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REPORT TO THE CONGRESS

Opportunities For Savings By Increasing Competition In Procurement Of Commercial Equipment B-164018

National Aeronautics and
Space Administration

BY THE COMPTROLLER GENERAL
OF THE UNITED STATES

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FEB 26, 1971

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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON D C 20548

B-164018

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

This is our report on opportunities for savings by increasing competition in procurement of commercial equipment by the National Aeronautics and Space Administration.

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

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

A handwritten signature in cursive script that reads "James B. Axtell".

Comptroller General
of the United States

BEST DOCUMENT AVAILABLE

D I G E S T

WHY THE REVIEW WAS MADE

The General Accounting Office (GAO) has reviewed the procurement of equipment by the National Aeronautics and Space Administration (NASA) to determine whether its policies, procedures, and practices have resulted in maximum competition as directed by law. The equipment covered in this review consisted of catalog, or off-the-shelf, items and did not include special equipment designed to meet the specific needs of the users. The equipment generally consisted of such items as electronic instrumentation devices and photographic and laboratory equipment. The review was made at five centers which purchased about \$41.4 million worth of equipment during 1968.

FINDINGS AND CONCLUSIONS

A significant number of purchases had been made without effective competition because, in many instances, restrictive specifications governed the procurement. Generally, specifications were prepared by the equipment users or under their direction and included special features which the users desired. These special features usually were available only on a particular piece of equipment from a single supplier. In some cases the special features were unnecessary. If equipment users had not specified such features, specifications could have been less restrictive, which probably would have resulted in increased competition and in savings to the Government. (See p. 5.)

Analysis of 1,239 contracts awarded during 1968 for equipment costing about \$24.4 million showed that 795 of the contracts (64 percent) had been awarded without effective competition. Of the 795 contracts, 389 had been negotiated on a sole-source basis. For the other 406 contracts, bids had been solicited from more than one supplier but in every case only one bidder's equipment met the specifications. (See p. 5.)

GAO mailed questionnaires to a number of NASA suppliers and interviewed their representatives. Several suppliers informed GAO that, when they received an invitation for bid that specified a brand name or equal, they did not respond because experience had shown that the brand-name supplier would receive the award. (See p. 7.)

GAO believes that there is little incentive on the part of suppliers of the preferred brands to offer their products at competitive prices when they recognize their products' characteristics in the specifications

Examples of procurements of equipment in which competition was limited as a result of restrictive specifications are discussed on pages 9 through 14

GAO believes that, although NASA's procurement policy (see p 4) is basically sound, restrictive specifications have limited competition. The basic cause for excessive use of restrictive specifications was a lack of effective management control. Review and approval of equipment purchase requests and of specifications were insufficient to ensure that the equipment requested was necessary, that it satisfied only minimum needs, and that the specifications were not unnecessarily restrictive (See p 17)

The inadequate review and approval process places equipment users in a position to decide which suppliers' equipment they want, to prepare specifications based on the unique characteristics of the items wanted, and to be virtually assured of getting them. It usually is not economical for a supplier to modify existing equipment to compete with another supplier that can meet the specifications without changes in its product (See p 17)

Equipment specifications based on a particular supplier's equipment or specifying a brand name or equal should be used only when no alternatives are possible

Justification for such equipment should (1) identify the research project or work for which the equipment is needed and should explain the need for the equipment, (2) identify all special requirements dictating a sole-source procurement or the use of restrictive specifications, (3) describe the benefits of the special requirements, and (4) list the estimated cost of the minimum acceptable alternative equipment that could be used if the special requirements were not necessary

Such justification would provide reviewing officials with adequate information to ensure that the equipment requested satisfies the minimum needs of the Government and that the specifications are not unnecessarily restrictive

RECOMMENDATIONS OR SUGGESTIONS

To increase competition and to provide for the procurement of equipment that meets actual minimum needs, the Administrator of NASA should

- require the use of specifications that have acceptable ranges of dimensions, performance, and other characteristics of the minimum equipment necessary to fulfill the Government's requirements and

--require that requests for the purchase of equipment clearly state whether the specifications are brand name or equal or have been prepared on the basis of equipment descriptions in a supplier's catalog and, if so, that the requests give full written justification of the need for any restrictive features specified (See p. 18)

AGENCY ACTIONS AND UNRESOLVED ISSUES

NASA stated that it was in full agreement with the objective of the recommendations and that it intended to implement requirements emphasizing to contracting and management officials the need to increase competition (See p 18)

MATTERS FOR CONSIDERATION BY THE CONGRESS

This report is sent to the Congress to inform it of the actions to be taken by NASA to increase competition in procurement

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CHAPTER 1

INTRODUCTION

The National Aeronautics and Space Act of 1958 (42 U.S.C. 2451) authorized the peaceful exploration of space and established NASA to research into and solve problems of flight in and out of the earth's atmosphere and to develop, construct, test, and operate aircraft, missiles, satellites, other space vehicles, and related equipment for research purposes.

