air Force did not participate in the preparations of the plan and that, since the contractor's critical path method schedule was not being used as a management tool at the construction site, the Air Force would not agree to use the schedules as a basis for determining excusable delays.

As a result of the difference of opinion as to the number of days of excusable delay allowable under the circumstances, the Air Force negotiated with the contractor and agreed upon the \$400,000 amount as the interim incentive fee.

Sustained incentive fee

To provide an incentive to complete the sustained airfield facilities by May 26, 1967, the letter contract provided that an incentive fee of \$10,000 be paid to the contractor for each day that completion of the interim airfield facilities and all the remaining airfield construction preceded June 20, 1967, not to exceed the sum of \$350,000. Thus, on the basis of the terms of the letter contract and by completing the sustained airfield facilities by the date specified in the letter contract for completion of all facilities, on May 26, 1967, the contractor could earn \$250,000 in incentive fees.

Our review showed that the sustained facilities were completed June 10, 1967, which was 14 days ahead of the target date established in the definitized contract dated April 10, 1967. Since the facilities were completed within the time allotted, the contractor was entitled to receive the maximum performance incentive fee of \$360,000 in accordance with the terms of the definitized contract. In contrast, had the over 10-month-old letter contract remained in effect an additional 62 days, the contractor would have received only \$100,000 in incentive fees for completion of the sustained facilities on June 10, 1967. The difference, in the amount of fee which could potentially be earned, occurred as a result of changes made in the method of computing the incentive fee under the definitized contract.

The definitized contract provided that the contractor complete all site work by August 1, 1967, and that the performance fee be broken down into five separate groups with each group being assigned certain facilities, completion dates, and incentive fees. An additional \$10,000 was transferred from the interim fee and added to the sustained incentive fee total. The following schedule shows the revised method for computing the fee.

<u>Group</u>	<u>Completion date</u>	<u>Incentive fee</u>
I	March 7, 1967	\$ 10,000
II	April 7, "	60,000
III	May 7, "	100,000
IV	June 7, "	150,000
V	June 24, "	<u>40,000</u>
Total		<u>\$360,000</u>

In connection with the new basis for computing the amount of performance incentive fee paid on the sustained facilities we noted that the facilities in Group I and several items in Group II were substantially completed at about the time these incentive groups and completion dates were established. We believe that this situation virtually eliminated any risk for the contractor on meeting the completion dates and assured the contractor of being paid the \$70,000 performance incentive fees for these groups. The following information summarizes our observation on this matter.

Group I facilities

Part II, paragraph 17c of the definitized contract stated that both parties to the contract in early February 1967, agreed that a \$10,000 performance incentive fee would be paid to the contractor if he completed 19 dormitories and six latrine buildings plus associated utilities, sidewalks, and streets on or before March 7, 1967. The contract indicated that these facilities were completed and accepted by the Air Force on February 27, 1967, and that the contractor would be paid the \$10,000 performance incentive fee for delivery of these facilities.

Our review of construction progress reports indicated that, on February 15, 1967, 12 of the 19 dormitories were already completed, two were erected, three were partially erected, and the concrete slabs were completed on the remaining two. With respect to the six latrines, three were already completed and three were partially completed by that date.

Group II facilities

The line-item makeup of this group, which was also established in early February 1967, consisted of 18 items and the correction of any construction deficiencies that had been found in any of the interim airfield facilities. The contract stated that a \$60,000 incentive fee would be paid to the contractor if it completed this group by April 7, 1967. Our review of a construction progress report indicated that, as of February 15, 1967, or about

2 weeks after the establishment of the group, six out of the 18 line items showed percentages of completion ranging from 55 to 96 percent. The following items were included

<u>Facility</u>	<u>Percent Complete</u>
Petroleum farm (includes interim and sustained)	78
Permanent concrete taxiway (parallel)	55
Control tower	94
Ground control approach	85
Ammunition magazines	65
Base communication and telephone exchange	96

The above items represent the most important or significant items in this group.

In addition, our review showed that the Air Force authorized its contractor to subcontract with Vietnamese and other foreign construction firms during the period January 15, 1967, to the latter part of April 1967 for completion of certain items set forth as Group I through Group V facilities in the definitized contract. The subcontract work included concrete foundations and floors for 73 buildings, erection of 50 buildings and painting of about 45,300 square yards of building surfaces. We believe the work accomplished under these subcontracts contributed significantly to the timely completion of each group of facilities.

Thus, our review has shown that the contractor was promised an incentive fee if it completed the groups on a timely basis even though many of the facilities in the two groups were substantially completed at about the time the negotiations concerning the fee were being carried out and some of the work was accomplished by subcontract which allowed the contractor to direct his work toward completion of other facilities.

In our opinion, the establishment of performance incentive goals and fees when work was substantially complete had the effect of assuring the contractor of a fee with no

increased measure of effort necessary on its parts to earn the fee.

We believe the attainment of efficient and effective construction requires the cooperation and coordination between all component elements of DOD and use of the combined professional skills represented therein. The lack of such working relationship is shown by the contradictory policies of the construction agencies regarding contractor fees. The granting of diverse fees to contractors performing the same or similar construction projects in the same geographic area can only lead to dissatisfaction and discontent of the unfavored contractor.

In our draft report we proposed that in those few cases where it was found necessary to award military construction contracts to more than one contractor in a particular overseas geographic area that the construction agent assure parity in contractor fees.

Agency comments

DOD commented that, as stated in the Air Force comments, the fee as negotiated was considered appropriate to the task assigned to the contractor. DOD added that it was considered that the difference in judgment regarding fee did not substantiate our opinion that the working relationships between DOD components was lacking in cooperation and coordination.

DOD stated that our proposal regarding the parity of contractor fees was in agreement with existing Office of Secretary of Defense policy. DOD added that the level of maximum fee allowed under the turnkey project, although higher on a percentage basis than fees allowed under other contracts for construction in Southeast Asia, was deemed appropriate considering the special nature of the task to be accomplished under the contract.

Air Force and contractor comments on this section and our evaluation thereof are included in appendix II.

GAO evaluation

Our review of the available contract negotiation records describing the Air Force turnkey staff's actions in May 1966 to establish the fee amount for the turnkey contractor showed that inquiries as to the basis for and magnitude of fees normally paid on cost-type construction contracts were generally limited to other Air Force personnel. The only exception that we noted occurred when the Air Force negotiators referred to a 1956 Army engineering manual which contained guidance as to recommended fees for cost-plus-fixed-fee construction projects.

We believe that, had the Air Force fully coordinated with other DOD components which were administering cost-type construction contracts in Southeast Asia, they could have benefited from the experience gained by these agencies and would have been in a better position to evaluate the reasonableness of the turnkey contract fee levels.

The DOD comments on the level of the fee allowed the turnkey contractor are similar to comments made by the Air Force on this matter and therefore our evaluation thereof is shown in appendix II, page 20.

Conclusion and recommendation

DOD agreed with our draft report proposal that fees should be similar for similar work in a single overseas geographic area but justified the higher fees for the Tuy Hoa project as an exception to this policy due to the special nature of the undertaking. Our review did not show that this project differed materially in scope, difficulty, and time to complete, from other projects completed in Southeast Asia during the same period of time. We do not consider use of a turnkey-type contract, in lieu of the normal contracting methods employed in Vietnam, a significant variance which would justify payment of higher than average fees. We therefore recommend that on cost-type contracts the Secretary of Defense require military construction agents

to justify the necessity for and to obtain advance approval for significant deviations from fee rates already in effect in a particular overseas geographic area.

CHAPTER 5

EXTENSIVE USE OF OVERTIME WORK

Our review showed that the contractor required many of its U.S.-and third-country-national employees to work more than 280 hours a month and its Vietnamese employees to work a total of 459,760 hours of overtime during the term of the contract. This was apparently done so that the contractor could meet the completion dates for the construction of the airfield facilities and coincidentally earn the incentive fees provided for in the contract. The contractor paid piasters equivalent to about \$117,000 in overtime to the Vietnamese employees and \$97,000 to the U.S.-and third-country-national employees and may be liable for an additional amount of about \$480,000 for overtime pay due, but not paid, to U.S.-and third-country-national employees.

The contractor's Vietnamese employees were paid overtime for all hours worked in excess of their normal 48-hour workweek. In regard to the U.S.-and third-country-national personnel, we noted that the contractor made some payments on claims for overtime work and may be required to pay the additional amount cited above even though the Air Force originally intended that no overtime payment would be made to these employees. This situation occurred apparently because of the wording of pertinent provisions of the contractor's overseas employment contract.

Our review showed that the employment contract used by the contractor for U.S.-and third-country-national employees contained the following language:

"4. Term of Employment, Hours of Work and Incentive Award"

* * * * *

"b. The Employee shall work such hours and shifts as may be required by the contractor. It is understood that to the extent work conditions permit, in the judgment of the contractor, the Employee

may be required to work as many as 280 hours per calendar month for the term of the contract and the stated salary."

Our review of Air Force and contract records indicate that the inclusion of the words--as many as 280 hours per month--had the effect of setting a limit on the number of hours required to be worked by contract employees and therefore any hours worked in excess of that number could be considered as overtime. However, there were no specific references in the employment contract concerning the payment of overtime. A review of contractor correspondence concerning the overtime problem showed that, despite the wording of the hours-of-work clause in the contract, the contracting officer did not intend that overtime payments would be made to U.S.-and third-country-national contract employees.

For example on January 31, 1967, the contracting officer sent a message to the administrative contracting officer at the construction site concerning the contractor's proposal to give the employees off every other Sunday. The contracting officer commented among other things that during the letter contract negotiations and the employee contract review, it was specifically understood and agreed, among the contractor, the major subcontractor, and the Air Force that, because of unpredictable working conditions and the urgency to get the job done, employees would be called upon to work such hours and shifts necessary to support the prime objective of this contract.

The contracting officer added that, when the basic wage scales were approved in July 1966, it was recognized that the employees might have to work more than the number of hours spelled out in the employee contract but that their basic salary or wage compensated them for those extra hours.

