

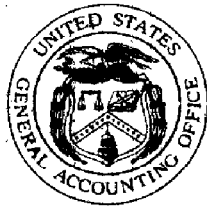
GAO

Report to the Chairman, Subcommittee
on Investigations and Oversight,
Committee on Science, Space, and
Technology, House of Representatives

January 1994

FEDERAL CONTRACTING

Weaknesses Exist in NSF's Process for Awarding Contracts



**Resources, Community, and
Economic Development Division**

B-254395

January 31, 1994

The Honorable Jimmy Hayes
Chairman, Subcommittee on
Investigations and Oversight
Committee on Science, Space,
and Technology
House of Representatives

Dear Mr. Chairman:

The National Science Foundation (NSF), an independent federal agency with a fiscal year 1994 budget of about \$3 billion, promotes and advances science in the United States, primarily through grants to research institutions. In addition, NSF enters into contracts for services that assist the agency in its program evaluations and in other program activities, such as processing grant proposals.

Because of concerns about the integrity of NSF's procurement process for awarding its competitive and noncompetitive contracts, we were asked to determine whether weaknesses exist in this process. Specifically, for competitive contracts, we assessed (1) whether NSF, when soliciting for proposals, clearly described the work needed and identified the specific items that would be considered in evaluating the proposals and (2) whether NSF evaluated the proposals in accordance with the factors included in the solicitations. For noncompetitive contracts, we assessed whether NSF, as required, properly justified procuring the services on a sole-source basis. To address these objectives, we reviewed 10 competitive contracts that we randomly selected from a universe of 32 competitive contracts and all 11 noncompetitive contracts that NSF awarded during fiscal years 1990 and 1991. The estimated value of the 21 contracts we reviewed totaled about \$49.4 million. (See app. I.)

Results in Brief

Weaknesses exist in NSF's process for awarding competitive contracts. Specifically, we identified one or more weaknesses in the contract award process for 6 of the 10 competitive contracts that we reviewed. Nine weaknesses in the award process for the six contracts are discussed below. For three contracts, NSF did not clearly describe during the contract award process the work it needed; as a result, the offerors, who are the potential contractors, were not provided with enough information to determine what services NSF actually needed. Also, for three contracts, NSF

did not inform the offerors about the relative importance of the factors it would use in its evaluation of the offerors' proposals. As a result, the offerors had to rely on their own judgment of the factors' importance to NSF in evaluating offerors' proposals. In addition, for three contracts, NSF's evaluations of proposals were faulty because the evaluation factors were either changed or improperly scored during the evaluation process. When proposals are not evaluated correctly, contracts could be awarded that are not the most advantageous to the government.

The weaknesses we found, in general, can be attributed to the agency's overall lack of emphasis on contracting activity, including inadequate internal oversight of the contract award process. Insufficient guidance for preparing solicitations and evaluating offerors' proposals has also contributed to the weaknesses identified. Taken together, these weaknesses raise questions about NSF's competitive contract award process.

Weaknesses also exist in NSF's process for awarding noncompetitive contracts. Although federal law allows an agency to obtain services from only one source, rather than through competition, the agency must provide a written justification for doing so. The justification is to, among other things, document what efforts were taken to identify other potential offerors and state what actions, if any, the agency plans to take to remove obstacles to future competition. NSF did not meet either of these requirements for 6 of the 11 noncompetitive contracts that it awarded during fiscal years 1990 and 1991. As a result, NSF may have denied other potential offerors the opportunity to compete for procurements and deprived itself of the benefits of competition.

Background

Federal agencies, including NSF, are required to comply with the Competition in Contracting Act of 1984 and the Federal Acquisition Regulation when acquiring goods and services through contracts. When a contract award is protested, GAO, under the authority of the act, reviews the award for compliance with federal procurement laws and regulations and issues a decision. NSF has developed a Proposal and Award Manual, which was updated in November 1993, that (1) provides the policies and procedures for soliciting procurement proposals and for awarding contracts and (2) identifies the responsible officials and their roles. NSF has supplemented the manual with memorandums that provide additional guidance for awarding contracts.