Chapter 137, Title 10, United States Code, formerly the Armed Services Procurement Act, provides that the procurement of goods and services by the Government be made, to the extent possible, under conditions of full and free competition. The NASA Procurement Regulation states that

"Plans, drawings, specifications or purchase descriptions for procurements shall state only the actual minimum needs of the Government and describe the supplies and services in a manner which will encourage maximum competition and eliminate insofar as is possible, any restrictive features which might limit acceptable offers to one supplier's product, or the products of a relatively few suppliers."

The operations of NASA are under the direction of four offices the Office of Manned Space Flight, the Office of Space Science and Applications, the Office of Tracking and Data Acquisition, and the Office of Advanced Research and Technology.

The equipment covered in this review consisted of catalog, or off-the-shelf, items and did not include special equipment designed to meet the specific needs of the users. The equipment generally consisted of such items as electronic instrumentation devices and photographic and laboratory equipment. The scope of our review is described in chapter 4.

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

CHAPTER 2

COMPETITION LIMITED BY UNNECESSARILY

RESTRICTIVE SPECIFICATIONS

Our review at five centers revealed that, in many instances, the use of restrictive specifications for the procurement of equipment had resulted in a significant number of purchases' being made without effective competition.

Generally, specifications were prepared by equipment users or under their direction and included those special features which the users considered necessary or desirable. We found, however, that the special features were generally available only on a particular piece of equipment from a single supplier and that, in some cases, the special features were unnecessary.

If equipment users had not specified such special features, the invitations for bids for the equipment could have contained less restrictive specifications, which probably would have resulted in increased competition and in savings to the Government.

NONCOMPETITIVE PROCUREMENTS

To determine the extent of competition for equipment purchases at the five centers, we compiled statistics on equipment purchases during calendar year 1968. The statistics showed that four of the centers had awarded 1,029 contracts in the total amount of about \$18.2 million and that the fifth center, Goddard Space Flight Center, had awarded 828 contracts in the amount of about \$23.2 million. We selected for analysis 210 of the Goddard contracts--in the amount of about \$6.2 million--on a random basis and all the 1,029 contracts awarded by the other centers. Thus our analysis included 1,239 contracts covering equipment purchases in the amount of about \$24.4 million

Our analysis revealed that 795 contracts, or about 64 percent, had been awarded without effective competition. Of the 795 contracts, 389 had been negotiated on a

sole-source basis. For the other 406 contracts, bids had been solicited from more than one supplier but in each case only one bidder's equipment met the specifications. The details for each center are shown in the following table.

<u>Center</u>	<u>Noncompetitive</u>			<u>Competitive</u>	<u>Total awards reviewed</u>
	<u>Sole source</u>	<u>Awarded on basis of one bid</u>	<u>Total</u>		
Ames	121	28	149	54	203
Electronics	85	117	202	91	293
Goddard	74	72	146	64	210
Langley	57	129	186	140	326
Lewis	<u>52</u>	<u>60</u>	<u>112</u>	<u>95</u>	<u>207</u>
Total	<u>389</u>	<u>406</u>	<u>795</u>	<u>444</u>	<u>1,239</u>
Percent	31	33	64	36	100

RESTRICTIVE SPECIFICATIONS

We found that the lack of effective competition was primarily attributable to the widespread practice of tailoring procurement specifications to a particular supplier's product and that this practice limited the number of suppliers that were able to respond to the invitations for bids.

The tailoring of specifications generally was accomplished in one of two ways. One practice was to cite a particular brand and model and to stipulate that an equal would be acceptable if the equal could meet certain characteristics. The other technique was to copy verbatim or to paraphrase the description of the preferred brand and model in the supplier's catalog.