On October 19, 1967, the contractor reported to the contracting officer that 139 claims for overtime compensation had been received from turnkey site employees. The contractor stated that, if the hours of overtime were computed on the "monthly" basis, 126 valid claims amounting to 16,232 hours were involved. It was estimated that the overtime costs would amount to about \$101,000 for these claims,

The contractor requested a determination regarding the Government's interest in the claims and a decision as to reimbursement of costs incurred in defending suits by employees for the overtime pay.

On November 14, 1967, the Air Force advised the contractor that, although the Air Force did not intend that overtime be paid on Project Turnkey, the phrase "as many as 280 hours per month" was included in the employment agreement and could not be ignored. The Deputy General Counsel for the Air Force stated that the approval of and participation in drafting the "280 hours" language were sufficient to obligate the Air Force to reimburse the contractor for overtime claims that it might have to pay.

The contractor was directed to attempt to settle the overtime issue with each employee who had filed a claim and had not signed an employment release. For those employees who had already signed a release of all claims against the contractor but who had worked overtime, the contractor was advised that, in the absence of a showing of special circumstances surrounding the signing of the release, the contractor's legal position against the employees was much stronger and that in such cases each claim would be treated as an individual case and resolved on its own merits.

Records indicate that, during the term of the contract, the U.S.-and third-country-national employees worked a total of 97,744 overtime hours. As of May 1968, the contractor had paid approximately \$97,000 in overtime claims filed by employees who had not signed an employment release. The potential overtime costs for additional overtime worked amounts to about \$480,000.

We noted that the employment agreement used by the largest U.S. military construction contractor in Vietnam did not contain any reference as to the maximum number of hours that the employees might be required to work and that no overtime of any kind was paid.

In discussions with a turnkey contractor official as to the extensive use of overtime work, we were informed that such work was not used to earn the performance incentive fees.

We were advised that the overtime hours were required due to manpower limitations, requests for early completion of the airfield facilities, and because demobilization of the contractor's work force generally was based on the availability of Government aircraft and that men had to be released in time to meet the scheduled planes.

Our review of contractor records showed that in effect a manpower limitation for U.S. nationals was imposed on the contractor at the inception of the contract by the construction of berthing and messing facilities for a 700-man contractor's work force at Tuy Hoa. To meet target date objectives for completion of the base, the contractor required its personnel to work a 280-hour workmonth under terms set forth in the employee hiring agreement.

Our review showed that the overtime work was approved after the fact by an onsite Air Force official who signed the monthly payroll listing which showed the total number of hours worked by each employee. In support of this statement, we reviewed correspondence which showed that in one case the contractor requested approval for overtime worked in the previous month and that in a second case the Air Force requested the contractor to provide justification and that it was provided over 2 months after the overtime work was accomplished.

We believe that approval of overtime after the work was completed amounted to a "rubber stamp" approval by the Air Force and was not in the best interest of the Government. This rubber stamp approval of overtime allowed the contractor what amounted to the uncontrolled use of the labor force and coincidentally provided the contractor the means of earning incentive fees for the timely completion of the project.

The uncontrolled use of the large amount of overtime worked on this project also may have affected the productivity of the contractor's work force. A recent study within the construction industry indicates that as overtime hours increase, injuries increase, and costs will nearly double (1) due to the actual cost incurred for the overtime and (2) due to the loss of productivity of the individual worker.

This study was based on a comparison of costs incurred and used a standard 173-hour workmonth compared with a 260-hour workmonth. As noted previously the Tuy Hoa project was accomplished on the basis of a 280-hour workmonth and overtime, above the 280-hour workmonth, totaled about 97,700 hours for the U.S. and third-country nationals during the life of the contract.

In our opinion, the Government paid the direct cost of the overtime and the incentive fee; and it, in addition, as disclosed in the construction industry study, may have paid for the hidden cost of a steadily declining productivity rate due to the excessive hours of work.

Agency comments

DOD commented that our report segment concerning overtime was erroneous since overtime was paid as a result of legal determination rather than a result of intended policy. DOD also stated that the more general question of contradictory policies of construction agencies regarding the overtime pay as discussed in our report was misleading in that lack of uniformity in the compensation structure among contractors performing overseas work was not unusual. DOD added that an overall objective in this area has not been uniformity per se, but rather comparability, in overall compensation for comparable employee effort.

Air Force and contractor comments on this section and our evaluation thereof are included in appendix II.

GAO evaluation

In connection with the DOD comment that overtime was paid as a result of a legal determination rather than intended policy, we believe that the intention of the Air Force and the contractor is immaterial since the overtime pay was legally justified. We believe this problem could have been settled during the preaward contract negotiations if the Air Force had coordinated with Navy officials and obtained pay provisions similar to those used by the Navy contractor, RMK-BRJ, in their employee hiring agreement.

A comparison of the Air Force contractor's overseas employment agreement with that of the Navy contractor, RMK-BRJ, showed that the Air Force established a 280-hour workmonth within the terms of the agreement whereas in the Navy agreement no mention was made of the number of hours to be worked although the established workmonth was 260 hours and work in excess of this was required at the option of the contractor.

Conclusion and recommendation

It is apparent that the Air Force did not intend to pay for overtime and would not have been required to do so, had an employment agreement comparable to that of the Navy been used. We recommend, therefore, that the Secretary of Defense provide policy guidance to construction agents to ensure that labor contracts concerning overseas construction areas, insofar as possible, are similar and will establish equitable provisions concerning overtime pay for contractor employees working in the same geographic area. In addition, consideration should be given to reducing incentive fees which could be earned if it is found that productivity has declined as a result of excessive overtime work performed in order to meet predetermined completion dates on a project for which the incentive fees were negotiated.

CHAPTER 6

DEPARTMENT OF DEFENSE AUDIT EFFORT

The Defense Contract Audit Agency (DCAA) performed audit work at the contractor's office in New York City, at the offices of the major subcontractors, American Union Transport Overseas Services, Inc., also of New York, and at B.B. McCormick & Sons, Inc., of Jacksonville Beach, Florida. The DCAA audit effort in the United States began in July 1966 and was completed by June 1968. During this time DCAA expended 1,266 man-days as follows:

Walter Kidde Constructors, Inc.	724
American Union Transport Overseas Services, Inc.	292
B.B. McCormick & Sons, Inc.	<u>250</u>
Total	<u>1,266</u>

In addition DCAA, Saigon, performed some audit work in Vietnam on this contract.

In the early stages of its work, DCAA provided assistance to Air Force contract management personnel reviewing the contractor's pricing proposals, attending price negotiation conferences, and analyzing the contractor's policies and procedures pertaining to development of costs under the contract. The DCAA's audit approach included reviews and reports on the contractor's accounting systems, purchasing activities, labor costs, purchased services and materials, and indirect costs. DCAA was responsible for examining claims for reimbursement from the contractor and approving them for payment. Its objective was to ensure that the payment of claims was consistent with the terms of the contract.

On June 6, 1968, the DCAA issued its final report on costs incurred under the contract to the Air Force contracting officer. The report disclosed that, out of about \$57.3 million claimed by the contractor, DCAA had disapproved about \$1.6 million. Our review of DCAA reports and workpapers indicated that, in most instances, the coverage

appeared adequate to satisfy the audit objectives. We did note however that, in at least two cases, the contracting officer would have been better informed regarding certain aspects of subcontractor operations had the work performed by DCAA been expanded. Details regarding these two instances are presented below.

1. On August 11, 1966, the contracting officer requested that DCAA review all the transactions of B.B. McCormick & Sons, Inc., involving the acquisition of used equipment. The contracting officer requested that particular attention be directed to those transactions involving items owned by the subcontractor, which were transferred to subcontract inventory after award of the subcontract, and that the review be completed before he made a decision regarding the subcontractor's request for approval of the transactions.

The DCAA report dated November 17, 1966, stated that the subcontractor's documentation of purchase order files for purchases from vendors was generally adequate and reflected the subcontractor's acquisition costs. The report, however, did not comment on the reasonableness of the prices paid for any used equipment but did state that the subcontractor did not procure the used equipment in a manner normally required of Government procurements and attributed this to the short lead time involved.

The report stated that the requirement for short lead time procurement was not susceptible to audit evaluation and did not express any opinion regarding these purchases. The only reference made in the report to the used equipment acquired from the subcontractor-owned inventory was a statement that the invoices covering such equipment had been canceled by the subcontractor and were to be resubmitted at a later date.

A subsequent DCAA report dated March 16, 1967, covering the subcontractor's procurement of used equipment consisted of one schedule listing the items of equipment owned by the subcontractor which were transferred to subcontract inventory and information concerning each item of such equipment. The summary information regarding all the equipment so transferred showed:

1. Current value of equipment as appraised by local dealer	\$528,000
2. Date subcontractor purchased equipment	10-58 to 8-66
3. Amount recorded in accounts as cost of the equipment	\$407,000
4. Lease and repair costs expended on the equipment	\$ 80,000
5. Amount of depreciation charged against equipment	\$221,000
6. Current depreciation value of equipment as reflected in accounts	\$186,000
7. Amount charged to the Government for the equipment	\$489,000

The DCAA report included no opinion, conclusion, or recommendation concerning the reasonableness of the amount charged by the subcontractor for the used equipment, and the report made no mention of the value of used equipment of a similar type shown in the Green Guide, which is a standard reference for used construction equipment values, even though DCAA had in its files data which would indicate that the contracting officer placed considerable credibility in the Green Guide.

Our review of the used equipment transactions showed that the prices charged to the Government for the subcontractor's used equipment were significantly higher than the prices shown in the Green Guide for equipment of a similar type. See page 36 of this report for details.

2. On September 2, 1966, the DCAA Jacksonville Suboffice was informed by the DCAA New York Branch that the current competitive trade discount policy of a particular manufacturer was 20 percent for new equipment, whereas the purchase orders submitted by B.B. McCormick & Sons, Inc., for this manufacturer's equipment showed discounts of only 7 to 10 percent. Accordingly, DCAA was requested by the

contracting officer to review the discount policy of this manufacturer to ascertain whether or not the Government was being charged the correct net cost for new equipment.