As outlined in the act, the federal standard for competition in the contracting process is called "full and open competition." Under full and open competition, all responsible sources are permitted to compete for a proposed procurement. When federal agencies acquire goods and services through full and open competition, they generally solicit proposals from offerors by distributing solicitations. The competition act and the acquisition regulation require that a solicitation (1) describe an agency's needed services; (2) identify specific items, called evaluation factors, that offerors need to address in their proposals and that will be considered in evaluating the proposals; and (3) explain how the various factors will be evaluated and what the relative importance of the factors will be during the agency's contractor selection process. After the agency receives the offerors' proposals, the agency is required to evaluate the proposals in accordance with the factors given in the solicitation.

When federal agencies acquire goods and services by noncompetitive procurement rather than by full and open competition, they must prepare a written justification that complies with the requirements of the act and the regulation. This justification must identify (1) the statutory basis and the reasons for making an exception to the general requirement for competition, (2) the efforts that the agency took to identify other suppliers, and (3) the efforts that it will take to ensure that future procurements for the item will be competitive.

At NSF, the Division of Contracts, Policy and Oversight is responsible for issuing procurement solicitations, making contract awards, and establishing the policies and procedures used in NSF's contracting activities.¹ Contracting officers perform contracting functions within the Division. NSF's personnel in program offices, who need the contract services to accomplish their program missions, develop the procurement statements of work and evaluation factors and assist in evaluating contractors' offers.

As of April 1993, the cumulative amount that had been obligated to fund active NSF contracts was about \$1.7 billion. Services procured under NSF contracts have ranged from processing grant applications to evaluating NSF programs.

¹The Division of Contracts, Policy and Oversight was established in May 1993 through a reorganization of NSF's Division of Grants and Contracts, which had been responsible for performing grants and contracts functions. All of the contracts that we reviewed were awarded before May 1993.

Weaknesses Exist in the Competitive Contract Award Process

In 6, or 60 percent, of the 10 contracts we reviewed, one or more weaknesses existed in the process NSF used to award the contracts.² These weaknesses included failures to (1) clearly explain NSF's needs to offerors, (2) adequately explain the relative importance of the evaluation factors provided to offerors, (3) evaluate proposals in accordance with the evaluation factors and without scoring errors, and (4) reject an offeror's late proposal.

Descriptions of Work Did Not Explain NSF's Needs to Offerors

NSF did not always provide to offerors clear descriptions of the work it needed for use in preparing proposals to compete for contracts. Specifically, statements of work for 3, or 30 percent, of the 10 competitive procurements that we reviewed were not clear. The act and regulation require agencies to specify their needs in order to promote full and open competition for procurements and to include any type of descriptions or specifications needed to do this. Similarly, both NSF's Proposal and Award Manual and internal memorandums require solicitations to have statements of work that contain sufficient detail to elicit responsive proposals. Furthermore, GAO has stated that it is a fundamental principle of federal procurement law to require that solicitations—which include statements of work—be clear and complete in order to provide offerors with a common basis for preparing proposals so that they can compete on an equal basis.³

For one procurement, the statement of work stated that the objective of the procurement was to assess the overall merits of an NSF program. However, we do not believe the specific tasks included in the statement of work would accomplish a program assessment. The tasks included activities such as describing the proposed methodology for sampling participants, designing the interview, and designing the plan for analyzing the data. The implication was that an assessment was to be made and a report prepared, but no specific tasks were mentioned for compiling and analyzing data. Thus, the statement of work did not clearly and completely describe NSF's needs to the competing offerors.

Within 3 months after the contract was awarded, the winning offeror told NSF program officials that the contract needed to have tasks added so that an assessment could be done. The NSF contracting officer reviewed the

²On the basis of the sample, the estimated percentage of contracts in the universe having one or more of the weaknesses is between 28.1 and 84.4 percent, at the 95-percent confidence level. (See app. I.)

³Tony Ingoglia Salami and Cheese, Inc., Comptroller General Decision, B-244452, Sept. 23, 1991, 91-2 C.P.D. ¶ 268.

statement of work and determined that a change had to be made to the contract to add the tasks necessary to complete the original intent of the procurement. The additional work increased the amount of the contract by \$40,743, or from \$238,004 to \$278,747.

