Reduction-In-Force Procedures B-158547

National Aeronautics and Space Administration

BY THE COMPTROLLER GENERAL OF THE UNITED STATES

MARCH 23, 1972

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

B-158547

Dear Mr. Downing:

This is our report on the reduction-in-force procedures used by the National Aeronautics and Space Administration (NASA) during its fiscal year 1972 reduction in force at the Goddard Space Flight Center, Greenbelt, Maryland, and the Lewis Research Center, Cleveland, Ohio. Our review was made in response to your request dated October 12, 1971.

We have not obtained written agency comments on this report. As agreed with your office, we are sending a copy of this report to the Chairman of the Subcommittee on NASA Oversight, House Committee on Science and Astronautics.

We plan to make no further distribution of this report unless copies are specifically requested, and then copies will be distributed only after your agreement has been obtained or public announcement has been made by you concerning the contents of the report.

Sincerely yours,

Comptroller General
of the United States

The Honorable Thomas N. Downing
House of Representatives

Contents

ABBREVIATIONS

GAO	General Accounting Office
NASA	National Aeronautics and Space Administration
RIF	Reduction in force

COMPTROLLER GENERAL'S REPORT TO THE HONORABLE THOMAS N. DOWNING HOUSE OF REPRESENTATIVES

REDUCTION-IN-FORCE PROCEDURES National Aeronautics and Space Administration B-158547

D I G E S T

WHY THE REVIEW WAS MADE

The General Accounting Office (GAO) was asked by Representative Thomas N. Downing (former Chairman of the Subcommittee on NASA Oversight, House Committee on Science and Astronautics), to review procedures used at Goddard Space Flight Center in Maryland and Lewis Research Center in Ohio of the National Aeronautics and Space Administration (NASA) in reducing personnel complements early in fiscal year 1972.

The Subcommittee was interested particularly in the reasonableness of the competitive levels established to effect the reduction in force (RIF).

FINDINGS AND CONCLUSIONS

Introduction

During a RIF employees are not selected directly for removal. Instead certain positions are selected for abolishment. Civil Service Commission regulations require an agency to categorize positions by competitive levels before conducting a RIF. Each competitive level comprises all positions that are so similar that each incumbent of a position in that level can perform satisfactorily in any other position in that level without a significant amount of training and without interrupting unduly the work program. (See p. 3.)

The regulations also provide for three rounds of competition for conducting a RIF. First-round competition involves employees competing for positions within their own competitive levels on the basis of tenure, veterans' preference, and length of service.

Second-round competition, known as bumping, involves the employees who were released during the first round competing for positions in other competitive levels. During second-round competition tenure and veterans' preference are considered; however, the regulations permit the agency to choose whether to consider length of service during the second round.

In third-round competition, known as retreating, an employee may have rights to available positions from which he has been promoted and may displace an employee having equal tenure and veterans' preference if the former has greater length of service. (See p. 4.)

The abolishment of 207 occupied positions at Goddard and 115 at Lewis affected a total of 487 employees, as follows:

MARCH 23, 1972

	Goddard	Lewis	Total
Transferred within grade	120	19	139
Downgraded	100	32	132
Separated	137	79	216
	357	130	487

Reasonableness of competitive levels

Of the 322 positions abolished at Goddard and Lewis, 188 were in competitive levels which had only one position. GAO found that employees in 81 such positions either had been separated or had been placed in lower grade positions. Had their former positions been in the same competitive level with other positions of the same occupational series, the 81 employees would have retained positions at their former grades.

GAO therefore compared the descriptions of 787 such other positions with those of 81 that had been abolished, to determine whether any should have been combined with those in other competitive levels.

In most cases the descriptions of the abolished positions were unlike those of positions in other competitive levels. A Goddard official was of the opinion that, for four cases in which the position descriptions did not appear to be significantly different from the descriptions of similar available positions, the employees would have needed more than the allowable time--60 days--to reach satisfactory levels of performance in the new positions. GAO had no basis for concluding that Goddard's judgment in these cases was not reasonable. Therefore the placement of the 81 positions in different competitive levels appeared appropriate. (See p. 9.)

Observations on length of service

Civil Service Commission regulations provide that, during second-round competition, an agency choose whether an employee's length of service will be considered. NASA chose not to consider it.

Because of this policy 72 employees at Goddard and Lewis who were in single-position competitive levels were not entitled to receive consideration for 405 similar positions in the same grade. The tenure status and veterans' preference of the 72 employees was not greater than that of the incumbents of the 405 positions. (See p. 10.)

CHAPTER 1

INTRODUCTION

During a reduction in force in the Federal civil service, employees are not selected directly for removal; rather certain positions are selected for abolishment. The effect is that employees are removed from the rolls, although not necessarily those employees whose positions were abolished. An employee whose position is abolished may be entitled to displace another employee in an identical position at the same grade, in a similar position at the same or a lower grade, or in a dissimilar position at the same or a lower grade.

An employee's entitlement to another position depends upon his personal qualifications as determined by the employing agency, in addition to various factors established by law.

APPLICABLE LAW AND REGULATIONS

The Veterans' Preference Act of 1944, as amended (5 U.S.C. 3502) requires that the Civil Service Commission issue regulations concerning retention rights of employees involved in a RIF by considering veterans' preference, tenure of employment, and length of service. The regulations issued by the Civil Service Commission (5 CFR 351) require that RIF procedures give due effect to the following factors.

1. Tenure of employment, whether career, probational, career conditional, indefinite, or other.

2. Veterans' preference.

3. Length of service.

4. Performance rating.

Civil Service Commission regulations require that, before an agency begins a RIF, it establish the competitive areas and competitive levels for all positions.