In response to the request, a DCAA audit report dated November 3, 1966, stated that the 20-percent trade discount was a markup applied by the distributor to the manufacturer's price and that the 7- to 12-percent discount granted to the subcontractor, for account of the Government by the distributor, was greater than would be granted to commercial concerns. Records indicate that the subcontractor received larger discounts than given to commercial concerns because the equipment was purchased for shipment overseas and the chances of the equipment being returned by the Government to the dealer for repair within the 6-month warranty period were considered remote.

In our opinion, the reply by DCAA, Jacksonville, was not responsive to the contracting officer's request. We were advised by the manufacturer that normally discounts of at least 20 percent were granted to the Government and its authorized contractors. (See p. 30.)

CHAPTER 7

SCOPE OF REVIEW

Audit work on this contract consisted of review of contractor and agency records and discussions with responsible Air Force and contractor personnel. We performed this work at the offices of Walter Kidde Constructors, Inc., and the Air Force contracting officer, both in New York City, and at the office of the major subcontractor, B. B. McCormick & Sons, Inc., in Jacksonville Beach, Florida. In addition, review work was performed at the construction site in the Republic of Vietnam and also at the offices of the Directorate of Civil Engineering, Headquarters, U.S. Air Force, and Headquarters, Naval Facilities Engineering Command, Washington, D.C. Our fieldwork began in October 1967 and was completed by November 1968. A limited amount of review work was performed during October and November 1969 in connection with our evaluation of the DOD comments to our draft report.

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APPENDIXES

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ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

17 JUL 1969

INSTALLATIONS AND LOGISTICS

Mr. Oye V. Stovall
Director, International Division
U.S. Government Accounting Office
Washington, D. C. 20458

Dear Mr. Stovall:

We have completed our review of the draft report by the General Accounting Office on "Review of a Contract for Construction of Airfield Facilities in the Republic of Vietnam" (OSD Case 2912) provided by your letter of 19 March 1969. By our letters of 29 April and 16 June 1969, you were advised of the need to delay provision of Department of Defense comments until early July. Our comments for your appropriate consideration in finalizing the report are enclosed as Tab A. [See GAO note 1.]

The draft report concerns principally the Department of the Air Force and its Turnkey contractor Walter Kidde Constructors, Inc., of New York, New York; therefore, in the interest of responsiveness and completeness, Air Force comments are forwarded herewith as Tab B.

The draft report properly acknowledges that, once the Turnkey concept was approved for Tuy Hoa, the Air Force and its contractor proceeded with dispatch and completed the facilities for an operational airfield within approximately one year, which was comparable to the construction period on similar projects. Clearly, in terms of execution and end product, Tuy Hoa airbase was an excellent construction job.

The draft report contains four specific recommendations regarding: (1) single construction agent in overseas areas; (2) parity of contractor fees and employee benefits; (3) timely procurement guidance under cost reimbursable contracts; and,

[See GAO note 2.]

These recommendations are in consonance with existing OSD policies which were considered to be operative in the case of the Tuy Hoa project. Approval of Air Force execution of this project on a Turnkey basis was granted after consideration of the merits of this case as a specific exception to the OSD policy which designates the Naval Facilities Engineering Command as the DOD construction agent in

Southeast Asia. The level of maximum fee allowed under the Turnkey, while higher on a percentage basis than fees allowed under other contracts for construction in Southeast Asia, was deemed appropriate considering the special nature of the task to be accomplished under the contract. Air Force comments regarding procurement practices indicate the scope of their efforts to obtain reasonable value under procurements

[See GAO note 2.]

The GAO draft report was prepared over a thirteen month period starting several months after the Tuy Hoa airbase was completed and the contractor demobilized from Vietnam and accordingly does not appear to recognize fully the conditions under which the project was executed. Only when viewed in the context of the many factors which influenced the chronological decisions made and actions taken can a determination be made regarding the reasonableness of the Turnkey endeavor.

We consider that the tone of the draft report is, in this light, unjustifiably prejudicial and leaves an unwarranted impression that prudent management was lacking, as indicated by the following excerpts from the report:

"---problem areas existed many of which can be related to the lack of experience of the Air Force in administering major construction contracts---"

"---weaknesses existed in the application of basic principles of management control generally recognized as needed to ensure that waste and inefficiency do not occur."

[See GAO note 2.]

Improvements in the management of any operation are always possible. Accordingly, the comments offered by the GAO are accepted in that spirit and will be given full consideration in our continued efforts to achieve improved management. However, it is requested that the facts in this case be reassessed in light of the comments provided herewith in order that any final report may be presented in an appropriate context and with full objectivity.

The GAO draft report and the Department of Defense comments submitted herewith are cleared for UNCLASSIFIED release.

Sincerely,



Glenn V. Gibson
Deputy Assistant Secretary of Defense

Enclosures

GAO note:

1. The substance of the DOD comments, and our evaluation thereof, is included in the appropriate sections of the report.
2. Deleted comments relate to matters in the draft report but omitted from the final report.

DEPARTMENT OF THE AIR FORCE
WASHINGTON 20330



JUN 25 1969

OFFICE OF THE SECRETARY

MEMORANDUM FOR ASSISTANT SECRETARY OF DEFENSE
(INSTALLATIONS AND LOGISTICS)

SUBJECT: GAO Draft Report "Review of a Contract for Construction of Airfield Facilities in the Republic of Vietnam" (OSD Case #2912)

The Air Force has been requested to provide comments to your office on the subject report which reviews the Air Force Turnkey construction of a complete air base at Tuy Hoa, South Vietnam.

We have carefully analyzed the report and the factual record associated with this contract and have concluded that the recorded accomplishments of the Turnkey contract demonstrated that the contract was an effective method of achieving the purpose and in this light the derogatory comments in the GAO draft report are for the most part unwarranted.

Our response shows that:

- After considering all related factors, the urgency for construction of an additional air base at Tuy Hoa and the need to augment existing in-country construction capabilities by an Air Force Turnkey construction contract (proposed by the Air Force and approved by the Secretary of Defense) in order to provide the base in the "shortest possible time" was ultimately recommended and firmly supported by all elements of the Unified Command - COMUSMACV, CINCPAC, and the JCS.

- An expeditionary airfield was completed and in use for combat operations before the scheduled completion date. The permanent airfield was also completed in less than the scheduled time.
- The project was completed within the originally estimated cost and funds allotted, and inflationary impact on the Vietnamese economy was minimized.
- Contractor and Air Force overhead costs were substantially less than those experienced by the existing combine.
- Considering the tight economic conditions in the heavy construction and industry, prices paid by the contractor for equipment were reasonable. The procurement methods used were limited procedures but were essentially the same as those of the existing combine.
- Fees paid the contractor were reasonable for the scope of work. Unlike other SEA contractors, the Turnkey contractor designed the base, mobilized personnel, secured scarce equipment and material in this country, set up a complete water transportation and logistics system, including over-the-beach unloading, and was required to, and did, complete the base in a very short time and within allotted funds.

[See GAO note 1.]

- The Air Force did not intend that construction workers should be paid overtime, and did not authorize overtime

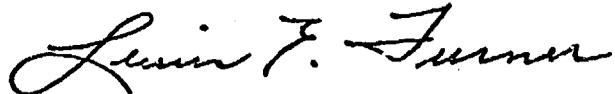
payments to allow the contractor to qualify for incentive fees. After completion of the work, some employees submitted claims for overtime to the contractor. The General Counsel of the Air Force decided approximately six months after the contract completion to authorize retroactive overtime payments to these employees. This decision in no way could have had any effect on the time needed to complete the base.

- The Air Force has demonstrated its capability to plan and manage a project of this nature, should another requirement arise under similar conditions.

RECOMMENDATIONS:

- a. That the GAO draft report and this response be downgraded to UNCLASSIFIED.
- b. That the Comptroller General review the draft report in light of the facts presented in the Air Force's response.

This memorandum contains no classified information.



LEWIS E. TURNER
Deputy Assistant Secretary
(Installations)

1 Attachment

AF Response to GAO Draft [See GAO note 2.]
Report (CSD Case #2912) (S)

GAO note:

- 1. Deleted comments relate to matters in the draft report but omitted from the final report.
- 2. Air Force detailed comments are summarized and evaluated in Appendix II of this report.

APPENDIX II

C o n t e n t s

ADDITIONAL AGENCY AND CONTRACTOR

COMMENTS AND GAO EVALUATION THEREOF

	<u>Appen- dix page</u>	<u>Refer to report page</u>
ADDED COSTS INCURRED BY USING AIR FORCE TURNKEY CONTRACTOR	1	6
Validity of Air Force proposal for turnkey	1	6
Added overhead costs	4	12
Duplicate equipment purchases	5	7
CONTRACTOR PROCUREMENT PROCEDURES	7	26
Lack of written policy early in the contract	7	26
Premium prices because of lack of competition	9	29
Premium prices resulting from buying from dealers rather than manufac- turers	10	30
Premium prices paid because of pro- curement through third parties	12	32
Acquisition of used equipment at high prices	14	35
Procurement of subcontractor-owned equipment at high prices	15	36
Use of Government supply channels	17	33
Equipment procurement--concluding comment	18	94
CONTRACTOR'S FEE	20	45
Interim incentive fee	22	48
Sustained incentive fee	24	51
USE OF OVERTIME	26	57
AIR FORCE CONSTRUCTION EXPERIENCE	28	104

ADDITIONAL AGENCY AND CONTRACTOR
COMMENTS AND GAO EVALUATION THEREOF

ADDED COSTS INCURRED BY USING
AIR FORCE TURNKEY CONTRACTOR

(pp. 6 to 25)

In responding to this section of the report the Air Force comments were directed to the following specific matters.

VALIDITY OF AIR FORCE PROPOSAL FOR TURNKEY

(pp. 6 to 7)

The Air Force has commented that the urgency for construction of the airfield at Tuy Hoa is clearly substantiated by the unified command record referring to a MACV recommendation of April 21, 1966, for an immediate decision to proceed with airfield development of Tuy Hoa without delay. The Air Force also cites two different statements by the Joint Chiefs of Staff of May 26 and 31, 1966, as to the need for the airfield facility at Tuy Hoa.