For a second procurement, the statement of work included a provision for additional technical support tasks that did not clearly define the additional services requested. The statement of work stated that the offeror should be prepared to provide additional technical assistance to NSF staff in survey research design and analysis in areas that were not identified. The unspecified technical support assistance was estimated to cost \$250,000, representing 20 percent of the amount of the contract. Since the services were not specifically identified, this open-ended provision could have meant many different things, and the competing offerors may not have been competing with an equal understanding of NSF's needs.

For a third procurement, the statement of work was unclear; several vague terms and phrases were used to describe NSF's required services. For example, the statement of work included terms and phrases such as "adequate spare parts" and "adequate documentation." In addition, the statement of work did not clearly indicate the need for a minimum number of personnel and company resources. However, these items were considered significant when the proposals were evaluated.

Such unclear statements of work do not provide a common basis on which offerors can compete, and the offerors may be reduced to guessing at what services NSF wants. Furthermore, unclear and incomplete statements of work in cases where more specificity could have been used may lead to additional costs after a contract is awarded for work that was not originally requested or clearly understood. We found that contracting is not a major activity at NSF compared to its grant activity and that the problems we identified were the result of inadequate oversight and guidance.

NSF procurement officials in the former Division of Grants and Contracts agreed that contracting is not a major activity at NSF compared with the agency's grant activity. Also, the officials told us that because contracting officers were responsible for both contracts and grants before May 1993 and did not routinely prepare contracts, inadequate oversight by contracting officials would have contributed to the problems we identified. Furthermore, the officials said that some personnel in program offices do not routinely prepare statements of work because of the small

amount of contracting in those offices. In addition, the officials acknowledged that NSF's guidance does not specify how statements of work should be written.

To ensure better oversight of contracts, the Division was split into two separate divisions in May 1993—one handling contracts and the other handling grants.⁴ Division officials believe that because the contracting officers and other contracting personnel responsible for contract awards will no longer handle grant awards, they will be able to focus their attention on ensuring that contract awards comply with applicable requirements. However, the Division has not issued any specific guidance to its program offices on how to prepare statements of work.

Importance of Evaluation Factors Was Not Provided to Offerors

The relative importance of the factors used to evaluate proposals was not clearly explained to competing offerors in 3, or 30 percent, of the 10 competitive contracts that we reviewed. As a result, offerors had to rely on their own judgment of the factors' importance. For one of the procurements, additional explanations of the importance of the evaluation factors were needed in order to comply with the regulation, as GAO interprets it. In two other procurements, additional explanations could have improved offerors' understanding of the factors' importance.

The act and the regulation require agencies to issue solicitations that clearly state all factors and their relative importance—such as cost and technical capability—that will be used to evaluate proposals. The regulation requires the factors to be listed in their order of relative importance, but it does not specifically require that a numerical weight be assigned or that adjectival descriptions of the factors' relative importance be included. However, in bid protest decisions, GAO has interpreted the regulation to mean that when one factor is assigned a predominant value over the other factors, this importance should be disclosed to potential offerors, and more is required than a mere statement that evaluation factors are listed in their order of importance.⁵ NSF's Proposal and Award Manual also requires that technical evaluation criteria and their relative importance must be included in solicitations.

Although all of the solicitations we reviewed listed the evaluation factors, the relative importance of the factors was not explained as precisely as

⁴The Division of Contracts, Policy and Oversight is now handling contracts, while the Division of Grants and Agreements is handling grants.

⁵Sperry Rand Corporation, Comptroller General Decision, B-179875, Sept. 12, 1974, 74-2 C.P.D. ¶ 158.

possible in three of the solicitations. For one procurement, the solicitation listed the evaluation factors as A, B, C, and D and stated that they were listed in order of importance. The relative importance of the factors was not disclosed in the solicitation, thus giving the impression that the difference between the factors was relatively small. However, the maximum value assigned to each factor and used in evaluating the proposals was 750 points for A, 100 points for B, 75 points for C, and 75 points for D. Therefore, factor A is at least 7.5 times greater than any other factor—a clearly significant difference. Thus, merely listing the factors in the order of importance was misleading to the competing offerors, since the significant difference in the value of the factors was not disclosed. GAO interpreted the solicitation as being inconsistent with the regulatory requirements.