We found that, when either of these two ways of writing specifications was used, the procurement usually was made under one of the following circumstances.

1. The preferred brand was bought on a sole-source basis without solicitation of other bids.

2. The preferred brand was bought because no other bids were received.
3. The preferred brand was bought because lower bids for other brands were rejected for not meeting specifications.

We were told by technical personnel at the centers, and our review confirmed, that it was common practice for the users of equipment to select in advance the brand and model desired and then to write the specifications around the features of that brand. We found that these features often had little or no relation to actual performance requirements but were apparently included only to ensure procurement of the preferred brand. Consequently, if a supplier offered another brand that could meet the center's actual requirements, the supplier's bid could be ruled non-responsive for failure to comply with the specifications.

Although the users probably were sincerely motivated to select what they considered to be the product best suited for their purposes, we believe that they often attempted to obtain the highest performance and most desirable features available without adequate consideration of whether the added cost of such features was justified by the benefits that would be realized. Moreover, since users cannot always be completely familiar with all products on the market, the practice of basing specifications upon the physical features of a preferred brand may result, in some cases, in excluding from consideration another brand which has higher performance characteristics than those of the preferred brand.

To obtain the views of NASA suppliers on the centers' practice of using restrictive specifications, we mailed questionnaires to a number of suppliers and interviewed their representatives. Several suppliers informed us that, when they received an invitation for bid that specified a brand name or equal or when they recognized that the specifications were based upon the features of a particular brand, they did not respond because experience had shown that the brand-name supplier would receive the award.

Generally, the suppliers that we contacted expressed the opinion that NASA could increase competition for its equipment purchases if it would base the specifications on the performance characteristics needed to fulfill NASA requirements rather than on the physical characteristics of one supplier's product.

In view of the suppliers' comments, we believe that invitations for bids that cite specifications based on particular brands restrict competition because suppliers of other brands believe that NASA prefers the products indicated by the specifications and therefore do not bid. As a result, we believe that there is little incentive on the part of suppliers of the preferred brands to offer their products at competitive prices when they recognize their products' characteristics in the specifications.

EXAMPLES OF USE OF RESTRICTIVE SPECIFICATIONS

To gain greater insight into the equipment procurement systems at the centers, we selected 40 noncompetitive procurements and examined into each one in detail. Our review of these procurements revealed the following information

	<u>Number of cases</u>
Competition limited because of:	
Use of restrictive tailored specifications	29
Use of restrictive brand-name or equal specifications	8
No restriction of competition noted	<u>3</u>
Total	<u>40</u>

Following are examples of procurements of equipment in which competition was limited as a result of the use of restrictive specifications.

Video tape recorder

A center had a need for a video tape recorder to be used in recording test subjects' physical and facial reactions under various controlled conditions. Because some of the tests were to be conducted in a mobile medical monitoring trailer where space was at a premium, the researcher specified that the recorder be sufficiently compact to be mounted in a 19-inch equipment rack. He specified also that the recorder have the maximum continuous recording time capability available, to minimize the need for interrupting test projects to change the tape.

The technician who was asked to develop the specifications told us that he had reviewed vendors' catalogs and had determined that the longest continuous recording time available on the market was 90 minutes and that the recorder with this capability apparently would fit into a 19-inch equipment rack. He then wrote the specifications around the features listed in the catalog for this model recorder and included the requirement that it be capable of fitting into the

equipment rack. Subsequently, the supplier of this recorder notified the center that it could not be mounted in a 19-inch rack. The technician then rewrote the specifications to eliminate the requirement for rack mounting, stating that, when the recorder was used in the trailer, it would be placed on a table rather than in the equipment rack. Nevertheless, the size and weight limitations, which were based on the dimensions and weight of the preferred model, remained unchanged in the specifications.

Invitations for bid for the procurement of the recorder were sent to 23 suppliers, but only two bids were received, in the amounts of \$4,350 and \$5,550. The supplier submitting the low bid stated that it was offering:

"*** [a] video tape recorder which provides the basic functional and operational characteristics as interpreted by Specifications No. L50-9012A.

"The specifications as written are restrictive to one particular manufacturer and source of supply therefore limiting the competitive procurement position the Federal Government desires."

The low bid was rejected because the recorder had the capability for only 60 minutes of uninterrupted playing time instead of the required 90 minutes, because it exceeded slightly the size and weight limitations, and because of certain other minor differences. The contract was awarded to the higher bidder, the supplier of the recorder that had been the basis for the center's specifications.