A competitive area administratively limits, geographically, organizationally, or both, the boundaries of competition. Competitive areas limit an employee's opportunity during a RIF to compete for remaining positions that are within the administrative boundary to which he is assigned.

A competitive level is a group of jobs in the same grade within each competitive area so similar that each person occupying one of those jobs--without a significant amount of training--can perform satisfactorily every other job in that same competitive level without interrupting unduly the work program.

COMPETITION FOR REMAINING POSITIONS

Civil Service Commission regulations provide three rounds of competition for conducting a RIF. After the agency has selected the positions to be abolished in a competitive level, the first-round competition occurs, and those employees within a competitive level compete only among themselves for the remaining positions within that competitive level. The employees ranking lowest in tenure, veterans' preference, and length of service are generally the first to be selected for release from the competitive level. Upon completion of the first-round competition, the number of employees remaining in the competitive level should equal the number of remaining available positions.

The second-round competition involves those employees released during the first-round competition. Each such employee competes for positions in other competitive levels and is entitled to be assigned to the highest paying occupied position in another competitive level at a rate of pay not in excess of that of his abolished position, provided that he is personally qualified for the position and that the position is held by an employee of lesser retention standing based on tenure and veterans' preference. The employee displaced by this means, known as bumping, may have similar bumping rights to other positions outside his competitive level.

Under Civil Service Commission regulations, an essential difference between first- and second-round competition is that, in first-round competition, an employee's length

of service must be considered whereas in second-round competition it need not be.

In first-round competition (actions within the same competitive level), an employee having a given tenure and veterans' preference will displace another having the same tenure and veterans' preference provided he has a greater length of service. The Commission's regulations, however, state that, in second-round competition (actions between competitive levels), an employee having given tenure and veterans' preference can displace another having the same tenure and veterans' preference if the former has a greater length of service and if the agency chooses to consider length of service in second-round competition. In the fiscal year 1972 RIF, NASA chose not to consider length of service during second-round competition.

Although the decision not to consider length of service during second-round competition lessens the agency's administrative burden by reducing the number of positions for which an employee must be considered, it also restricts an employee's ability to bump. For example, a career employee having veterans' preference cannot bump another career employee having veterans' preference even though the former may have greater length of service. Similarly a career employee without veterans' preference cannot bump another employee in the same category even though he has greater length of service. (This matter is discussed more fully in ch. 3 of this report.)

Civil Service Commission regulations also provide for third-round competition called retreating, in which tenure, veterans' preference, and length of service are considered. In retreating an employee may have rights to available positions which are either identical to or substantially the same as positions from or through which he has been promoted. In such instances the employee has rights similar to those provided in first-round competition; that is, he may displace an employee having equal tenure and veterans' preference if he has greater length of service.

EMPLOYEES AFFECTED BY RIF AT GODDARD AND LEWIS CENTERS

The abolishment of 207 occupied positions at Goddard and 115 at Lewis resulted in a total of 487 employees being affected, as follows.

	Goddard	Lewis	Total
Transferred within grade	120	19	139
Downgraded	100	32	132
Separated	137	79	216
	357	130	487

Although 322 positions were abolished, only 216 employees were separated. The other 106 employees were transferred to other positions that were vacant at the time of the RIF.

CHAPTER 2

ESTABLISHMENT OF COMPETITIVE LEVELS FOR RIF

Competitive levels need not be established for the normal operations of an organization; however, they are needed to group the positions within an organization in the event that a RIF is anticipated.

CRITERIA FOR ESTABLISHING COMPETITIVE LEVELS

Civil Service Commission regulations state that positions in the same competitive level are to be so similar in all important respects that the agency can readily move an employee from one position to another within the same competitive level without a significant amount of training and without interrupting unduly the work program. Characteristics to be shared by all positions in a competitive level are (1) similarity of duties, responsibilities, pay schedule, and terms of employment and (2) similarity of requirements for experience, training, skills, and aptitudes.

The Federal Personnel Manual, which includes the instructions for implementing the regulations relating to a RIF, points out that some of the characteristics of a position are determined easily whereas the determinations on other characteristics may require careful judgment. The manual also states that, before decisions of whether positions should be placed in the same competitive level can be made, the following questions may require study.

1. Do the positions require the same basis experience and training?

2. Do the positions require the same skills and aptitudes?

3. How long would it take an employee having experience in one position to reach a level of satisfactory performance in another?

4. How much time can be allowed for meeting satisfactory performance standards without causing serious harm to the organization's work program?

PROCEDURES USED IN ESTABLISHING COMPETITIVE LEVELS

The competitive levels established by Goddard and Lewis were based upon the official description for each position. These descriptions generally were prepared by the supervisors or by incumbents of the positions and were reviewed by a designated official in the personnel office. Most descriptions show general and specific duties and responsibilities and the special knowledge or skills required for the position.

Goddard and Lewis used different criteria to determine whether a position should be placed in the same competitive level with other positions. Goddard classification specialists placed positions in the same competitive level if, in their judgment, the incumbents of those positions would require no more than 60 days to reach satisfactory levels of performance if transferred to any of the other positions. Lewis classification specialists, on the other hand, did not use the 60-day criteria but included what they felt would be a reasonable amount of training needed for the incumbents to adequately perform in the other positions.

NUMBER OF SEPARATE COMPETITIVE LEVELS

Shortly before RIF notices were issued, both installations reevaluated the competitive levels that had been established in anticipation of the RIF. This reevaluation resulted in an increased number of competitive levels, as follows:

	Number of competitive levels	Number of occupied positions	Average number of positions for each competitive level
Goddard:			
Before evaluation	2,375	4,391	1.8
After evaluation	2,733	4,391	1.6
Increase	358		
Lewis:			
Before evaluation	1,822	3,477	1.9
After evaluation	1,969	3,477	1.8
Increase	147		

It is evident from the average number of positions for each competitive level that a substantial number of the competitive levels established at each center contained only a single position. With respect to the abolished positions, 112 of the 207 positions abolished at Goddard and 76 of the 115 positions abolished at Lewis, or a total of 188 positions, were in single-position competitive levels.