For two other procurements, the differences in the numerical values assigned to the factors during the evaluation process were not as large as those in the example above, but a clearer explanation of the factors' relative importance would have helped the offerors in identifying the most important factors. For example, these two procurements had four evaluation factors—A, B, C, and D; factor C was 2.5 times as important as factor D, which followed it. One of the potential offerors who submitted questions to NSF on one of the solicitations asked about the importance of the evaluation factors. However, NSF did not provide any additional information and stated that the information provided in the solicitation was sufficient for offerors to determine the factors' importance.

In these two procurements, the relative importance of the evaluation factors could have been described more fully. As a matter of sound procurement policy, we believe that when evaluation factors are materially unequal, the fullest possible disclosure of all of the evaluation factors and their relative importance is preferred to relying on the reasonableness of the offerors' judgment as to the relative importance of the various evaluation factors.

When the relative importance of evaluation factors is not explained to competing offerors, the offerors' ability to prepare proposals that meet the requirements of the procuring agency is hindered. The offerors must rely on their own judgment to determine the importance of the evaluation factors; as a result, they may not spend enough time on important factors and may spend too much time on less important factors. These unneeded efforts to address less important factors could lead to wasted costs and could hurt the procuring agency, because it may not obtain proposals that

address its true needs. We found that NSF had not developed any additional guidance for use in describing the relationship between factors.

Officials in the Division of Grants and Contracts agreed that NSF's guidance requires disclosure only of the relative importance of the evaluation factors in solicitations. The guidance does not include any criteria for describing the relationship between these factors. Furthermore, as discussed above, the officials said that because contracting officers do not award contracts as routinely as they do grants and because the number of contracts awarded is small, oversight of evaluation factors may also have been inadequate.

Evaluations of Proposals Were Faulty

For 3, or 30 percent, of the 10 competitive contracts that we reviewed, the evaluation factors, though satisfactorily described, were either changed or improperly scored when the proposals were evaluated. The act and the regulation require NSF, once the competing offerors' proposals are received, to evaluate the proposals in accordance with the factors in the solicitations and in a manner that is fair to competing offerors. Similarly, NSF's Proposal and Award Manual requires that specific evaluation criteria and the relative importance of the criteria as stated in the solicitations be used to evaluate offerors' proposals. In addition, NSF's May 8, 1992, memorandum on contracting states that the criteria used to evaluate proposals must be the same as those given in the solicitation; the memorandum includes a model evaluation plan and procedures and examples of rating scales and scoring sheets for personnel in program offices to use in evaluating proposals.

Specifically, in two procurements, we found that the factors used to evaluate proposals were not the same as those given in the solicitations. For one procurement, the solicitation stated that factors A and B were of equal value, but during the actual evaluation of proposals, factor A was given almost twice the importance of factor B. In the other procurement, the factors in the solicitation and the factors used in evaluating the proposals were completely different. A factor in this solicitation, which accounted for 20 percent of the evaluation score, stated that the offerors would be evaluated on their ability to provide remedial maintenance within 4 hours. The criterion in the evaluation plan stated that an offeror must have a detailed plan to provide remedial maintenance 24 hours a day, 7 days a week.

For the remaining procurement, each factor in the proposals was to be evaluated and given an even-numbered score between 0 and 10 on the basis of the criteria associated with the number score. For example, a score of 2 was required when a proposal was evaluated as inadequate, with a major weakness that could not be corrected without substantive revisions. A score of 6 or more reflected a factor that was adequate and met specifications without substantive revisions, with no major weaknesses. For one offeror's proposal, the numerical evaluation criteria related to the evaluation factors were not consistently applied to the proposal by the evaluators who scored it. For example, the evaluators had rated the proposal with numerical scores of 6 or more, indicating that the proposal had no major weaknesses, but the narrative evaluation of the proposal showed that the evaluators believed that the proposal did have major weaknesses and thus should have resulted in numerical scores of 4 or less.

Mistakes in the application of evaluation factors and the scoring of proposals affect the integrity of NSF's competitive award process. Also, faulty scoring could result in an award to an offeror who is not the most advantageous for the government. We found that the contracting officers did not provide adequate oversight of the application of evaluation factors in three cases and that NSF's current guidance does not specifically address the contracting officers' responsibility to ensure that the numerical scoring of the proposals is done correctly.