The Air Force further commented that there were initial MACV objections to the turnkey contract but that they were not (as implied in our report) based solely on a position that construction of Tuy Hoa by RMK-BRJ would be the most effective and economical alternative. The Air Force stated that, in early March 1966, discussions disclosed that the main reason for the MACV doubts was that it did not consider the turnkey proposal feasible. The Air Force stated that MACV's objections were withdrawn when the objectives and procedures of the turnkey contract philosophy were explained.

The Air Force commented that the implication in our draft report that the RMK-BRJ existing capability would either meet Tuy Hoa construction requirements in the time required, or could be expanded to meet it, was not substantiated by the record. In support of its contention, the Air Force describes examples of construction delays and problems

experienced on other airfield construction in 1965. It also refers to a MACV statement of February 1966 which indicates that, for calendar year 1966, Vietnam in-place construction requirements totaled approximately \$1.23 billion and that planned total placement capability could only provide an estimated \$539.7 million resulting in a requirements/capability shortfall of \$692 million of in-place construction.

The Air Force stated that it was apparent that expansion of RMK-BRJ to allow construction of Tuy Hoa in the required time schedule could not be accomplished without deferral of other high-priority work assigned or contemplated by RMK-BRJ.

In concluding its comments on this section of the report, the Air Force has stated that our draft report implies that the most efficient approach to Tuy Hoa construction would be through the Navy's single contractor force. Although the Air Force does not take formal exception to this position, its reply contains statistics comparing construction times for 10,000-foot concrete runways at Cam Ranh Bay, Phan Rang, and Phu Cat completed by the Navy contractor with the completion time for the runway at Tuy Hoa.

GAO evaluation

The Air Force comments concerning the urgency of the requirement for an air base at Tuy Hoa and the chronology leading up to MACV's approval of the turnkey concept, are, we believe, similar to the DOD comments on the same subject and do not provide any additional substantive information. Therefore, our analysis of this issue has been presented in our evaluation of the DOD comment on page 19 of the report.

The Air Force statement that other high-priority jobs would have been deferred had RMK-BRJ been committed to the Tuy Hoa construction job is a similar position to that taken by DOD. This position can only be accepted if RMK-BRJ were incapable of expanding its work force. We believe that RMK-BRJ could have retained or expanded its work force rather than reducing it, as discussed on page 13 of our report, with the same or greater facility than the Air Force contractor displayed in mobilizing an initial work force.

In regard to the Air Force comments concerning the projected \$692 million shortfall, our review showed that this estimation was of questionable value because the \$1.23 billion in military service requirements included facilities which were not scheduled for completion until mid-1967, whereas the construction capability of \$539 million represented a projected capability for the calendar year 1966 only. For example, the Tuy Hoa air base requirement, funded under 1966 appropriations and included in the requirements was not scheduled for completion until May 1967.

We believe that a realistic projection of construction capability shortfall requires a comparison of in-place requirements with construction capability for the same period of time. Thus, it appears that the Air Force use of the \$692 million projection of construction capability shortfall to support its position that the Tuy Hoa requirement could not have been accomplished by RMK-BRJ without deferral of other high-priority work is of questionable value, because the Air Force attempted to compare the time frame in which total requirements were expected to be completed with a shorter time frame during which only a portion of the total requirements was expected to be completed.

Our belief is supported by the MACV Director of Construction, during the time frame of the turnkey project, who expressed the opinion in June 1967 that there was no question that the joint-venture system provided sufficient capability and that from June 1966 onward there was a continuing problem of excess capability. The Director of Construction added that, in evaluating the turnkey job in Vietnam, one of the factors which must be considered is that construction of the Tuy Hoa base by the turnkey did contribute to the over-mobilization of the joint-venture contractor.

The Air Force comments concerning lengths of time required to complete other air base runways in Vietnam compared with Tuy Hoa imply that the Air Force contractor was more efficient due to the shorter length of construction time at Tuy Hoa. Our audit was not directed toward an examination of the comparative efficiency of the two contractors; however, we believe that the start to completion time of a portion of a project is not indicative of the efficiency of a given contractor unless suitable recognition is

given to such factors as funds available, scope of the project, changes in construction priorities, degree of enemy interference, and number of delays caused by sponsor-induced design changes.

For example, in our report to the Congress of the United States on the United States construction activities in the Republic of Vietnam (May 15, 1967, B-159451), we reported on delays in the execution of the construction projects because the Air Force continuously changed stated requirements, criteria, and siting at Cam Ranh Air Base. At Phu Cat Air Base, construction was delayed due to real estate problems.

Added Overhead Costs

(pp. 12 to 17)

The Air Force in its comments agreed that approximately \$3.9 million in contractor offsite overhead and Air Force administrative costs had been incurred for the turn-key operation. It did not agree, however, that these costs would have been avoided by utilizing the capability of the Navy and its contractor to complete the air base at Tuy Hoa. The Air Force stated that it was a fallacy to assume that the Navy's contractor could have accomplished the construction without incurring some additional overhead and equipment costs. The Air Force stated that the Tuy Hoa project would have been properly charged for onsite and offsite overhead and administrative costs incurred by RMK-BRJ and the Navy.

The Air Force added that, if the project had been accomplished by the Navy contractor, the cost to the Air Force for Tuy Hoa construction would have been greater or the amount of work would have had to be reduced. In support of this contention, the Air Force states that (1) the turn-key contractor's overhead of \$2.9 million represented only 5.3 percent of the total direct contract costs whereas the Navy contractor's overhead ranged from about 14 to 26 percent of direct site costs and (2) the Navy assesses a management fee of 4 percent of total cost whereas the reported Air Force administrative costs of \$1 million represent less than 2 percent of total costs.

GAO evaluation

We have noted in our evaluation of the DOD comments on this matter (see p. 21) that we recognize all the turnkey contractor and Air Force overhead and administrative costs associated with the Tuy Hoa project would not have been avoided had the Navy contractor built the airfield. We further recognize that the overhead charges incurred by RMK-BRJ and the Navy would have been charged to the Tuy Hoa airfield project had the Navy been assigned the project.

We believe, however, to the extent that the turnkey contractor and the Air Force project management organization duplicated the Navy and its contractor's activities and functions as described in our report on page 12 that corresponding duplicate costs were incurred.

We believe that the comparison of the Air Force's administrative costs with the Navy management fee is invalid in that, as indicated in our report on page 15, the Navy was responsible for the preparation of engineering drawings and specifications which are included in the overhead rate whereas the Air Force administrative staff did not prepare engineering drawings and specifications. These activities were the responsibility of the contractor under the turnkey concept and are included in contract cost rather than in the overhead costs of the construction agent.

Duplicate equipment purchases
(pp. 7 to 11)

The Air Force did not comment concerning the equipment dollar savings which might have been realized had the construction of Tuy Hoa been performed by the Navy contractor because it had already purchased the equipment and subsequent purchase of similar equipment by the Air Force contractor was duplicative. Instead the Air Force directed its comments toward the transfer of the Navy equipment to its contractor.

The Air Force commented that it tried unsuccessfully at a very high level to secure any available RMK-BRJ equipment from the Navy. The Air Force added that it had no

choice but to instruct the turnkey contractor to proceed with its equipment mobilization effort and that any equipment identified to the Air Force after July 1966 would have come too late, since virtually all turnkey equipment had been procured by that time.

The Air Force further stated that the details concerning the equipment shipped to Vietnam by RMK-BRJ for this project as presented in our draft report are contrary to testimony contained in an August 1966 Congressional Hearing given by the Naval Facilities Engineering Command. The Air Force commented that this testimony indicated that equipment valued at \$6 million referred to as the Tuy Hoa equipment was being held on the West Coast for shipment.

GAO evaluation

We believe that our report presentation concerning the duplicate equipment purchases for the Tuy Hoa project as described on page 7, as well as our evaluation of the DOD comments on this matter as contained on page 22, clearly shows that equipment existed in the U.S. military construction program in Vietnam in 1966 which could have been made available to the Air Force contractor for the Tuy Hoa airfield project in the time frame required.

With respect to the Air Force comment that construction equipment referred to as the Tuy Hoa equipment and valued at about \$6 million was being held on the West Coast for shipment in August 1966, our review of RMK-BRJ shipping records showed that, for 73 purchase orders for equipment valued at about \$6.8 million and identified for site "Z" which was subsequently designated as Tuy Hoa, all but two had a shipping date prior to August 1966. The following schedule is a breakdown of the 73 purchase orders showing the number of orders shipped by month.

							<u>1966</u>	
<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>November</u>	<u>Total</u>	
8	25	27	6	5	1	1	73	

CONTRACTOR PROCUREMENT PROCEDURES
(pp. 25 to 44)

The Air Force has commented that our report implies that cheaper alternatives were open to the turnkey contractor which would have met the time parameters of the project. The Air Force added that our report did not adequately acknowledge the then-existing conditions in the heavy construction equipment market and that the facts were that equipment needed was not available from normal supply; therefore the turnkey contractor, faced with a requirement to be mobilized onsite across the beach in 4 months, had no alternative but to procure whatever and from whomever possible consistent with existing market conditions.

GAO evaluation

We believe our draft report acknowledged the market conditions in 1966 regarding the purchase of heavy construction equipment as evidenced by inclusion of statements by the subcontractor and the Air Force appraisal team as to the availability of equipment for the turnkey contract. We believe the principal issue with respect to the subcontractor's procurements is that, although the unusually high prices were being paid for the turnkey contract equipment, the Navy contractor had already obtained the needed equipment and delivered much of it to Vietnam.

Additional Air Force comments on the specific matters included in the procurement section of our draft report are summarized and presented in the following sections.