As agreed to with your office, our review was confined to the 188 positions abolished at the two centers that were in single-position competitive levels.

REASONABLENESS OF COMPETITIVE LEVELS

We identified 81 positions of the 188 abolished, in which the employees that had occupied the positions either had been separated or had been placed in lower grade positions. Had their former positions been in the same competitive level with other positions of the same occupational series, the 81 employees would have retained positions at their former grades.

We therefore compared the descriptions of 787 such other positions with those of the 81 that had been abolished, to determine whether any should have been combined with those in other competitive levels.

We found no instance in which description of an abolished position in a single-position competitive level was identical to the description of a position in another competitive level. In most cases the descriptions of the abolished positions were unlike descriptions of other positions and therefore the placement of the positions in separate competitive levels appeared appropriate.

We noted four cases at Goddard, however, in which the descriptions of the abolished positions did not appear to be significantly different from the descriptions of similar available positions. We discussed these cases with a Goddard official who told us that, in her judgment, the employees whose positions had been abolished would have needed more than 60 days to reach satisfactory levels of performance if transferred to the similar available positions. We have no basis for concluding that Goddard's judgment in these cases was not reasonable.

CHAPTER 3

OBSERVATION ON CONSIDERATION GIVEN TO LENGTH OF SERVICE DURING RIF

The Veterans' Preference Act provides that length of service, tenure, and veterans' preference be given due effect by the Civil Service Commission in its regulations on RIFs.

Civil Service Commission regulations provide that, during second-round competition, or bumping, an agency choose whether an employee's length of service will be considered. Both Goddard and Lewis chose not to consider length of service in second-round competition, in accordance with NASA's stated policy.

The courts have ruled on the due effect that must be given to the basic factors. In an opinion dated January 14, 1959, the United States Court of Claims (Barberi v. United States 144 Ct. Cls. 573-577) ruled that the provision of the Veterans' Preference Act of 1944 requiring due effect to be given to the factors of tenure, veterans' preference, and length of service

> "*** does not mean that some weight be given to each of them in every case. In some cases great weight might be given to one factor, and, in others, little or no weight."

Although NASA's policy of not considering length of service during second-round competition apparently does not violate Civil Service Commission regulations or the intent of the Veterans' Preference Act of 1944, we believe that the following discussion is pertinent to the subject matter of this report.

EFFECT ON EMPLOYEES AT GODDARD AND LEWIS BECAUSE LENGTH OF SERVICE WAS NOT CONSIDERED

Of the 81 employees at Goddard and Lewis who were in single-position competitive levels and were either downgraded or separated from Federal service, 72 were not entitled to

receive consideration for 405 similar positions in the same grade during second-round competition even though they had greater lengths of service than the incumbents of the 405 positions. This occurred because the tenure status and veterans' preference of the 72 employees was not greater than that of the incumbents of the 405 other positions.

In one case the incumbent of the position of data analyst, GS-12, was offered a GS-11 position when her position was abolished. The records show that there were 36 GS-12 positions similar to hers for which she was not considered because, although she had greater length of service than any of the incumbents of these positions, each of them was equal to her in tenure and veterans' preference.

Similarly, in each of the 71 other cases, the incumbent of the abolished position did not receive consideration for placement in from one to as many as 34 similar positions even though he had greater length of service than the incumbents of the other positions but did not have greater tenure and veterans'-preference status. If their lengths of service had been a factor in determining their eligibility for other positions, some of the employees who were reduced in grade probably would have retained their grades and some who were separated probably still would be employed.

CHAPTER 4

SCOPE OF REVIEW

This review was made at Goddard Space Flight Center, Greenbelt, Maryland, and at Lewis Research Center, Cleveland, Ohio. At Goddard there were 28 competitive areas, but our review was restricted to the competitive areas in which positions had been abolished. Our review at Lewis was restricted to the Cleveland competitive area and did not include the Plum Brook Station located about 50 miles from Cleveland. We also visited the Headquarters office of NASA in Washington, D.C., and obtained documentation pertaining to a previous RIF and NASA guidelines for conducting RIFs.

We met with installation officials and examined retention registers, position descriptions, and statistical data compiled by each installation on the results of the RIF. We reviewed in detail a number of cases in which the employees either had been separated or had been placed in lower grade positions. We did not interview these persons nor did we attempt to determine their qualifications to fill any of the positions similar to their own for which they had not been considered in the RIF.

COMMITTEE ON SCIENCE AND ASTRONAUTICS
HOUSE OF REPRESENTATIVES
SUITE 2321 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, D.C. 20515

October 12, 1971

Mr. Elmer B. Staats
Comptroller General of the
United States
General Accounting Office
Washington, D.C. 20548

Dear Mr. Staats:

Some Members of the Committee on Science and Astronautics have received constituent complaints regarding the manner in which the National Aeronautics and Space Administration is conducting reduction in force procedures that have recently been instituted. In view of the national unemployment problem currently being experienced, I believe that NASA should give every consideration to the employees affected and that every effort should be made to insure fairness in compliance with the RIF procedures.

Therefore I request that a suitable investigation be made at the Lewis Research Center and the Goddard Space Flight Center to determine if these aims are being met. Your Mr. Klein Spencer is familiar with this request and has had conversations with members of the staff on the subject.