Officials in the Division of Grants and Contracts told us that they could not explain the causes of the problems we found with the proposal evaluations. They pointed out, however, that NSF's current guidance instructs contracting officers and program offices' personnel to ensure that the evaluation factors used to evaluate proposals are the same as those in the solicitation. Even so, the guidance does not specifically tell the contracting officers to ensure that the evaluations are done correctly.

NSF Allowed One Late Offeror to Compete After Initial Proposal Evaluations Were Completed

According to the Federal Acquisition Regulation, the offerors' proposals that are received after the deadline for submission should not be considered. However, a late proposal may be accepted if it is received before a contract is awarded, if it meets the mailing or other requirements specified by the regulation, and if the late receipt was the result of the government's mishandling of the proposal. In one procurement we reviewed, NSF accepted an offeror's proposal 3 months after the cutoff date. Although the offeror who submitted the late proposal was not

awarded the contract, the inclusion of the late proposal was unfair to the original offerors. Acceptance of the late proposal was unfair because it was not required to go through the initial evaluation and ranking process that the original offerors' proposals went through.

Although NSF contracting personnel in the Division of Grants and Contracts reviewing the procurement believed the acceptance of this late proposal was improper, they continued with the procurement to prevent delays in awarding the contract. They did so because the procurement had been under way for over 6 months, the late proposal already had been evaluated when the Division reviewing official found out that the proposal was late, and the potential for a bid protest was likely if the solicitation was canceled.

Justifications for Noncompetitive Procurements Did Not Address All Required Factors

NSF's justifications for some noncompetitive awards did not document NSF's attempts to identify other capable offerors and the efforts made, if any, to remove obstacles to future competition, as required, prior to making noncompetitive contract awards. The act and regulation allow federal agencies, including NSF, to obtain services from only one source when no other source will satisfy the agencies' requirements. However, in doing so, agencies must provide a written justification to support the decision. The justification should describe the efforts made to ensure that offers are solicited from as many potential sources as is practical. It should include any effort that was made to identify potential offerors from the commercial marketplace; a list of other sources that expressed an interest; and a statement of actions, if any, that the agency plans to take to remove obstacles to future competition. Additionally, NSF's May 8, 1992, memorandum states that noncompetitive procurements should be documented and justified, as required by the regulation. Unlike competitive procurements, noncompetitive procurements do not require the issuance of solicitations that contain statements of work and evaluation factors. In addition, proposals are not received from multiple offerors for evaluation and scoring prior to the contract award.

NSF's justifications for 6 of the 11 noncompetitive contracts awarded during fiscal years 1990 and 1991 did not document if other offerors were available and capable of meeting NSF's needs and if efforts were made to increase future competition for the services. In each of the six cases, the contracting officer prepared a justification stating that it was impossible to obtain full and open competition. However, our review of NSF's justifications and related information in the contract files did not disclose

any written documents to show that NSF had attempted to identify other potential offerors capable of providing the required services. In addition, the justifications did not document NSF's efforts, if any, to remove obstacles to future competition, as required by the regulation. When NSF, or any other agency, awards contracts without checking for the existence of other capable offerors, it denies potential offerors the opportunity to compete for procurements and deprives itself of the benefits of competition.

A contracting official in the Division of Grants and Contracts said that for the six noncompetitive procurements we questioned, the contracts had been awarded to the National Academy of Sciences. He explained that since the Academy is recognized as a unique and reputable source throughout the government, NSF did not attempt to identify other capable offerors and did not take any actions to remove obstacles to future competition. The contracting official told us that NSF recently awarded a competitive contract to an organization other than the Academy to manage an NSF program though the contract had been awarded to the Academy for the past 40 years. The official further explained that he did not know how many other noncompetitive contracts are with the Academy that could be competitive. This lack of awareness of other potential offerors is what the act sought to eliminate when it imposed the documentation requirements in the justifications.

Although circumstances may exist in which a sole-source award is justified on the basis of the unique status of an offeror and the particular needs of an agency for a specific contract, we believe that this justification should not be assumed to apply on a wholesale basis. Furthermore, an offeror's unique status does not relieve agencies of their responsibility under the regulation. The act and the regulation require that an individual justification must be made for each noncompetitive procurement on a case-by-case basis.