The recorder was received by the center in August 1968 but was inoperable and had to be returned to the manufacturer for repair. It was not returned to the center until December 1968. At the time of our review in September 1969, none of the tests had exceeded about 45 minutes and many of the tests had included interruptions which would have provided the opportunity to change tapes if it had been necessary to do so.

We discussed this procurement with the researcher using the recorder, who stated that he was not aware of the \$1,200 difference between the price of the recorder that was purchased and the low bid. He told us that, had he been aware of this difference, he would have reconsidered his request for the 90-minute recorder.

Tow tractor

A center's invitation for bids for the procurement of a tow tractor contained specifications based on those in the catalog description of a brand and model which center officials had determined would meet the center's needs. The specifications cited the brand name and model or equal and listed a number of required features which were identical with those of the preferred brand, including a 4,000-pound drawbar pull, a six-cylinder gasoline-powered engine with approximately 227-cubic-inch displacement and 84 brake horsepower, a fully synchronized transmission with three forward speeds and one reverse speed, and hydraulic brakes with an Orscheln-type parking brake.

The contract file did not contain documentation justifying the need for these specific features or evidence that these specifications had been questioned during the purchase request approval process. Moreover, none of the center officials whom we interviewed, including some of the approving officials, could explain the function of, or the need for, the specified Orscheln-type parking brake.

Six firms were invited to bid on the tow tractor, but only one bid was received. The other five firms replied that they were unable to meet the specifications. A contract for the tow tractor was awarded to the vendor whose catalog had been used as the basis for preparing the purchase specifications. The contract price was \$5,380.

We contacted a number of suppliers and determined that there were several other brands of tow tractors available at comparable or lower prices, which had a 4,000-pound or more drawbar pull but which could not meet one or more of the other specifications. For example, two of these tractors had engines with fewer than six cylinders. Center officials told us that a six-cylinder engine was not absolutely

necessary and that a tractor with fewer cylinders might have been acceptable if it could do the job required. They said that, in addition to the 4,000-pound drawbar pull, the essential requirements were weight and safety.

Since the lower priced tractors that we identified had not been evaluated by the center's technical personnel, we could not determine whether they would have met the weight and safety requirements. We believe that it is apparent, however, that the restrictive specifications effectively eliminated from competition for this advertised procurement all but the preselected brand and model of tow tractor.

Audio tape recorders

A center needed seven audio tape recorders for use in sonic-boom tests to be conducted in California's Mojave Desert. Because of the remoteness of the test locations, the center desired a recorder with a low power consumption, to permit operation from a storage battery.

The specifications were based on the catalog description of a model with a power consumption of 125 watts, which we understood was the lowest power consumption of any recorder then available. The specifications cited maximum dimensions that approximated those of the preferred brand and cited many other features that were copied almost verbatim from the supplier's catalog, including the capability to operate at an altitude of 70,000 feet. Since the sonic booms were to be recorded at ground level, the only reason for including this requirement appeared to be that it was a feature of the preferred recorder.

The center solicited bids for the procurement of the recorders from 53 suppliers but received only three bids, in the amounts of \$112,798, \$106,750, and \$75,740. The low bid was rejected because, among other things, the recorder's power consumption was 500 watts, which exceeded the specified maximum of 125 watts. The second lowest bid was received from the supplier around whose catalog description the specifications had been written. This bid was accepted and the recorders were purchased for \$106,750.

The supplier was late in delivering the recorders, and, after they were delivered, the center found them to be

defective. At the time of our fieldwork, the center had returned the recorders to the manufacturer numerous times and was still trying to have them repaired under the warranty

When less than a month remained before commencement of the scheduled tests and the center had not yet received the tape recorders in an operable condition, it solicited new proposals for the procurement of seven tape recorders to accomplish the tests. Because of the urgency of the requirement, the proposals were solicited by telephone, requiring delivery within 10 days, although the center recognized that this requirement might exclude from bidding a number of major tape recorder manufacturers who conceivably could meet the specifications. The specifications for this procurement were based upon two selected commercial models or equal.