Sincerely yours,

THOMAS N. DOWNING
Chairman, Subcommittee
on NASA Oversight

REPORT TO THE
JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

Controls Over Shipyard Costs And Procurement Practices Of Litton Industries, Inc., Pascagoula, Mississippi B-133170

Department of the Navy

BY THE COMPTROLLER GENERAL
OF THE UNITED STATES

MARCH 23, 1972

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

B-133170

Dear Mr. Chairman:

Your letters of August 18 and December 10, 1970, requested that we review efforts by the Department of the Navy and its contractors to control ship construction costs at major private shipyards.

On June 4 and August 23, 1971, we furnished you with data on some of your questions. The remaining questions related to the adequacy of control over shipyard costs and procurement practices as exercised by both the contractor and the Government. To obtain answers to the remaining questions, we reviewed operations of two major private shipbuilders, and on January 13, 1972, we reported to you on the operations of Newport News Shipbuilding and Dry Dock Company. In this report we deal with the operations of the Litton Industries, Inc., facilities at Pascagoula, Mississippi, and in the Los Angeles, California, area.

It appears that much can be done by the contractor and the Navy to reduce shipyard costs and, in turn, costs to the Government. We found that Litton did not always follow effective procurement procedures to ensure that the most favorable prices were obtained for some purchases. We noted that the Defense Contract Audit Agency had questioned the contractor's cost-charging practices which had resulted in allocating to Navy contracts costs relating to Litton's commercial work. Our selective examination confirmed that certain inequitable cost allocations had been made.

We could not evaluate the effectiveness of the contractor's budgeting and cost system, because the contracts we reviewed at one of the shipyards did not require the contractor to furnish or make available budget information to the Government and because the system had not been fully developed for the contractor's other and newer shipyard.

Official comments on the matters discussed in this report have not been requested or obtained from the contractor or the Navy. We plan to make no further distribution of

this report unless copies are specifically requested, and then we shall make distribution only after your agreement has been obtained or public announcement has been made by you concerning the contents of the report.

Sincerely yours,

Elmer B. Staats

Comptroller General
of the United States

The Honorable William Proxmire
Chairman, Joint Economic Committee
Congress of the United States

Contents

ABBREVIATIONS

DCAA	Defense Contract Audit Agency
GAO	General Accounting Office
SUPSHIP	Supervisor of Shipbuilding, Conversion, and Repair

CHAPTER 1

INTRODUCTION

In accordance with letters of August 18 and December 10, 1970, from the Chairman, Joint Economic Committee, we have reviewed the adequacy of controls over shipyard costs and procurement practices as exercised by both the Government and Litton Industries, Inc., Pascagoula, Mississippi.

Litton has two shipyards located in Pascagoula--Litton Ship Systems (West Yard) and Ingalls Nuclear Shipbuilding (East Yard). The two are independent of each other, each having its own separate management and organizational structure and each following different procurement and cost control practices.

The West Yard is engaged in the modular construction of surface ships for the Navy and for private companies. At the time of our review, the value of the contracts being worked on totaled about $3 billion. About 93 percent, or $2.8 billion, was for Navy ships to be constructed under fixed-price incentive contracts, although up to that time the West Yard was devoting its construction effort primarily to commercial vessels.

Litton's Data Systems Division assists the West Yard and is responsible for assembly, test, and evaluation of electronic components which it purchases or which are furnished by the Government under the Navy contracts. Litton's Advanced Marine Technology Division purchases most of the other major components and provides engineering-design services for the West Yard. Both organizations are located in the Los Angeles, California, area.

The East Yard is engaged in the conventional construction and overhaul of submarines and the construction of Navy surface ships. This yard also constructs commercial ships for private companies. At the time of our review, the value of Navy contracts being worked on at the East Yard totaled about $266 million. This total included $113 million for a fixed-price (formally advertised) contract, $107 million for a fixed-price incentive contract, and $46 million for cost-plus-incentive-fee contracts.

Questions raised by the Chairman covered three subjects--cost controls, shipyard controls over procurement, and Navy surveillance over the shipyards' procurement and

CHAPTER 2

SHIPYARD CONTROLS OVER PROCUREMENT

The questions on this subject are concerned with the shipyards' efforts to obtain competition in subcontracting and, in the case of noncompetitive subcontracts, to comply with the provisions of the Truth-in-Negotiations Act.

For the two East Yard contracts we reviewed, amounting to about $120 million, the contractor awarded subcontracts totaling about $39 million. Data on subcontracting as of January 1971 and the number of items selected for our review follow.

	Prime contract amount (millions)	Subcontracts			
		Total		Selected for review	
		Number	Amount (millions)	Number	Amount (millions)
SSN-637 class submarines	$107.4	3,922	$37.4	182	$24.0
SSN-612 submarine overhaul	12.5	1,612	1.7	113	1.0
Total	$119.9	5,534	$39.1	295	$25.0

We examined 194 subcontracts, amounting to $366 million, out of the 222 subcontracts, amounting to $372 million, awarded by Litton through December 31, 1970, for work done by the West Yard on the LHA and DD-963 ships.

We examined purchasing records and held discussions with contractor and Navy officials in Pascagoula and at the assisting organizations in California that purchased most of the components for the Navy ships to be constructed by the West Yard.

The specific questions and the information we obtained follow.

"In awarding subcontracts, do the shipyards employ safeguards comparable to those used by the Government in awarding prime contracts?"

EAST YARD

The contractor's policies provide for some of the safeguards used by the Government. We noted some exceptions--Litton did not obtain cost and pricing data for certain

subcontract awards that were required by the Truth-in-Negotiations Act (see p. 8) and did not hold discussions with all responsible offerors before awarding negotiated subcontracts (see p. 5).

We also found that price histories of prior buys and price estimates for current purchases generally were not available to assist in determining the reasonableness of subcontract prices. Also in one instance we found that proper consideration had not been given to splitting a procurement to obtain lower subcontract prices.