LACK OF WRITTEN POLICY EARLY IN THE CONTRACT
(pp. 26 to 27)

The Air Force commented that our draft report cited initial weaknesses in management control as resulting in "unnecessary" high costs but that the record showed that contracting officer letters of June 9, 13, and 20, 1966, established procedures and controls for procurement activities specifying in particular the content and detail for contractor documentation of purchase approvals. The Air Force stated that payments based on "after-the-fact"

purchase order documentation were not approved until the contracting officer was satisfied that prices paid were fair and reasonable.

In this connection the Air Force added that, in approving such transactions, the contracting officer received statements from the contractor such as (1) the vendor was not listed in the Joint Consolidated List of Debarred Contractors, (2) the items were required for the contract, (3) the contractor warranted that the prices paid were fair and reasonable, (4) the vendor guaranteed that the prices were no higher than those charged the most favored customer for similar items, and (5) the prices paid were in keeping with cost appraisals by the Air Force equipment team.

GAO evaluation

In our report we recognized that the Air Force provided the contractor with a guide describing the type of data required on the purchasing documents and the supporting data to be submitted with purchase orders. Our review has shown, however, that the subcontractor did not prepare any written procurement policies and procedures during the time that most of the procurements were made, and that the Air Force did not take action to ensure that such procedures were prepared on a timely basis and followed by the subcontractor.

We noted that it was not until about August 1, 1966, that the subcontractor prepared a written procurement procedure entitled "Export Order Procedure for McCormick Purchasing," which was a check-off list for preparing purchase orders. By this time, however, a substantial amount of the purchases had been initiated.

The Air Force comments as to the procedures followed in the after-the-fact approval of the subcontractor's purchase orders by the contracting officer do not, in our opinion, change the fact that the subcontractor paid unusually high prices for the construction equipment.

PREMIUM PRICES BECAUSE OF
LACK OF COMPETITION
(pp. 29 to 30)

The Air Force commented that the \$159,000 purchase, which was made at 8 percent above dealer list price, was for rock-crushing equipment and that the regrettably high price of this item was paid only after the subcontractor had contacted four manufacturers and 14 dealers and other contractors located in 10 states. The Air Force added that one of the manufacturers initially stated that two units could be delivered but that this commitment was subsequently revoked because the Navy was buying the company's entire factory production.

The Air Force stated that solicitation of competitive bids would be an empty formality where prior contacts have reasonably assured that recipients could not respond. The Air Force stated that the normal method of equipment procurement for turnkey consisted of telephone contacts, which is essentially the same procedure which our draft report cites as a satisfactory RMK-BRJ short-cut alternative to the normal more lengthy competitive procedures.

The Air Force concluded by stating that our report implied that large discounts were common to RMK-BRJ but that a review of the record indicated that the discounts as shown in our report were not always available to RMK-BRJ. In support of this position, the Air Force stated that a CINCPAC Construction Cost Study showed that RMK-BRJ paid \$90,011 for a tractor-scraper TS-24 and \$49,935 for a tractor-crawler-bulldozer whereas our report showed that RMK-BRJ paid only \$72,229 and \$44,308 respectively for these items.

GAO evaluation

The Air Force comments relative to the subcontractor's problems in obtaining rock-crushing equipment due to the manufacturer's production being committed to the Navy contractor show that the turnkey contractor and the Navy contractor were in fact forced to compete for construction equipment and materials. In our opinion, competition for the same item from a single seller between buyers for the

government may result in higher prices than necessary being paid due to differences in discount terms offered on the basis of the number of units being purchased.

Regarding the comment that the normal method of equipment procurement for the turnkey contract consisted of telephone contacts, our review of the subcontractor's procurement records generally did not disclose documentation showing that telephone bids were obtained from more than one supplier or manufacturer.

In connection with the comment concerning the comparison of the cost of RMK-BRJ construction equipment with that for the turnkey contract, we noted that the prices cited by the Air Force for RMK-BRJ equipment include transportation costs. The prices shown in our report however exclude the transportation cost to provide a comparison between the prices available to the RMK-BRJ and turnkey contractor for equipment.

PREMIUM PRICES RESULTING FROM BUYING
FROM DEALERS RATHER THAN MANUFACTURERS
(pp. 30 to 31)

The Air Force commented that the 10 purchase orders discussed on page 30 of our report were for Allis-Chalmers equipment purchased through the Galis Company of Jacksonville, Florida, and that the subcontractor's discounts of 7 to 12 percent were more than twice what other Galis customers were receiving under prevailing market conditions. The Air Force added that it was the policy of most equipment manufacturers, including Allis-Chalmers, not to sell equipment directly to contractors but to protect their distribution in dealing with Government contractors.

The same reason was given by the Air Force in connection with the subcontractor's purchase of soil cement equipment from a dealer. The Air Force cited a statement made by the local dealer for this equipment that all the manufacturers in their contracts with it reserved the right to sell to Government agencies directly but did so only when contacted by Government agencies on a direct basis and when the agency actually purchased the equipment for its own use.

The Air Force concluded that our report ignored the market condition and nonavailability of equipment from manufacturers and further stated that the subcontractor had no recourse but to buy the equipment from dealers at the best possible market prices.

GAO evaluation

Our review of contract records showed that the subcontractor received larger discounts for the purchase of Allis-Chalmers equipment than the dealer gave to commercial concerns because the equipment was purchased for shipment overseas and chances of the equipment being returned by the Government to the dealer for repair within the 6-month warranty period were considered remote.

In regard to the Air Force statement that it is the policy of most equipment manufacturers not to sell directly to contractors, we contacted both Allis-Chalmers and Bros, Inc., manufacturers of heavy construction equipment and soil cement equipment, respectively, to inquire as to their policy of offering discounts on purchases made directly by the Government or its contractors under a cost-type contract where purchases are made on behalf of the Government with title passing directly to the Government. We were advised by both manufacturers that discounts on equipment purchases would be about 20 percent to the Government and its authorized cost-type contractors.

It seems that, at the time of purchase of the Allis-Chalmers and Bros Inc. equipment the subcontractor relied on the local dealers' quotations and did not determine availability and prices from the manufacturer. As an example, the certification given to the Air Force by the subcontractor for both the Allis-Chalmers and Bros Inc. equipment cited above stated that the prices quoted by the dealers were below list prices, therefore, no request for additional quotations was made.

The Air Force contention that nonavailability of construction equipment justified the payment of high prices to dealers has ignored the fact that in our report we pointed out instances involving several million dollars worth of purchases where the subcontractor's purchases from local

dealers were actually shipped from the manufacturer rather than the dealers.

PREMIUM PRICES PAID BECAUSE OF
PROCUREMENT THROUGH THIRD PARTIES

(pp. 32 to 33)

The Air Force commented that third parties were used to provide procurement expediting capability when it was not possible to procure equipment from manufacturers or equipment dealers. The Air Force added that, although this procedure would not be accepted under normal conditions, it had proved eminently successful because of the short procurement lead time available to the subcontractor.

Regarding the purchase of rock-crushing equipment through third parties, the Air Force commented that, in addition to being more efficient, this approach was probably more economical than having the subcontractor incur travel and payroll costs searching the availability and condition of equipment throughout the United States.

In regard to the additional freight charges discussed in our report, the Air Force commented that, under the prevailing market conditions, there was no practical way to avoid these charges. Regarding the purchase of the front-end loaders, the Air Force stated that the subcontractor tried to avoid the additional freight costs but the item was not available from the manufacturer or a local distributor. The Air Force added that the item was purchased from a dealer who provided immediate delivery with a 10-percent discount off list price.

GAO evaluation

We believe that the Air Force cannot justify the use of third parties to make procurements on the grounds of short procurement lead times and prevailing market conditions because in justifying the turnkey concept the contractor's proposal stated without qualification that the contractor owned or controlled a significant amount of construction equipment including four rockcrushers.

We do not agree that travel and payroll costs were saved by use of a third party because our review of contract records showed that a third party, an equipment dealer, obtained the equipment by the use of both telephone and personal contact at locations in several states and that travel and payroll costs were incurred by the dealer in connection with this search. Normally these costs are included in the price quoted by the dealer.

In addition, we found no indication in the records reviewed during our audit that the subcontractor attempted to acquire the front-end loaders from the manufacturer or a local distributor as stated in the Air Force comments. The certificate signed by the subcontractor stated that the equipment was purchased without request for additional quotations due to the urgent need and immediate availability. Thus, under these circumstances, it seems that the Air Force was forced to accept the additional freight charge because the subcontractor did not attempt to obtain the equipment from other possible sources of supply.

ACQUISITION OF USED EQUIPMENT AT
HIGH PRICES (pp. 35 to 36)

The Air Force commented that our comparison of the prices paid by the subcontractor for nine used tractor-scrappers with the prices paid by the Navy contractor for the same equipment new was misleading since new equipment could not be obtained for the turnkey project in the required time frame, and market conditions had inflated the price of used equipment in good condition to the point where the Green Guide was not valid in this case. The Air Force added that its equipment specialists in their certification on this procurement stated that the subcontractor had called the manufacturer on the item but was told that Navy priorities for Vietnam could not be changed and would be filled before any equipment could be released to the turnkey contract.

The Air Force further stated that the prices paid were premium of what was reasonable but that, in considering the essentiality of the equipment and the time frame of the project, the requirement for the equipment could not be met in any other way.

Regarding the subcontractor's purchase of four passenger buses, the Air Force stated that our report implied that unnecessarily high costs were paid but that our report did not consider that the buses had received excellent maintenance. The Air Force added that minor repairs had been made by the seller and that all units had been modified with new steps installed at the rear to expedite loading and unloading. These costs were included in the purchase price and the Air Force equipment specialists appraised the price paid as well below fair market value of the items.

GAO evaluation

Although the Air Force comments indicate that, due to the market condition, the subcontractor had no choice but to purchase the nine used tractor-scrappers at premium prices, we noted that this particular type of equipment also was shown as being owned or controlled by the contractor in the March 1966 turnkey concept proposal. We believe, however, that the main point, as shown in our report and confirmed

by the Air Force comments, is that premium prices were paid by the turnkey contractor for used tractor-scrappers while the Navy contractor was procuring new tractor-scrappers at prices which were in some instances less than turnkey contractor's prices for the used equipment.