Two proposals were received. One, in the amount of \$68,565, was for the recorder for which a bid of \$75,740 had been received under the original solicitation. The other proposal, in the amount of \$64,750, was for a brand of recorder for which a bid had not been received in the original solicitation. The center accepted the low proposal and negotiated a contract for the purchase of the seven recorders for \$64,750. Since these recorders had a power consumption of 500 watts and could not be operated from storage batteries, the center also purchased seven electric generators at a total cost of about \$1,750. We were informed by the researcher that these tape recorders satisfactorily met the center's requirements for the sonic-boom tests.

It is apparent that the center did not consider all the alternatives when it purchased the original recorders at a cost of \$106,750. Had it done so, it could have purchased seven recorders and seven generators to accomplish the tests at a considerably lower cost.

Leak detector

A center had a need for a leak detector to detect and measure leaks in vacuum systems. The user of this equipment identified the need for the equipment, selected the preferred brand and model, drafted the purchase request, prepared the specifications, recommended the source, evaluated

the bids, selected the supplier to receive the award, and accepted the equipment upon delivery.

The bid solicitation cited a brand name or equal in accordance with specifications which included such special features as sensitivity, response time, cleanup time, cold trap, remote control, dimensions, and operating instructions permanently printed on the instrument, all of which were taken from a catalog description of the preferred model

Invitations for bid were sent to 12 suppliers and five bids were received, ranging from a low of \$2,986 to a high of \$4,540. The second highest bid, in the amount of \$4,090, was for the leak detector on which the center's specifications had been based. The three lowest bids were declared nonresponsive for failure to meet the specifications, and the award was made to the supplier of the preferred brand. The highest bid was not evaluated for compliance with the specifications.

The lowest bid was rejected because, among other reasons, the instrument did not have a cold trap. The user of the equipment informed us that the purpose of the cold trap was to condense out harmful vapors and to protect the system from contamination. Our examination of the catalog describing the detector for which the low bid was submitted showed that it had a titanium pump which removed impurities from the system by a different process than the cold trap. The user told us that he had not been familiar with the titanium pump and that, had he been aware of its capability, he would have given more consideration to the low bid in view of the price difference of more than \$1,000.

Although we do not know for certain that the lowest priced leak detector would have fulfilled the center's requirements since the low bid was rejected without a technical evaluation of the titanium pump, we believe that this procurement illustrates the effect of basing specifications on the features of a preselected brand and model instead of on actual performance requirements

WEAKNESSES IN EVALUATING EQUIPMENT REQUESTS

We believe that the use of restrictive specifications stems from a lack of effective management control over the review and approval of equipment purchase requests and of the accompanying specifications. The users of equipment are responsible for preparing the purchase requests and the equipment specifications. NASA procedures require that these requests be reviewed and approved by users' branch and division chiefs.

Our review showed that purchase requests generally did not contain written justifications of equipment needs or other information necessary for the reviewing officials to determine that the required equipment was necessary, that it satisfied only minimum needs, or that the accompanying specifications were not unnecessarily restrictive. We discussed with branch and division chiefs at the various centers the basis for approving requests. At one center they told us that they relied heavily on the judgment of the users to make the proper determinations of what to buy. Some officials told us that in reviewing purchase requests they were concerned primarily with the availability of funds.

After a purchase request has been approved by the branch and division chief and, in some instances, by an assistant director, it is reviewed in the center's procurement office. According to procurement personnel, they seldom question the need for special features of equipment because they are not qualified to make a determination of the need for technical features. We believe that the procurement personnel should be able to rely upon the branch and division chiefs to adequately fulfill their reviewing responsibilities. It follows, however, that such reliance requires that equipment needs be thoroughly evaluated at those management levels.

NASA's cost reduction reports show that significant savings can be obtained when equipment requests are closely evaluated, as illustrated by the following cases.

1. After determining that a certain contractor was the only source available for the procurement of ship-board counters, a center requested the contractor to submit a proposal for the counters. The

contractor submitted a proposal of \$120,000, which the center considered excessive. After obtaining competitive bids from other contractors, the center awarded a contract to the low bidder for \$30,000.

2. A center needed four cameras to include in its photographic system for a launch simulator. In 1967 a request for a proposal was sent to the sole-source contractor, who offered the items for \$30,000. Because of budget constraints, however, the center could not purchase the cameras. After reexamining its requirements, the center determined that existing cameras could be modified to satisfy its needs. The modifications were made for \$2,200.
3. A user requested that a certain item be bought from a specific contractor because that contractor was the only one that could furnish the item. Contracting personnel questioned this decision and solicited bids from other sources. Eight bids were received, ranging from a low bid of \$62,975 to the high of \$203,500 that was submitted by the recommended sole source. The award was made to the low bidder.