Price histories and estimates not available

The purchase order files we examined, which covered larger buys, generally did not contain price estimates for the current buy or price histories of prior buys to assist in determining the reasonableness of subcontract prices. Department of Defense regulations provide that the contracting officer, before soliciting quotations, develop, where feasible, an estimate of the proper price level or the value of the product or service to be purchased based on prior purchases and other data.

We found that files for 122 of the 181 subcontracts for procurements of $2,500 or more showed no indications that price estimates had been prepared. In only a few cases did we find evidence that current quotes had been compared with prices paid in prior procurements. Although it does not necessarily follow that the subcontract prices were unreasonable, the contractor had forgone the opportunity offered by those safeguards for determining whether it was paying fair prices.

East Yard procurement officials informed us that they recently had instituted a new requirement for the preparation of price estimates and a system for recording pricing data relating to prior procurements.

Opportunity to obtain lower prices by splitting awards

Government regulations and Litton's procurement manual required that, if appropriate, individual prices be evaluated to determine whether awards to more than one offeror would be advantageous.

In our examination of 32 subcontracts in excess of $100,000, we found that one subcontract could have been split between two suppliers and that as a result lower prices could have been obtained. An award for $343,217 was made to a

subcontractor for various ball valves even though a lower price for some of the valves had been proposed by another responsive, qualified firm. Two firms proposed individual prices for 34 line items of ball valves. The solicitation was not on an all-or-none basis. One firm proposed prices that were lower for each of 16 items but higher for each of the remaining items. If two contracts had been awarded, for 16 items to one firm and for 18 to the other, the cost of the 34 items would have been approximately $21,000 less than the amount of the single award. An East Yard procurement official agreed that this order could have been split to obtain more favorable prices.

WEST YARD

The procurement policies of the West Yard and the assisting organizations provided for many of the safeguards used by the Government. These included making preaward surveys to determine subcontractors' capabilities, soliciting competitive bids, obtaining cost or pricing data in the circumstances prescribed by the Truth-in-Negotiations Act, and performing price-cost analyses to evaluate the reasonableness of subcontract prices offered. We noted no deviations from these policies.

"Do shipyards seek to establish maximum practicable competition in subcontract procurements?"

EAST YARD

For a few subcontracts, representing the major portion of the amounts of the subcontracts we reviewed, the East Yard made awards on competitive bases. The East Yard, however, did not make maximum efforts to obtain lower prices for a large number of subcontracts. In addition, we found no evidence that Litton had held negotiation discussions on 200 of the 224 awards we examined. We did find a questionable justification for several awards made to one subcontractor which had not been the low offeror.

Conduct of negotiation discussions

The shipyard apparently did not hold negotiation discussions for most of the subcontract awards we reviewed. As a result the lowest available subcontract prices may not have been obtained. The Truth-in-Negotiations Act provides that Government procurement officers hold such discussions in the absence of clear demonstrations that fair and reasonable prices can be obtained without holding such discussions. Discussions are not required when all offerors are notified that the awards might be made without such discussions.

Our review of 224 subcontracts showed that the files for 200 of the procurements contained neither evidence of negotiation discussions with offerors nor evidence of offerors' having been notified in the requests for proposals that the awards might be made without such discussions. Litton officials stated that their procurement files not always were documented to show evidence of negotiations. We noted that negotiation discussions in connection with 24 awards had resulted in reductions in initial proposed prices from $8.8 million to $8 million. It therefore appears that, through added emphasis on the use of this negotiation technique, the contractor might have realized further price reductions.

It is of interest to note that the Advanced Marine Technology Division, a major procuring activity for the LHA ship construction program, follows an extensive practice of conducting negotiation discussions with offerors. We reviewed subcontracts, totaling about $117 million, awarded for the LHA program and found that such negotiations had reduced initial proposed prices by about $16.9 million.

Awards to other than low offerors

In several cases where the contractor awarded subcontracts to other than the low offerors, the contractor's justifications appeared to be reasonable. These included instances where the low offerors were considered to be nonresponsive, were not qualified, or were unable to meet delivery requirements.

One subcontractor, however, who was not the low offeror, received seven awards on the basis of proposed earlier deliveries where such deliveries were not essential. These awards totaled $57,539. Had these awards been made to the low offerors, the contractor could have realized savings of $29,913--the difference between the low proposals and the successful offeror's prices.

WEST YARD

We found that competition had been sought for the West Yard's purchases. The contractor solicited two or more sources of supply for 150 of the 194 subcontracts we selected for examination. Of the 150 subcontract awards, 99 were for amounts over $100,000. In all but a few instances, Litton solicited from three to 18 sources.

For the other 44 purchases, amounting to $2.3 million, Litton appeared to have had sufficient justification for soliciting only one source. In the award of one contract

to Sperry Rand Corporation in the amount of $1.6 million, Litton had concluded, on the basis of its procurement records, that Sperry Rand was the only qualified source capable of providing certain navigation equipment in the required time frame. Most of the remaining $0.7 million had been awarded without attempting to obtain competition because Litton believed either that only one source could meet delivery schedule requirements or that it was impracticable to change suppliers when awarding follow-on subcontracts.

"Is there evidence of undue subcontracting by shipbuilders to other subsidiaries of their parent firms?"

EAST YARD

We found no evidence of undue subcontracting by the East Yard to its affiliated companies. In our sample of 295 subcontracts selected from 5,534 subcontracts awarded under two contracts we reviewed (see p. 3), we found that only one award had been made to an affiliate. In addition, the contractor furnished us with a listing of all subcontracts awarded to subsidiaries of Litton, which showed 25 awards, including the one we had found in our test, totaling about $123,800 under the two Navy contracts.

WEST YARD

In relation to the current value ($2.8 billion) of the two Navy contracts, we found no undue subcontracting by Litton with its subsidiaries or affiliates.