Conclusions

At the heart of the federal competitive procurement process is the concept of fairness to all potential competitors. This concept can be gleaned from procurement law, which requires that all responsible sources be permitted to compete for federal procurements. To effectively compete for competitive procurements, potential offerors need to know what the government's needs are and what evaluation factors are important to the government. Furthermore, competing offerors need to know that their proposals will be evaluated in accordance with the evaluation factors

listed in the solicitation and that their proposals will be scored correctly. Although the concept of fairness has been defined and explained by law, regulation, and bid protest decisions by the Comptroller General, six of NSF's competitively awarded contracts that we reviewed had one or more weaknesses in these key areas. Considering the number of contracts with weaknesses and the variety of weaknesses, NSF's competitive contract award process is open to question.

We found inadequate oversight of the process for awarding contracts and a lack of specific guidance on key aspects of the award process to be the two primary causes of the weaknesses we identified. Recently, in May 1993, NSF reorganized its contracts and grants organization to create separate offices for contracts and grants. Specifically, this was done to provide greater oversight of the contract award process. We believe this is a step in the right direction. However, the need still exists for more specific guidance on the competitive contract award process in connection with the weaknesses that we identified.

On the majority of the noncompetitive contracts that we reviewed, NSF did not document whether it had made an effort to identify other sources and to remove obstacles to competition for future procurements. Since NSF depends largely on one contractor, other potential offerors may not have been given the opportunity to compete for the work.

Recommendations

To further improve NSF's contracting activities, we recommend that the Director, NSF, develop detailed guidance for

- program officials to use in preparing statements of work, including a description of the type of information the statements of work should provide and examples of weaknesses to avoid;
- program and contracting personnel to use in explaining the relative importance of evaluation factors in solicitations; and
- contracting officers to use in ensuring that evaluation criteria are scored properly.

In addition, the Director, NSF, should ensure

- that contract personnel comply with existing requirements to determine if other offerors are available before awarding contracts on a sole-source basis and document the efforts taken to do so and

- that planned efforts to remove obstacles to future competition for sole-source procurements are documented as required.

Agency Comments and Our Evaluation

NSF provided written comments on a draft of this report and agreed with all of our recommendations. However, NSF expressed an overall concern that the draft report did not reflect recent improvements made to the agency's contracting process and organization since the period covered by our audit. We agree that NSF has taken a number of steps to strengthen its management of contracting activities, including a major reorganization in May 1993. We acknowledge this reorganization in the report. To further address NSF's concerns, we added a statement recognizing that NSF revised its contracting policies and procedures manual in November 1993. While an improvement, the manual still falls short of addressing the specific weaknesses we identified.

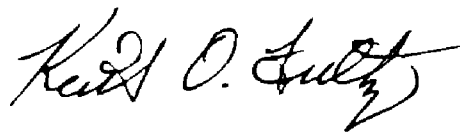
Furthermore, while NSF acknowledged weaknesses in the process for awarding certain contracts, it disagreed that the weaknesses were pervasive. We do not state that the weaknesses we identified were pervasive. The results of our random sample of competitive contracts are presented in the report as an estimate of the percentage of contracts in the universe with the identified weaknesses. To avoid misinterpretation, we provide the lower and upper bounds of the estimate of contracts with weaknesses in a footnote in the report and in appendix I. An attachment to NSF's response letter details these and other concerns about the report's characterization of our findings. These comments and our evaluation of them are presented in appendix II.

To accomplish our objectives, we interviewed the appropriate NSF officials in Washington, D.C. We also reviewed pertinent legislation, regulations, Comptroller General Decisions, NSF guidance, reports from NSF's Office of Inspector General, and contract files. We conducted our review from June 1992 to November 1993, in accordance with generally accepted government auditing standards. Appendix I provides additional information on our scope and methodology.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days after the date of this letter. At that time, we will send copies to the Director, NSF; the Director, Office of Management and Budget; and other interested parties. We will also make copies available to others upon request.

This work was performed under the direction of Victor S. Rezendes, Director, Energy and Science Issues, who can be reached on (202) 512-3841 if you or your staff have any questions. Major contributors to this report are listed in appendix III.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Keith O. Fultz". The signature is written in a cursive style with a large, stylized initial "K".