As part of our review, we examined reports issued by NASA's internal auditors and found that from March 1965 three reports had been issued that included findings similar to ours. They reported that the Lewis Research Center not only had a very high number of sole-source procurements but also had insufficient documentation to justify buying items on this basis. In August 1967 the auditors reported that, at the George C. Marshall Space Flight Center, the justifications often lacked enough information to establish the necessity for purchasing items on a noncompetitive basis and that procurement specifications had been prepared on a basis that precluded competition. In September 1968 they reported that the Electronics Research Center needed to obtain increased competition for its purchases.

CHAPTER 3

CONCLUSIONS, RECOMMENDATIONS, AND AGENCY COMMENTS

CONCLUSIONS

We believe that, although NASA's procurement policy is basically sound, its practice of using restrictive specifications has resulted in limited competition. Our review indicated that the basic cause for excessive use of restrictive specifications was a lack of effective management control over the review and approval of equipment purchase requests and of specifications to ensure that the equipment requested was necessary, that it satisfied only minimum needs, and that the specifications were not unnecessarily restrictive.

This inadequate review and approval process places equipment users in a position to decide which suppliers' equipment they want, to prepare specifications based on the unique characteristics of the items wanted, and to be virtually assured of getting them. We believe that invitations for bids that contain specifications based on descriptive features of a particular product, rather than on performance requirements, result in limited competition because it usually is not economical for a supplier to modify existing equipment to compete with another supplier that can meet the specifications without changes in its product.

In our opinion, the centers' procurement systems need to be strengthened to realize the economies normally achieved through competition and to obtain adequate assurance that equipment purchases are consistent with minimum needs. In addition, we believe that NASA should reemphasize to its centers its basic procurement policy and should establish the controls necessary to ensure that the policy is properly implemented.

We believe that equipment specifications which are based on a particular supplier's equipment or which specify a brand name or equal should be used only when no alternatives are possible. We believe also that justification for such equipment should (1) identify the research project or

work for which the equipment is needed and should explain the need for the equipment, (2) identify all special requirements which necessitate a sole-source procurement or the use of restrictive specifications, (3) describe the benefits of the special requirements, and (4) list the estimated cost of the minimum acceptable alternative equipment which could be used if the special requirements in item (2) above were not necessary. Such justifications would provide reviewing officials with adequate information to ensure that the equipment requested satisfies only the minimum needs of the Government and that the specifications are not unnecessarily restrictive.

RECOMMENDATIONS

To increase competition and to provide for the procurement of equipment that meets actual minimum needs, we recommend that the Administrator of NASA:

- Require the use of specifications that have acceptable ranges of dimensions, performance, and other characteristics of the minimum equipment necessary to fulfill the Government's requirements.
- Require that requests for the purchase of equipment clearly state whether the specifications are brand name or equal or have been prepared on the basis of equipment descriptions in a supplier's catalog and, if so, that the requests give a detailed written justification of the need for any restrictive features specified.

AGENCY COMMENTS

NASA's comments on our draft report were furnished to us in a letter dated July 30, 1970 (see app. I), by the Acting Associate Administrator for Organization and Management.

NASA advised us that it was in full agreement with the objective of the recommendations and intended to implement operating requirements which would emphasize to contracting and management officials the need to increase competition in the procurement of commercial-type equipment.

NASA stated that it intended to require a certification, with concurrence at no lower than the division level of the requesting organization, that the specification employed the widest ranges of characteristics consonant with the use envisioned for the equipment and that, in the requisitioner's judgment, no quality or characteristic was stated as a requirement which was not necessary for the adequate performance of the equipment. NASA stated also that, if such a certification cannot be made, the documentation accompanying the request should provide full particulars and a justification for the use of the restrictive specification.

NASA stated further that the certification would be expanded to provide notification when a manufacturer's catalog had been used in preparing the specifications or when specifications were brand name or equal. NASA stated that, in such cases, the requisitioner would be required to make a written determination that in his judgment the use of brand-name or equal purchase descriptions or specifications would permit adequate competition and that all the known acceptable brand-name products meeting the user's requirements had been listed in the determination.