In connection with the purchase of the four buses, although the Air Force states that the buses received excellent maintenance, we noted that one of the buses was delivered to Jacksonville from Miami, Florida, a distance of about 360 miles, and received a new engine.

The Air Force statement that the buses were modified by the seller to provide rear exit steps and that this cost was included in the total cost implies that any added cost over and above the normal price as shown in the trade association publication should be attributed to the modification. In this case the difference in cost amounted to about \$7,000 for four units, (\$11,650-\$4,600). This cost appears unusually high considering that the total price of similar units without the modification amounted to only about \$4,600.

PROCUREMENT OF SUBCONTRACTOR OWNED
EQUIPMENT AT HIGH PRICES

(p. 36)

The Air Force commented that our report placed undue emphasis on the Green Guide as being the final authority for used equipment prices and cited several limitations (that it was a national average price and that adjustments must be made for local market situations and mechanical conditions of the individual units) with respect to using the Green Guide to establish equipment prices. The Air Force added that most of the equipment procured from the subcontractor had been overhauled or rebuilt to "like new condition" or modified, and under these considerations the prices would rise well above the Green Guide prices even under normal market conditions. Thus, the Green Guide could not be used as the sole basis for reimbursement.

The Air Force stated that its equipment specialists estimated that, by purchasing the subcontractor's used equipment, the Air Force (1) saved the Government about

\$235,000 when comparing the actual invoice price of the used equipment with the replacement cost for new equipment and (2) saved the Government about \$138,000 when comparing the actual invoice price with the dollar value of remaining usable life of the used equipment.

The Air Force concluded by stating that the subcontractor was not reimbursed for its equipment until March 1967 and only after the contracting officer was satisfied that prices paid were fair and reasonable. The facts considered by the contracting officer included the urgency of the project, the effect of delays in obtaining the equipment on the overall program, and the evaluations made of the equipment conditions and equipment prices.

GAO evaluation

Although the Green Guide prices for construction equipment are subject to modification based on the condition of the equipment and local market conditions, they are an indication of the average price. Any variance in this case should not be large because the equipment was said to be in good to excellent condition and the equipment was already owned by the subcontractor, which should eliminate any fluctuation of prices due to market conditions.

Our review showed that the Air Force appraisal team, in evaluating the purchase of used equipment for the contract, used the Green Guide whenever possible as a basis from which to work in establishing prices. In addition, we noted that the Air Force contracting officer requested that the contractor obtain Green Guide reports available to subscribers for all equipment bought for the turnkey project. The cover of the Green Guide states that it is published as a service for equipment dealers, equipment manufacturers, contractors, insurance companies, financial institutions, bonding companies, auctioneers, government agencies, insurance adjustors, accountants, appraisers, attorneys, and all others involved with construction equipment. We believe that a publication recognized as essential by the contracting officer, used by an Air Force equipment evaluation team, and apparently well recognized by the business world should be used with a considerable degree of confidence and that the prices cited in the Green Guide are realistic.

The Air Force comment that the Government saved about \$235,000 by procuring the subcontractor-owned equipment is, in our opinion, invalid. The equipment was procured apparently without consideration as to its availability in the competitive market. Under these conditions we do not believe that the Air Force can assume substantial savings accrued since no valid comparison of competitive prices was obtained.

USE OF GOVERNMENT SUPPLY CHANNELS

(pp. 33 to 34)

The Air Force commented that each Federal Supply Schedule contract has dollar limitations concerning the size of each purchase. For example, one major manufacturer limits single-item purchases to a cost not to exceed \$10,000 with a combined total purchase limit of \$50,000. The use of GSA is only possible where a contract exists and only to the extent that purchases contemplated are within the limitation of the contract.

The Air Force has stated that it still has difficulty obtaining spare parts for Southeast Asia requirements which are in the manufacturer's warehouse and covered by GSA contracts but have not been shipped because of the detailed procedures and associated paper work. To obtain expedited handling, procurement outside GSA channels becomes essential.

The Air Force agreed that the contractor should have been encouraged to use GSA contracts earlier in its performance of the contract and that some savings would have resulted in those cases where time permitted their use although urgency of need precluded the use of the Federal Supply Schedule in other cases.

GAO evaluation

The maximum limitations on use of GSA contracts for spare parts do not contemplate that Government cost-type contractors are required to pay list prices on purchases from the Federal Supply Schedule contractors when the purchases exceed the maximum order limitations. Instead, GSA intends that discounts on purchases under these contracts which exceed the maximum order limitations be subject to

separate negotiations which contemplate even greater discounts on the larger purchases.

The Air Force comment concerning delays in obtaining parts through GSA contracts and that the urgency of some orders precluded the use of the Federal Supply Schedule is similar to comments made by DOD on this matter and therefore our evaluation thereof is included on page 42 of this report.

EQUIPMENT PROCUREMENT--CONCLUDING COMMENT

The Air Force stated that the residual value of equipment and spare parts purchased through the contract was estimated to be \$8,700,000. This equipment was transferred to Air Force Civil Engineering Squadrons in Vietnam on a reimbursable basis to fill approved equipment authorizations and is still in use today. The Air Force added that this equipment transfer avoided additional costs to the Government and a possible surplus.

GAO evaluation

With respect to the equipment and spare parts transferred to the Air Force construction units, we noted that, of the \$8.7 million residual value assigned by the Air Force, about \$900,000 related to spare parts. Our review of the method used to determine the residual value of the equipment showed that the Air Force derived the residual value by establishing a depreciation rate for the turnkey equipment far lower than would normally be expected in the construction industry.

For example, in determining the depreciation rate, the Air Force stated that the equipment was used 6 hours a day or a total of 1,440 hours during the life of the contract. Our review showed that, on the turnkey project, generally two shifts of 10 hours each were worked each day. On the basis of this level of effort, we believe that the Air Force's 6-hour usage factor for mechanical equipment is substantially understated.

Our review of Air Force records showed that the depreciation taken by the Air Force equaled about 11.3 percent

of the original cost of the equipment. Our review of depreciation charges allowed by the U.S. Internal Revenue Service showed that a composite rate should be about 18.4 percent whereas average rates reported by the Associated General Contractors of America, based on contractor experience in the United States, amounted to about 23.3 percent. Moreover we noted that the Navy contractor established depreciation rates far in excess of either of the above rates on the basis of its experience in Vietnam. As an example a composite rate for equipment used during the construction of airfield pavements, roads and streets, buildings, and utilities was shown to be 24.5 percent prior to June 1, 1966, and 39.6 percent after June 1, 1966.

Utilizing the latter rates would have increased depreciation for the turnkey equipment from about \$994,500 as shown on Air Force records to about \$3,377,500, a difference of \$2,383,000.

We believe that the Air Force, by understating the amount of depreciation, understated the overall cost of the turnkey project by a like amount which would ultimately have to be reflected in the cost of other Air Force projects where the Air Force Civil Engineering Squadrons had to amortize the inflated cost of the equipment purchased from the turnkey project using other Air Force funds.

CONTRACTOR'S FEE
(pp. 45 to 56)

In response to our draft report position that the turnkey contract fees were significantly in excess of rates used in other cost-type construction contracts in Southeast Asia for similar work, the Air Force commented that the amount of fee to be negotiated with a contractor was a difficult question of judgment. The Air Force stated that the turnkey contractor was required to do much more than the usual construction contractor in that it had to design the base; mobilize personnel and secure equipment in the United States without interfering with other Vietnam construction activities; establish a transportation and logistics system; build the base in an unprecedented short time; and demobilize and return his work force to the United States.

The Air Force stated that, in view of these stringent requirements, it believed that a fee of \$2.1 million with the incentive fee arrangement for superior performance was justified.

The contractor commented that our comparison of the turnkey fee rate with the rates of other cost-plus contracts in Southeast Asia was incorrect because the fees quoted for the other contractors appeared to be those for prime contractors whereas the turnkey contract fee was for both the prime and the principal subcontractor. The contractor added that, in considering the prime contractor's fee only, the fee percentage was approximately 3 percent, which is comparable to the other fees listed in our report and is certainly not significantly in excess particularly when the tremendous difference in scope of work of the two situations is considered.

GAO evaluation

Our review of the United States Government's construction activities in Southeast Asia showed that other cost-plus award fee contractors had to perform many of the same tasks that the Air Force states that the turnkey contractor was required to do. For example, the other U.S. contractors had to mobilize personnel and secure equipment, establish a logistics system, and demobilize and return their work force to the United States.

In regard to the Air Force statement that the turnkey contractor was required to build the base in an unprecedented short period of time, we noted in DOD's general comments to our report to the Congress of the United States on the United States construction activities in the Republic of Vietnam (B-159451, May 15, 1967), as to the nature of the construction program in Vietnam and the conditions under which it was accomplished, extraordinary short deadlines were imposed for construction of many facilities urgently required. Thus it seems that the short time period for construction of facilities in Vietnam was a requirement common to the overall United States construction program in Vietnam and not limited to the turnkey contractor.

We recognize that the Air Force contractor was required to provide the design for the air base at Tuy Hoa and a shipping and off-loading operation which was not required to be provided by other Government construction contractors in Southeast Asia. We question, however, whether such activities would account for the turnkey contractor's fee being greater by about 3.24 percent than the fee of one of the other Southeast Asia U.S. construction contractors whose contract value and work scope were generally comparable to the turnkey contractor's. (See p. 46.)

In regard to the contractor's comments concerning the fee rates, we do not believe that the 3 percent paid to the prime contractor under the turnkey contract is comparable to the other fee rates shown in our report because (1) the Thailand contractors did not utilize principal cost-plus subcontractors in their projects and thus the fee rates shown are the maximum rates applicable to the estimated contract costs whereas, in the turnkey contract, the maximum fee rate is 6.26 percent and (2) although the rate shown for the U.S. contractor in Vietnam is the prime contractor rate, we found that when a principal cost-plus subcontractor was used, the prime contractor's fixed fee was reduced to 1 percent of the estimated construction costs of the work to be performed by the subcontractor and no award fee was established for subcontracted work.