Keith O. Fultz
Assistant Comptroller General

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Abbreviations

GAO	General Accounting Office
NSF	National Science Foundation

Scope and Methodology

In response to a request from the Subcommittee on Investigations and Oversight, House Committee on Science, Space, and Technology, we determined whether weaknesses existed in the National Science Foundation's (NSF) process for awarding its competitive and noncompetitive contracts. Specifically, we assessed (1) whether NSF's solicitations for competitive procurements clearly described the work needed and identified the specific items that would be considered in evaluating proposals and (2) whether NSF evaluated the proposals in accordance with the factors in the solicitations. For the noncompetitive contracts, we determined whether NSF properly justified procuring the services on a sole-source basis.

We used data from NSF's computerized contract award system to identify the universe of active contracts having award values of \$25,000 or more, and were awarded in fiscal years 1990 and 1991. We identified 44 contracts that were awarded in fiscal years 1990 and 1991. One contract was excluded from the universe of contracts because it was a management and operations contract that was not typical of the other contracts. We determined that 32 of the 43 remaining contracts were awarded through competition, and 11 were awarded without competition. We determined whether the contracts were competitive or noncompetitive from data, which we obtained by computer from the governmentwide Federal Procurement Data System, and NSF files.

We selected for review the 11 noncompetitive contracts with an estimated value of about \$27.8 million. We also selected a random sample of 10 competitive contracts with an estimated value of about \$21.6 million, for a total of 21 contracts with an estimated value of about \$49.4 million.

The 10 competitive contracts that we reviewed were taken from a universe of 32 active contracts that were awarded by NSF in fiscal years 1990 and 1991 with a total estimated value of about \$95 million. We took a simple random sample of the competitively awarded contracts to estimate the percentage of contracts in the universe that had the weaknesses we found. Each sample proportion has a measurable precision that indicates how closely we can reproduce from the sample the results that we would obtain if we were to take a complete count of the universe of 32 contracts using the same measurement methods. For example, when a particular weakness was found in 30 percent of the cases sampled, we estimate that between 9.4 and 62.5 percent of the cases in the universe have that weakness. This range, or confidence interval, is calculated at the 95 percent confidence level, meaning that 95 times out of 100 we would

obtain a confidence interval actually containing the percent of the cases in the universe with that weakness. Table I.1 below shows the estimates from our sample.

Table I.1: Estimated Percentage of NSF's Competitive Contracts With Contract Award Weaknesses

Sampled contracts with a contract award weakness		Estimated percentage of contracts in the universe with a contract award weaknesses	
Number	Percent	Lower bound	Upper bound
0	0.0	0.0	25.0
1	10.0	3.1	40.6
2	20.0	6.3	53.1
3	30.0	9.4	62.5
4	40.0	15.6	71.9
5	50.0	21.9	78.1
6	60.0	28.1	84.4
7	70.0	37.5	90.6
8	80.0	46.9	93.8
9	90.0	59.4	96.9
10	100.0	75.0	100.0

Note: The lower and upper bounds are calculated at a 95-percent confidence level.

To determine whether NSF followed the procurement requirements for awarding competitive contracts, we examined the description of services in the statements of work, the criteria for evaluating proposals that NSF provided to offerors, and the results of proposal evaluations. We analyzed the descriptions of services contained in the solicitations to determine whether they were clearly expressed and understandable. We determined whether the criteria and evaluations complied with regulatory requirements. We also determined whether the justifications for noncompetitive contract awards were consistent with certain requirements of the act and regulation. In addition, we discussed the awards with NSF officials.

Comments From the National Science Foundation

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

NATIONAL SCIENCE FOUNDATION
4201 WILSON BOULEVARD
ARLINGTON, VIRGINIA 22230



November 24, 1993

Mr. Victor S. Rezendes
Director, Energy and Science Issues
Resources, Community, and Economic
Development Division
United States General Accounting Office
Washington, D.C. 20548

Re: GAO Proposed Report entitled, Federal Contracting Weaknesses Exist in NSF's Process for Awarding Contracts (GAO/RCED-94-31)

Dear Mr. Rezendes:

This letter provides National Science Foundation comments on the subject draft GAO report, in response to your letter of November 3, 1993.

Our chief concern is that the report discusses perceived weaknesses in NSF's contracting process during the 1990-1991 timeframe and characterizes them as if occurring in the present. In addition, it does not recognize the improvements NSF has made in its contracting process and organization since the period of time covered by the report. NSF took major steps in 1992 and 1993 to strengthen its acquisition process and its management of contracting activities as well as to specifically address many of the weaknesses GAO notes. (The Attachment identifies the steps NSF has taken and provides detailed comments including NSF's concerns about the report's characterizations of the GAO findings).