There were 12 subcontracts, amounting to about $14 million, which had been awarded to subsidiaries or affiliates. All but $26,000 worth had been awarded on the basis of price competition.

"What percentage of subcontract procurements are sole-source?"

EAST YARD

The contractor had no classification of subcontract procurements to show the extent of awards on a sole-source basis. In our review of the 295 subcontracts, amounting to $25 million, we found that only one responsive bid had been received in each of 204 procurements, or 69 percent of the subcontracts. The 204 procurements amounted to $7.3 million, as shown below.

	Quantity	Amount (millions)
SSN-637 class of submarine	105	$6.8
SSN-612 submarine overhaul	99	.5
	204	$7.3

Of the procurements amounting to $6.8 million, procurements amounting to $4.3 million had been based on a pooling arrangement with the Electric Boat Division of General Dynamics Corporation to obtain lower prices on selected items. Electric Boat is the lead yard for the SSN-637 class of submarines.

With respect to the overhaul contract, the contractor stated that the reasons for single, responsive bids had been the restricted number of qualified sources capable of meeting the requirements of the submarine overhaul program and that the replacements of many system components had been required to be procured from the original source.

WEST YARD

Under its two prime contracts for the LHAs and DD-963's, Litton awarded 222 subcontracts amounting to $372 million. We examined 194 subcontracts awarded for $366 million and found that 62 had been awarded on sole-source bases. The sole-source awards totaled $64.9 million, or about 17.5 percent of the value of all subcontracts awarded. A tabulation of the sole-source awards follows.

	Number of awards	Amount (millions)
Multiple solicitations but only one responsive bid	18	$62.6
One source solicited	44	2.3
	62	$64.9

"Are the shipyards in full compliance with the Truth-in-Negotiations Act?"

EAST YARD

For the two contracts that we reviewed, we examined all subcontracts in excess of $100,000 and found that the East

Yard had complied with the requirements of the Truth-in-Negotiations Act, except for 20 procurement actions which had been based on prices arranged with Electric Boat.

Litton explained that it had relied on Electric Boat to obtain the required pricing certificates and cost or pricing data from the subcontractors. Therefore we made a review of the 20 procurements at Electric Boat and found that 12 had been subject to the act. In four instances the required data and pricing certificates were obtained. In four other procurements, data and/or pricing certificates had not been obtained. In the remaining four instances, Electric Boat had requested but had been refused the cost or pricing data.

Electric Boat officials stated that the requirements of the Truth-in-Negotiations Act had not been completely understood by some of its buyers and vendors at the time the awards we examined into had been made. They said, however, that contractor procurement system reviews performed by the Navy at Electric Boat in October 1969 and December 1970 had led to a better understanding of the act. They stated also that the shipyard's current subcontract awards complied with the cost or pricing data requirements of the act. On a limited basis we examined current awards and found that in each instance the required pricing certificate and cost data had been obtained.

East Yard procurement officials stated that for future procurements they would obtain cost and pricing data and pricing certificates without relying upon the other shipyard to do so.

We also reviewed tabulations by subcontractors of 1969 and 1970 procurements, to determine whether the East Yard had attempted to avoid the cost or pricing data requirements of the act by splitting awards into amounts below $100,000. We found no evidence of such splitting.

WEST YARD

We believe that Litton awarded subcontracts in compliance with the cost or pricing data requirements of the Truth-in-Negotiations Act. Of 194 subcontracts we selected for examination, 11 subcontracts, amounting to about $63 million, were subject to the cost or pricing data requirements of the act. We reviewed each of these subcontracts and found that Litton had obtained the required certificate and cost or pricing data in each case.

We reviewed also selected subcontracts to determine whether the contractor had attempted to avoid the cost or pricing data requirements of the act by splitting awards into amounts below $100,000. We found no evidence of such splitting.

CHAPTER 3

COST CONTROLS

"Are shipyards' budgeting and cost control systems adequate to ensure proper control of labor and material cost on Navy ships?"

EAST YARD

We could not evaluate the effectiveness of the contractor's budgeting and cost control systems because the contracts we reviewed at the East Yard did not require the contractor to furnish, or to make available, budget information to the Government. For that reason we did not have the information necessary to evaluate the effectiveness of the system. We did note, however, that the contractor's system did not provide for segregating actual cost of change orders to permit comparison with budgets in order to evaluate change-order pricing and performance. The Navy and the contractor contended that it was not practicable to segregate costs of changes and that to do so would be very costly.

WEST YARD

Unlike the contracts at the East Yard, the contracts at the West Yard required the reporting of budgetary data to the Navy. We could not evaluate the adequacy of the contractor's budgeting and cost control system, however, because it had not been fully developed and implemented. The LHA ships were in the early stages of production, and Litton officials told us that detailed budgetary data were not yet available. Construction of the DD-963 ships had not started. We noted that the contractor's system did not provide for segregating actual costs of change orders to permit comparison with budgets in order to evaluate change-order prices and performance. The contractor and the Navy contend that it would be impracticable to segregate costs of changes and that to do so would be extremely costly.

System description

The description which follows relates to the system to be used by the West Yard to control production costs on LHA ships.

After the contractor submitted a price proposal for a Navy ship construction contract, the Navy and the contractor negotiated target cost, target profit, target price, and ceiling price. The target cost of the contract was the basis upon which budgets were to be prepared.

The contract provided for the quarterly reporting of development and production costs in terms of budgeted costs, actual costs, and the value of the physical progress. The development costs consisted of costs for such major groups as design and engineering, peculiar support equipment, common support equipment, training, and data. Production costs will be broken down into nine major groups (systems), such as hull structure, propulsion, and electric plant. The hull structure will be broken down into 33 smaller groups, such as superstructure, main deck, and inner bottom. There will be 175 smaller groups within the nine major groups. At the time of our review, the Navy and the contractor had not decided on the extent of reporting for the smaller groups.