In addition, NASA stated that it was confident that the certifications and justifications described above would serve as an effective means to realize the desired improvement in procurements of the type questioned by GAO and that center directors would be requested to implement appropriate procedures immediately.

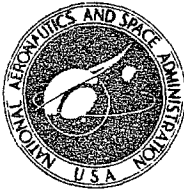
CHAPTER 4

SCOPE OF REVIEW

Our review included an examination of pertinent records and documents at the Ames Research Center, Moffett Field, California, the Electronics Research Center, Cambridge, Massachusetts, the Goddard Space Flight Center, Greenbelt, Maryland, the Langley Research Center, Hampton, Virginia, and the Lewis Research Center, Cleveland, Ohio.

We compiled statistics showing the amount of competition that these centers obtained in the award of 1,239 contracts for equipment during calendar year 1968. We also selected for detailed examination 40 noncompetitive procurements at the five centers.

APPENDIXES



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
WASHINGTON D C 20546

JUL 30 1970

REPLY TO
ATTN OF KDP-1

Mr. James K. Spencer
Assistant Director, Civil Division
U. S. General Accounting Office
Washington, D. C. 20548

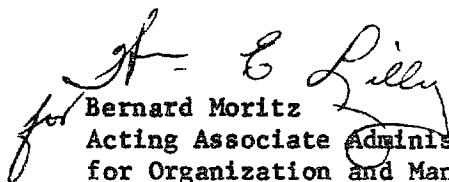
Dear Mr. Spencer:

We appreciate the opportunity to comment on the recommendations in the draft audit report, "Opportunities for Savings by Reducing Noncompetitive Procurement of Commercial-Type Equipment." As can be seen from the attached comments, the NASA is in full agreement with the objective of the recommendations and we intend to implement operating requirements which will emphasize to contracting and management officials the need to increase competition in the procurement of commercial-type equipment.

As is indicated by the report also, we believe that the NASA's procurement policy is basically sound and we are in full agreement that purchase requests and equipment specifications should not be unnecessarily restrictive. Accordingly, our comments are limited to consideration of the recommendations and the steps necessary to implement them. We feel we should point out however, that certain of the procurement examples mentioned in the report do not necessarily indicate a lack of effective management control over the review and approval of purchase requests. For instance, when equipment meeting specifications is not offered following a solicitation, the schedule for experimentation may force the acquisition of equipment which would have been regarded as only marginally acceptable at the time the request was originally approved. The successful performance of the marginal equipment is frequently associated with a margin of risk which may be tolerable only within the context of time and circumstances.

We appreciate your efforts in helping NASA to make its procurement practices more effective and believe that the additional requirements described in the attachment will strengthen our procedures.

Sincerely yours,


for Bernard Moritz
Acting Associate Administrator
for Organization and Management

NASA COMMENTS ON THE GAO DRAFT REPORT TO CONGRESS ON
OPPORTUNITIES FOR SAVINGS BY REDUCING NONCOMPETITIVE
PROCUREMENT OF COMMERCIAL-TYPE EQUIPMENT

The General Accounting Office (GAO) in the draft report titled "Opportunities for Savings by Reducing Noncompetitive Procurement of Commercial-Type Equipment," presents two primary recommendations with a view to improving competitive opportunities by decreasing the use of restrictive specifications.

It is NASA policy, as set forth in NASA Procurement Regulation, Part 1, Subpart 12, to "state only the actual minimum needs of the Government and describe the supplies and services in a manner which will encourage maximum competition and eliminate, insofar as is possible, any restrictive features which might limit acceptable offers to one supplier's product, or the products of a relatively few suppliers." The regulation also covers policy considerations on the availability of specifications, standards, plans and drawings, and the use of purchase descriptions and the use of brand names.

The following comments are submitted regarding the recommendations contained in the report:

GAO Recommendation 1. Place increased emphasis on the use of specifications which call for acceptable ranges of dimensions, performance, and other characteristics of the minimum equipment necessary to fulfill the Government's requirements.

We agree that the Government requisitioner should thoroughly justify the use of specifications which set forth restrictively narrow ranges of performance, dimensions and other characteristics; or, which establish a requirement of a kind or level found in the product of only one or two producers. The use of such specifications can be legitimate under certain compelling circumstances. When specifications prove more restrictive than necessary it is probably more due to striving for engineering or technical perfection on the part of the requisitioner rather than any intent to limit competition.