The subcontractor's fixed fee amounted to 3 percent of estimated construction costs, thus the maximum fee rate that the Government had to pay for the work performed when a cost-plus subcontractor was used was 4 percent.

INTERIM INCENTIVE FEE

(pp. 48 to 50)

The Air Force commented that our draft report statement concerning the extension of the performance incentive fee dates was not consistent with the actual chronological execution of the contract. In support of this position, the Air Force stated that in May 1966 time was of the essence and that the basic objective of the letter contract was to provide immediate contractual coverage. The Air Force added that, although the general scope of facilities required for a complete airfield was well known and defined in the contract, the timing for completion of specific facilities was subject to change due to the dynamic tactical situation in Vietnam. The basic intent or objective of the letter contract according to the Air Force was to obtain a jet-capable airfield that would support combat operations at the earliest possible time.

The Air Force stated that certain less needed facilities identified as interim facilities were not completed. However, the fact that the airfield was used by C-124 aircraft as early as November 7, 1966, and that the first squadron of F-100 aircraft began combat missions on November 16, 1966, which exceeded the anticipated date for fulfillment of the basic objective for performance incentive purposes, justified payment of a major portion of the interim incentive fee.

The Air Force concluded by stating that, in approving the \$400,000 incentive fee, the contracting officer quite properly considered the strength of the case presented by the contractor relative to the excusable delay claims, as well as recognized the contractor's achievement in providing an early operational airfield capability.

The contractor stated that the dispute between the Air Force and the contractor as to a time extension for completion of the interim facilities was settled by reducing the contractor's fee for this part of the work.

GAO evaluation

Our review of the letter contract records did not disclose any changes in the letter contract terms which revised the completion dates for the specified interim airfield facilities. The completion dates for both the interim and sustained facilities were revised in the definitized contract, but this contract was not approved until April 1967. The actual chronological execution of the contract is shown on pages 6 and 47 through 52 of our report.

Although the contractor did complete certain major interim facilities, we noted that many other facilities--which were an integral part of the interim operational air base such as petroleum facilities, an aircraft maintenance shop, ammunition storage, and navigational aids--were provided on a temporary basis by other than the contractor. A U.S. Air Force civil engineering squadron built a JP 4 fuel bladder farm, interim ammunition storage facilities, and a temporary aircraft maintenance shop. In addition, we noted that mobile navigational aid facilities--including the control tower, ground control approach, tactical air navigational and radio beacon--were used. These facilities, built by others, and the mobile facilities enabled the use of the Tuy Hoa field.

As indicated in our report on page 49, the problem, control tower, and navigational aids facilities were a part of the interim facilities required by the letter contract; however, they were either not finished on time or were transferred to the sustained airfield requirements.

We believe that the payment of a \$400,000 interim fee under terms of the definitized contract was not in the best interest of the Government and should not have been allowed. As shown in the table on page 47, the interim facilities were not completed in the time allowed and as discussed above the temporary and mobile government facilities had to be used to establish an operational air base. The use of these facilities, although not contemplated when the level of the interim incentive fee was originally

established in the letter contract, was required to overcome the failure of the contractor to provide interim facilities in accordance with terms of the letter contract.

SUSTAINED INCENTIVE FEE

(pp. 51 to 54)

The Air Force stated that, as early as October 1966, it determined that the "one completion date" concept specified in the letter contract (i.e. the concept of having all facilities listed in the interim and sustained "packages" completed by the "package" completion date--December 27, 1966, and May 26, 1967, respectively) should be modified primarily because it did not allow for priority completion of the various facilities and did not place any obligation on the contractor to have any of the facilities in the package completed until all were completed.

The Air Force commented that our draft report misinterpreted the objectives of renegotiating the incentive packages and represented the revised incentives as a relaxation of management controls that assisted the contractor in earning incentive fees. On the contrary, according to the Air Force the negotiation of the five groupings and the demobilization incentive provisions in the definitized contract eliminated all the objectionable features of the "one completion date" concept contained in the original letter contract. The rearrangement of incentive schedules and introduction of demobilization incentives forced the contractor into tighter management controls, reduced overall costs, and ensured earlier facility availability.

With respect to the payment of the incentive fee for Groups I and II of the sustained facilities, the contractor stated that no incentive fee was payable unless each and every item in a group was completed by the incentive award dates. The contractor added that, on the first of February 1967 when the groups were established, some of the items in Groups I and II were very far from completion and thus there was a decided risk that the contractor would forfeit the entire incentive for a particular group. The contractor concluded by stating that the mere fact that a group included a building that was well along in construction was

immaterial, since every item had to be 100 percent complete before any incentive could be earned.

GAO evaluation

We noted that, during negotiations to definitize the contract in December 1966 and January 1967, attempts were still being made to apply the one-completion-date concept with respect to determining the interim fee amount. As previously stated, however, the amount of the interim incentive fee was arrived at by negotiation when the Air Force and the contractor could not resolve their varying views as to time extension requested by the contractor for completion of the facilities.

We believe it is questionable whether the revised basis for paying the incentive fee on the first two groupings of sustained facilities ensured earlier facility availability because, as shown in our report, most of the facilities in the first group and several facilities in the second group were substantially complete at the time the incentive fee offer was made.

With respect to the claim that overall costs were reduced, the original estimated costs amounted to \$52 million and our review showed a total contractor construction cost for the base to be \$53.6 million. Thus it is not readily apparent how the rearrangement of incentive schedules and introduction of demobilization incentives reduced overall costs.

The contractor's comments imply that only a small part of the facilities in sustained incentive Groups I and II were completed when the groups were established in early February 1967. As shown in our report, many facilities in those two groups were well on their way to completion at about the time these incentive groups and completion dates were established. Thus the risk that the contractor would not meet the incentive completion dates of March 7, 1967, and April 7, 1967, for Groups I and II, respectively, was substantially less than had all the facilities in these two groups been started in early February 1967.

USE OF OVERTIME
(pp. 57 to 62)

The Air Force commented that there was never any intention to pay overtime and that it was paid as a result of a legal determination made after completion of the construction job in Vietnam. The Air Force stated that the Government did not authorize or encourage payment of employees for overtime work for any purpose.

The Air Force added that the employees raised the question of overtime at the end of the job on the basis of ambiguous language in their employment agreement. The Air Force concluded by stating that the legal decision in November 1967, which was made with the full knowledge of GAO, was based solely on the legal merits of the employees' claims and had no relationship to the contractor's ability to earn the incentive fee for meeting completion dates many months prior to the decision.

The contractor commented that it was not necessary to work 1 single hour overtime after February 1, 1967, in order for it to earn its incentive and that the man-hours that were not spent (but were contractually allowed within the incentive time tables) exceeded the overtime hours worked by over 100,000 hours. The contractor added that the overtime after February 1, 1967, was worked in order to meet a new demobilization schedule which was imposed by the availability of Air Force aircraft to return employees to the United States.

The contractor further stated that the overtime work prior to February 1, 1967, had been necessary in order to comply with a requirement that completion of the interim runway be advanced by 5 weeks and completion of other interim and sustained facilities be accelerated and that a requirement for emergency extra work occurred at the peak of construction activity and was accomplished on an around-the-clock basis.

The contractor concluded by stating that substantial savings of overhead costs were realized by working more than 280 hours a calendar month since the length of the entire project was reduced commensurately. The contractor added

that, had the overtime hours not been worked, the contractor would still have earned the incentives; but the project would have continued for a longer period or alternative mobilization of a larger work force would have been required.

GAO evaluation

Although the Air Force stated that it had not authorized overtime work and that the actual payment of the overtime claims had occurred after the completion of airfield project, the fact remains that the contractor's U.S.-and third-country-national employees worked a total of about 97,000 overtime hours and the Vietnamese employees worked a total of about 459,000 hours. Considering that the overtime work occurred from August 1966 through June 1967, we believe that the performance of this work contributed directly to the contractor's ability to earn the interim, sustained, and demobilization incentive fees.

The contractor's statement that it was not necessary to work 1 single hour of overtime after February 1, 1967, conflicts with his later comment that had the overtime hours not been worked the project would have continued for a longer period of time. If the project had continued for a longer period of time, the contractor's chances of earning the \$140,000 incentive fee for release of his employees at an early date would have been lost. Thus it seems that the overtime hours worked by the contractor's employees assisted in earning part of the incentive fees.

The contractor's statement that overtime hours were worked prior to February 1, 1967, to comply with requirements for the early completion of facilities likewise indicates that the overtime assisted the contractor in earning the incentive fees.

AIR FORCE CONSTRUCTION
EXPERIENCE

The Air Force has commented that the general tone of our report alludes to Air Force inexperience. The Air Force expressed the view that it did a fine job on the turnkey project and that this position was supported by the MACV Director of Construction who stated in his End of Tour Report that the turnkey job at Tuy Hoa was a good one from the construction standpoint.

GAO evaluation

The Air Force in its comments limited the remarks concerning its construction experience under cost-reimbursable-type contracts to the turnkey project. In this connection, DOD stated that the assignment of the Air Force as construction agent for the turnkey project was an exception to policy. Our review of the appropriate DOD instruction which defines construction responsibilities within the Department showed that historically the Army Corps of Engineers and the Navy have been assigned construction agents for military construction programs both within the United States and overseas for both themselves and the Air Force. As an exception to the policy, the Air Force with the approval of DOD, may sponsor as well as act as its own construction agent.

Our review showed that the Navy, as the designated construction agency for DOD in Southeast Asia, acted as the construction agent for a number of projects sponsored by the Air Force. Insofar as we could determine, the Air Force in its role of sponsor has participated in the design of airfield facilities both in Southeast Asia and elsewhere but has not, with the exception of the turnkey project at Tuy Hoa, participated both as a sponsor and as construction agent in the construction of an entire air base under either a lump sum or a cost-reimbursable-type contract.