Litton plans to budget material and labor costs by systems. Labor costs also will be budgeted by function for the contractor's internal purposes. There will be about 15 functions or tasks, such as design, procurement, and manufacture.

The work to be performed by the functional organizations will be stated in a management work package. This package will contain a time-phased budget and a schedule of performance and will identify the manager responsible for accomplishing the task. The package will contain also data for converting from the functional basis to the systems basis. As yet management work packages have not been put into use. In addition, hardware work packages will be developed for use at the shop level.

In negotiating change-order prices, a minimum or maximum provisional price, rather than a fixed price, was agreed to between the Navy and the contractor before change-order work was authorized. Final prices were to be adjudicated at a later date. Navy officials stated that most of the change orders issued had been design changes. The provisional price system was employed so that change-order work could be authorized promptly to prevent the accumulation of unnecessary costs.

GAO evaluation

We were unable to evaluate the East Yard's budgeting and cost control systems, because the contractor would not

make budget data available to us and because the contracts we reviewed did not require Litton to furnish such information to the Government.

At the West Yard we were unable to determine the adequacy of its budgeting and cost control system because it had not been fully developed at the time of our review.

The cost control systems for both yards do not identify separately the actual costs of change orders. Navy and contractor representatives told us that it would be impracticable and very costly to segregate change-order costs. They also stated that generally a price was agreed to before change-order work was started. We believe that, where firm prices are not established before significant changes in work are started, the segregation of change-order costs, where feasible, is needed to provide a sound basis for negotiating change-order prices.

"Are there adequate contractor and government controls over labor and material charging practices?"

EAST YARD

The contractor has established procedures for controlling material charges to specific systems and for controlling labor charges to work packages of a ship. Government control is exercised through review and analysis by the Defense Contract Audit Agency (DCAA) of the contractor's cost-charging practices.

On the basis of our test of the contractor's system for charging costs and our review of the Government's surveillance over the charging procedures, we believe that the controls over the charging of labor and material are adequate.

Up to March 31, 1971, $81,694,207 had been charged to two Navy contracts whose prices totaled about $120 million, as shown in the following schedule.

	Three SSN-637 class submarines	One SSN-612 submarine overhaul	Total
Material	$37,879,693	$ 2,196,467	$40,076,160
Labor	15,201,656	6,907,849	22,109,505
Overhead	14,691,139	4,817,403	19,508,542
	$67,772,488	$13,921,719	$81,694,207

Material-charging practices

The contractor's policy on material-charging practices provided that material which could be identified to a particular ship was to be charged direct. Material consumed in routine shop and plant operations or material used for repairs and maintenance of buildings and equipment was to be charged to overhead expense accounts.

Direct purchases

Purchase orders were identified by ship and by system. A purchase order number was placed on correspondence, invoices, and packages related to the purchase. The cost of the purchase was charged to the appropriate ship and system.

Stores issues

The contractor, in addition to purchasing material specifically for a ship, issued material from stores to the various departments on the basis of a stock control stores requisition signed by an authorized person. Stores issues included common-type items, such as rivets and pipe. The costs of stores issues were charged to the appropriate ship and system.

DCAA reviews

We reviewed the recent DCAA reports of the contractor's material control procedures and practices. DCAA found no mischarging of costs between contracts.

GAO evaluation

We selected for examination 41 direct purchases and 71 stores issues recorded during 1 month, to determine whether material costs had been charged properly. We traced material transactions from the source documents, through the intermediate accounting records, to the general ledger work-in-process account. Also we physically verified the existence of individual purchases costing more than $1,000. Our verification of material charges and our physical verification of material revealed no mischarges.

Labor-charging practices

Labor hours were accumulated for each ship by cost center, operation, system, and work package. The contractor's control of cost charging for labor was placed primarily with the workers' supervisors.

Time cards

Hourly employees received prepunched time cards at gate racks as they entered the yard. Information such as the employee's name, badge number, and rate of pay was preprinted on the card. The employees reported to their assigned work areas and punched in at nearby clock stations. The supervisors entered the hours worked on the cards by hull, cost center, operation, system, and work package.

Time cards for salaried employees were issued and prepared on a weekly basis. Salaried employees followed the same procedure in recording their time as did the hourly employees.

Payroll department timekeepers audited time cards for proper signatures and for valid hull, system, and work-package numbers.

DCAA reviews

We reviewed the audit reports and supporting workpapers covering three DCAA audits of the contractor's labor-charging practices and procedures. The reports showed only minor mischarging of labor costs between contracts.

GAO evaluation

To determine whether labor costs had been charged properly, we traced 113 direct labor transactions recorded during 1 week from the time cards, through the intermediate accounting records, to the general ledger work-in-process account. Our verification revealed no mischarges between contracts.

On the basis of our review and the work performed by DCAA, we concluded that the contractor's accounting practices were adequate to accurately record labor costs.

WEST YARD

For our review of contractor and Government controls over labor- and material-charging practices we made a random selection of 83 material transactions and 98 labor transactions at the West Yard; 19 other direct costs and 59 labor transactions at the Advanced Marine Technology Division; and 21 material transactions and 53 labor transactions at the Data Systems Division. In our review we traced each of the above transactions from the source document, through the intermediate accounting records, to the general ledger accounts. We found that these charges had been made to the proper contracts.

Marine Technology costs

DCAA found that, during the period 1969 through 1971, Navy contracts for the LHAs and DD-963's were charged about $7 million for overhead expenses applicable to Litton's commercial work.