One of the recognizable difficulties that arises, contributing to instances of using a restrictive specification, is the inability of a contracting officer, not clearly in possession of superior technical knowledge, to superimpose his opinion or judgment on equipment requirements stated to be necessary by a technically qualified initiator of a purchase request. And we believe, as does GAO, that "procurement

personnel should be able to rely upon the branch and division chiefs to adequately fulfill their reviewing responsibilities." Nevertheless, we now intend to require more than the review and approval by the user's branch and division chiefs by adding the need for a certification with concurrence at no lower than division level in the initiator's organization that the specification as stated employs the widest ranges of characteristics consonant with the use envisioned for the equipment, and further, that in the requisitioner's judgment no quality or characteristic is stated as a requirement which is not necessary for the adequate performance of the equipment. If such certification cannot be made, then the documentation accompanying the request shall provide full particulars and a justification for the use of the restrictive specification. Such justification shall be concurred in at division level.

GAO Recommendation 2. Whenever specifications are brand name or equal, or have been prepared with the use of a supplier's catalog, require that the individual who prepares the purchase request clearly state that fact and that he furnish a detailed written justification for using this type of specification.

The certification mentioned above will be expanded to provide notification when a given manufacturer's catalog has been used in preparing the specification. When this occurs or when specifications are brand name or equal, the documentation accompanying the request will provide full justification for the concurrence of the division chief. Thus the requisitioner will be required to make a written determination that in his judgment the use of brand name or equal purchase descriptions or specifications will permit adequate competition, that all of the known acceptable brand name products meeting the user's requirements have been listed in the determination

In order to maintain the engineering competence demonstrated in the accomplishment of the NASA mission to date, we feel that engineering personnel must be free to exercise their judgment in determining needs. At the same time, the contracting officer needs to know that such judgment, considering all aspects, including the need for competition and economy, has in fact been made. We are confident that the certifications and justifications described above will serve as an effective means to realizing the desired improvement in procurements of the type questioned by GAO, and we will request Center Directors to implement appropriate procedures immediately



D. J. Harnett
Assistant Administrator
for Industry Affairs

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

<u>Tenure of office</u>	
<u>From</u>	<u>To</u>

HEADQUARTERS

ADMINISTRATOR:

George M. Low (acting)	Sept. 1970	Present
Thomas O. Paine	Oct. 1968	Sept. 1970
James E. Webb	Feb. 1961	Oct. 1968

DEPUTY ADMINISTRATOR:

George M. Low	Dec. 1969	Present
Thomas O. Paine	Mar. 1968	Oct. 1968
Robert C. Seamans, Jr.	Dec. 1965	Jan. 1968

ASSOCIATE ADMINISTRATOR

Homer E. Newell	Oct. 1967	Present
Robert C. Seamans, Jr	Sept. 1960	Sept 1967

ASSOCIATE ADMINISTRATOR FOR
ORGANIZATION AND MANAGEMENT

Richard C. McCurdy	Oct. 1970	Present
Bernard Moritz (acting)	May 1969	Oct. 1970
Harold B. Finger	Mar. 1967	May 1969

ASSISTANT ADMINISTRATOR,
OFFICE OF INDUSTRY AFFAIRS AND
TECHNOLOGY UTILIZATION

Daniel J. Harnett	Oct. 1969	Present
George J. Vecchietti (acting)	May 1969	Sept. 1969
Philip N. Whittaker	Aug. 1968	May 1969
Bernhardt L Dorman	Jan. 1967	July 1968

<u>Tenure of office</u>	
<u>From</u>	<u>To</u>

AMES RESEARCH CENTER

DIRECTOR:

Hans M. Mark	Feb. 1969	Present
H. Julien Allen	Oct. 1965	Feb. 1969

ELECTRONICS RESEARCH CENTER (note a)

DIRECTOR:

James C. Elms	Oct. 1966	June 1970
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GODDARD SPACE FLIGHT CENTER

DIRECTOR:

John F. Clark	July 1965	Present
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LANGLEY RESEARCH CENTER

DIRECTOR:

Edgar M. Cortright	May 1968	Present
F. L. Thompson	May 1960	May 1968

LEWIS RESEARCH CENTER

DIRECTOR:

Bruce T. Lundin	Nov. 1969	Present
Abe Silverstein	Nov. 1961	Oct. 1969

^aElectronics Research Center was closed as of June 1970.