Although our report comments on the Air Force experience on an overseas cost-type construction project such as the Tuy Hoa project, we believe that the main point of our report concerns the costly method used to accomplish the project. We believe that significant added costs in

the form of duplicate overhead and administrative costs and equipment purchases have been incurred by the Government because of the mobilization of a separate contractor and a second construction agency to perform and monitor a limited amount of construction work in Vietnam at a time when a multimillion-dollar U.S. military construction contractor capability and construction agent already existed incountry.

We believe that this position is supported by the MACV Director of Construction who also commented in the above referred to End of Tour Report concerning the use of more than one contractor. The Director of Construction stated that, in his opinion, fragmenting the contract program among several contractors would complicate rather than simplify controls for then there would be multiples in everything--cost factors, sets of assets, bookkeeping systems, management groups, logistics and services, and costly duplication as well as competition for assets and support systems.

SUMMARY OF KEY EVENTS IN SELECTION
OF THE TURNKEY CONCEPT FOR THE TUY HOA

AIRFIELD PROJECT

The purpose of this summary is to describe the pertinent actions taken by officials within DOD and its component commands in the decision to use the turnkey concept and a separate contractor for the Tuy Hoa airfield project. Some of the information was included in our original draft report whereas other information was included in the DOD comments to our draft. We have used the latter information because it contains an unclassified historical record of the key events; and, up to this time, it has been considered classified information.

In December 1965 the Navy construction agent for DOD in Vietnam, directed its joint-venture contractor, RMK-BRJ (composed of Raymond International of Delaware, Inc.; Morrison Knudsen of Asia, Inc.; Brown and Root, Inc.; and J. A. Jones Construction Company), to mobilize and construct a number of ports, air bases, logistics depots, and cantonments in Vietnam. Pursuant to this direction, RMK-BRJ made procurements beginning early in 1966 of equipment and materials needed to accomplish the construction program. One of the projects that RMK-BRJ mobilized for was a jet-capable air base which was eventually sited at Tuy Hoa, Vietnam.

In February 1966, on the basis of its belief that the Navy contractor would not be capable of meeting beneficial occupancy dates for certain Air Force projects in Vietnam, the Air Force requested authority from the Secretary of Defense to contract with a U.S. firm for the construction of an air base in Vietnam. On February 16 and 28, 1966, the Air Force held meetings with potential contractors which were furnished the scope of work to be performed in connection with the construction of an air base in Vietnam identified only as Site 11.

DOD stated that, on February 27, 1966, MACV opposed the introduction of an additional cost reimbursable construction contractor in Vietnam because, even without the additional

airfield site, it was expected that the tactical jet airfield requirements would be met on the basis of expeditionary airfield construction and utilization of new facilities at existing airfields. Completion of airfield support facilities and permanent airfield pavements was expected to stretch out beyond nominal required dates; although this was not considered critical, despite some sacrifices in effectiveness, efficiency, and safety margins. Our review showed that MACV also opposed the turnkey arrangement because it would introduce a new competitive activity into Vietnam which would require port capacity, cargo handling, transit storage, transportation, and allied logistic support.

A memorandum from the Secretary of the Air Force to the Secretary of Defense dated March 5, 1966, contained a summary describing the resources, capabilities, and approach proposed by a potential prime contractor for construction of an air base in Vietnam. As to the resources available, it was stated that:

"Despite many pronounced opinions to the contrary, the availability of construction equipment to accomplish a job of this size and nature is available without waiting at the tail end of a long production line. The [contractor] organization in the time available has been able to locate and obtain, if needed, a significant spread of construction equipment in good operating condition. The following list of equipment is owned or controlled and available for shipment within 30 days: ***."

In early March 1966, we noted that the Secretary of the Navy pointed out to the Secretary of Defense that any increase in construction capability in Vietnam should be achieved by taking advantage of the logistics management, equipment, and material advantages that existed through RMK-BRJ.

DOD stated that, on March 12, 1966, MACV reiterated the reasons for nonconcurrence of the Air Force turnkey proposal, and on March 13, 1966, CINCPAC supported MACV's

position. By April 21, 1966, conditions were reappraised to the extent that MACV concluded that an additional airfield was desirable and, in view of the nonavailability of the preferred site at Hue, recommended to CINCPAC that a decision be made to proceed with developing an airfield at Tuy Hoa without delay.

According to DOD, on April 27, 1966, the Joint Chiefs of Staff, in a message to CINCPAC, commented that only if Hue siting is clearly unacceptable should the go-ahead for Tuy Hoa be given. DOD added that the Joint Chiefs of Staff agreed to assist in obtaining a release on Hue from the Department of State; but, in the interest of avoiding delay, the Joint Chiefs of Staff suggested proceeding simultaneously at both Hue and Tuy Hoa with the preliminary steps of land acquisition, site layout, design, and possibly construction. DOD stated that, in responding to this suggestion on May 6, 1966, the MACV suggested Chu Lai as an acceptable alternative to Hue and recommended proceeding with Tuy Hoa using the turnkey concept as well as a parallel runway at Chu Lai using the Navy's contractor.

On May 7, 1966, the CINCPAC supported the MACV proposal to execute the Tuy Hoa project under the proposed Air Force turnkey concept subject to certain conditions. The contractor was to be responsible for construction of the complete Tuy Hoe complex including the air base, port, breakwaters, and railroad and road relocation. The turnkey contractor was required to mobilize its own equipment, manpower, materials, and dredges with the use of existing in-country resources being limited to those excess to all known requirements. The turnkey contractor was also responsible for providing its own sea lift, unloading, beaching, and barging as required.

On May 26, 1966, the Joint Chiefs of Staff recommended to the Secretary of Defense that the turnkey proposal be approved as outlined in the Air Force memorandum of March 5, 1966, to the Secretary of Defense. A turnkey contract is one whereby the contractor is responsible for the design and construction of a facility as well as providing the shipping and logistic support requirements. On May 27, 1966, the Deputy Secretary of Defense approved the turnkey

concept and authorized the Air Force to contract for the construction of an air base at Tuy Hoa. This approval was granted subject to the conditions established by the CINCPAC in early May 1966.

PRINCIPAL OFFICIALS RESPONSIBLE FOR
ADMINISTRATION OF THE CONSTRUCTION PROGRAM
DISCUSSED IN THIS REPORT

	<u>Tenure of office</u>	
	<u>From</u>	<u>To</u>
<u>DEPARTMENT OF DEFENSE</u>		
SECRETARY OF DEFENSE:		
Melvin R. Laird	Jan. 1969	Present
Clark Clifford	Mar. 1968	Jan. 1969
Robert S. McNamara	Jan. 1961	Feb. 1968
DEPUTY SECRETARY OF DEFENSE:		
David Packard	Jan. 1969	Present
Paul H. Nitze	July 1967	Jan. 1969
Cyrus R. Vance	Jan. 1964	July 1967
ASSISTANT SECRETARY OF DEFENSE (INSTALLATIONS AND LOGISTICS):		
Barry J. Shillito	Feb. 1969	Present
Thomas D. Morris	Sept. 1967	Feb. 1969
Paul R. Ignatius	Dec. 1964	Aug. 1967
DIRECTOR, DEFENSE CONTRACT AUDIT AGENCY:		
William B. Petty	July 1965	Present
<u>DEPARTMENT OF THE NAVY</u>		
SECRETARY OF THE NAVY:		
John H. Chafee	Jan. 1969	Present
Paul R. Ignatius	Aug. 1967	Jan. 1969
John R. McNaughton	July 1967	July 1967
Paul H. Nitze	Nov. 1963	June 1967
COMMANDER, NAVAL FACILITIES ENGI- NEERING COMMAND:		
Rear Adm. Walter M. Enger	Aug. 1969	Present
Rear Adm. Alexander C. Husband	Nov. 1965	Aug. 1969

PRINCIPAL OFFICIALS RESPONSIBLE FOR
ADMINISTRATION OF THE CONSTRUCTION PROGRAM

DISCUSSED IN THIS REPORT (continued)

Tenure of office

From

To

DEPARTMENT OF THE AIR FORCE

SECRETARY OF THE AIR FORCE:

Dr. Robert C. Seamans, Jr.	Feb. 1969	Present
Dr. Harold Brown	Oct. 1965	Feb. 1969

ASSISTANT SECRETARY OF THE AIR
FORCE (INSTALLATIONS AND LOGIS-
TICS):

Philip N. Whittaker	May 1969	Present
Robert H. Charles	Nov. 1963	May 1969

COMMANDER IN CHIEF, PACIFIC

COMMANDER IN CHIEF, PACIFIC:

Adm. John S. McCain, Jr.	July 1968	Present
Adm. U.S.G. Sharp	July 1964	June 1968

VIETNAM COMMANDS

COMMANDER, MILITARY ASSISTANCE

COMMAND, VIETNAM:

Gen. Creighton W. Abrams	July 1968	Present
Gen. William C. Westmoreland	Aug. 1964	June 1968

DIRECTOR OF CONSTRUCTION, MILITARY
ASSISTANCE COMMAND, VIETNAM

(note a):

Maj. Gen. Elmer P. Yates	July 1969	Present
Maj. Gen. William T. Bradley	Sept. 1968	July 1969
Maj. Gen. Andrew P. Rollins	Nov. 1967	Sept. 1968
Brig. Gen. Mahlon E. Gates	June 1967	Nov. 1967

PRINCIPAL OFFICIALS RESPONSIBLE FOR
ADMINISTRATION OF THE CONSTRUCTION PROGRAM
DISCUSSED IN THIS REPORT (continued)

Tenure of office
From To

VIETNAM COMMANDS (continued)

DIRECTOR OF CONSTRUCTION, MILITARY
ASSISTANCE COMMAND, VIETNAM
(note a) (continued):

Brig. Gen. Daniel A. Raymond	July 1966	June 1967
Brig. Gen. Carrol H. Dunn	Feb. 1966	July 1966

COMMANDING GENERAL, UNITED STATES
7th AIR FORCE, VIETNAM:

Gen. George S. Brown	Aug. 1968	Present
Gen. William W. Momyer	July 1966	July 1968
Lt. Gen. Joseph H. Moore	Jan. 1964	June 1966

^aPosition established February 11, 1966.