DCAA's reports indicated that this had resulted from (1) Litton's including in material cost, for the purpose of allocating material overhead of the West Yard between its Government work and its commercial work, the costs incurred on the two contracts by Marine Technology in California, none of which were for material but rather were for direct labor, overhead, other direct costs, and general and administrative expenses and (2) Litton's charging Marine Technology (where work was almost wholly on Government contracts) with general and administrative costs incurred at that facility which were applicable, in part, to the West Yard. In addition, general and administrative expenses incurred at the West Yard (engaged primarily in commercial work) were allocated on the basis of the costs incurred at the two locations. This resulted in inequitable charges between Litton's Government work and its commercial work. According to DCAA the activities at Pascagoula and California were so integrated that the treatment of the two organizations as separate entities with separate general and administrative pools was unrealistic.

Although we did not review Litton's overhead-charging practices in detail, our selective examination indicated that they were resulting in the Navy contracts' bearing some of the overhead expenses applicable to the West Yard's commercial work.

Litton takes the position that there are no inequities in the direct- and indirect-costing practices. The treatment of labor, material, and overhead costs of an assisting division as material costs at the prime division has been in effect at the East Yard since before the construction of the West Yard. The contractor is considering changing its allocation method beginning with fiscal year 1972. The contractor believes that an adjustment should not be made for prior years' costs.

GAO evaluation

Our limited review confirmed the DCAA finding that the contractor's method of charging costs incurred by Marine Technology had resulted in Navy contracts' bearing certain overhead costs applicable to commercial work. The Navy currently has this matter under consideration.

CHAPTER 4

NAVY'S SURVEILLANCE OVER THE SHIPYARDS' PROCUREMENT AND COST CONTROL PRACTICES

Two questions were raised concerning Navy surveillance of shipyard operations.

> "Does the Navy maintain effective surveillance over shipbuilders' procurement, cost control, and cost charging practices?"
>
> "Is closer Navy surveillance of shipyard operations needed?"

The Navy's Supervisor of Shipbuilding, Conversion, and Repair (SUPSHIP) at Pascagoula is the organization responsible for administering the contracts at the East and West Yards. In this capacity it exercises surveillance over the contractor's operations to ensure conformance with contractual requirements. To carry out this surveillance, SUPSHIP, as of November 1971, had a staff of 275 civilians and 19 military personnel. This staff was involved in surveillance of such contractor operations as quality assurance, planning, control of material procurement, and cost control.

EAST YARD

The Navy had reviewed the East Yard's purchasing system in accordance with an Armed Services Procurement Regulation requirement. Approval of the contractor's purchasing system was withdrawn following a procurement review in August 1969 when the Navy determined that

- --the purchasing manual did not fully implement the requirements of the Truth-in-Negotiations Act,
- --the bidders' lists were incomplete,
- --criteria for conducting negotiation discussions were needed,
- --procedures and capability for making cost analyses did not exist, and
- --adequate documentation to enable reconstruction of purchase transactions was not present.

In a later review, in September 1970, the Navy found that most of the deficiencies previously disclosed had not been corrected.

Litton was required by the contract for construction of the SSN-637 class of submarines to submit proposed subcontracts which exceed $100,000 to the contracting officer for consent. There were 69 such subcontracts. We reviewed the 69 subcontracts and found that 11 had not been submitted to the Navy. The contracting officer stated that these subcontracts were issued before the establishment of controls to ensure that the contractor submitted the subcontracts for Navy consent. The Navy did not consent to 31 subcontracts until 3 to 207 days after they were awarded.

SUPSHIP surveillance was augmented by DCAA at Pascagoula. In November 1971 nine of DCAA's auditors were assigned to the East Yard. During fiscal year 1971 DCAA performed audits in such areas as financial control, material, labor, and overhead. Reports on its findings, along with the contractor's comments, were sent to SUPSHIP. SUPSHIP and DCAA periodically discussed with the contractor the extent and propriety of corrective actions taken.

WEST YARD

In addition to having its staff at Pascagoula, SUPSHIP had a branch office at Culver City, California, with a staff of 10 civilians and seven military personnel. This staff had surveillance responsibility over Marine Technology's operations.

The surveillance responsibility at the Data Systems Division was delegated by SUPSHIP to the Defense Contract Administration Services Office, Woodland Hills, California.

Contractor procurement system reviews were made at the two California organziations but not at the West Yard. Marine Technology's procurement system was approved informally after a review by the Navy in August 1970. The Defense Contract Administration Services Office, after its reviews, approved the procurement system of the Data Systems Division for a period of 1 year, which started in January 1971. Notwithstanding the system approvals, the contracts require prior written consent by the contracting officers of individual procurements in excess of $100,000 for the LHAs and the DD-963's. We reviewed 146 subcontracts in excess of $100,000 and found that the contractor had failed to submit 14 procurements for consent before the awards. The contracting officers' consent to these procurements was not obtained until 10 to 168 days after they were awarded.

SUPSHIP surveillance at the West Yard and at the two organizations in California was augmented by DCAA. During the fiscal year ended June 30, 1971, DCAA performed audits of financial reporting, financial management, costs, overhead, general and administrative expenses, and other matters.

To improve its surveillance over shipyards, SUPSHIP was establishing a business review staff consisting of a supervisory business analyst, an industrial engineer, and a financial analyst. The staff was to be responsible for maintaining surveillance over all aspects of the contractor's business practices, including management objectives and policies, work operations and progress, resources utilization, and cost control and reporting systems.

GAO evaluation

Surveillance over the cost-charging practices at Litton has been adequate. Closer surveillance of the contractor's subcontracting practices, however, appears necessary. As discussed on pages 3 through 10, the East Yard did not always follow effective procurement procedures to ensure that the most favorable prices were obtained in some subcontract procurements and there were considerable delays at both yards in approving subcontracts as required by the Navy's contracts.