NSF acknowledges the GAO findings regarding weaknesses in the process for certain contracts during the timeframe reviewed, and concurs with the report recommendations. We are pleased that the GAO review did not find that any contract competition should have resulted in a different outcome or that any contract award should have been made to another offeror.

The National Science Foundation will continue to review existing contracting guidance and practices and give particular emphasis and attention to contracts management, staffing and oversight activities. We will also implement the GAO recommendations as discussed in the Attachment.

We appreciate the opportunity to provide agency comments on the draft report.

Sincerely,

Neal Lane
Director

Attachment

See comment 1.

See comment 2.

NSF Comments on GAO's Proposed Report

Federal Contracting: Weaknesses Exist in
NSF's Process for Awarding Contracts
(GAO/RCED-94-31)

Background

The statements regarding weaknesses in NSF's contracting process during the 1990-91 timeframe are characterized as if occurring in the present, do not reflect the major changes taken to strengthen the acquisition process in NSF, and are not indicative of NSF's current contracting process. We request that GAO modify statements cast in the present tense, regarding problems or weaknesses that may have been observed during that period and give adequate emphasis to several important changes in NSF's contracting practices. For example, a major reorganization in May 1993, created the Division of Contracts, Policy and Oversight to provide greater focus to agency contracting activities. This reorganization was effected in part, due to recent NSF internal and Inspector General findings which highlighted the need to have a separate contracting and procurement staff that did not also have responsibility for NSF grant awards. The reorganization has resulted in increased oversight, resources and attention to procurement activities. In addition, NSF has increased emphasis on training of contracting personnel, developed extensive supplemental guidance on contracting and issued detailed guidance to all contracting staff. Finally, over three years ago the Foundation's Office of the General Counsel began to review Request for Proposals and awards involving more than \$25,000 to assure their legal sufficiency.

All of the contracts discussed in the report were awarded in 1990-1991, prior to these changes. Yet, the report characterizes perceived weaknesses in these contracts as if they reflect current processes. Certain statements in the report speak of events occurring in 1992-1993, (e.g. the footnote at page 5), thus, further lending itself to misunderstanding. We believe the report needs to be much clearer as to the timeframes of the various elements discussed.

Statistical Characterizations

We question whether certain statistics, based on the number of contracts sampled in the report, accurately reflect *pervasive* weakness in the process or oversight of contracts generally. While NSF acknowledges weaknesses in the process for certain contracts, other practices which GAO cites as weaknesses are subject to differences in opinion regarding the best contracting practice. Given these legitimate differences in opinion, statements in the report such as, "In 6, or 60 percent, of the 10 (competitive) contracts we reviewed, one or more weaknesses existed in the process NSF used to award the contracts" are misleading, are subject to misinterpretation and are not indicative of the actual findings. The GAO review does not suggest that NSF officials acted improperly in any instance, that any contract competition should have resulted in a different outcome or that any contract award should have been made to another offeror.

See comment 1.

See comment 3.

See comment 4.

Evaluation Factors

An example of the problems with the report's characterizations is the description of the application of evaluation criteria. Sperry Rand, a GAO decision cited in the report, indicates that where one evaluation factor is predominant, that should be so stated in the Request for Proposals (RFP). In only one NSF solicitation was there indeed a predominant factor which should have been so indicated in the RFP. Yet, GAO cites two other NSF solicitations in which the evaluation factors were only slightly more heavily weighted relative to one another to arrive at the 30 percent "error" rate claimed. Comptroller General decisions do not support the view that a more detailed description of relative weights is necessary in the other two solicitations. GAO's statement attributing a 30 percent error rate in the application of evaluation factors is inconsistent with Sperry Rand and thus is overstated by 20 percent. The discussion in the report of these cases also fails to acknowledge the Federal Acquisition Regulations, Part 15.605 (b) which state that the "relative importance of those factors (are) within the broad discretion of agency acquisition officials."

See comment 5.

Statements of Work

In another of the characterizations regarding weaknesses in statements of work, GAO criticized the use of a technical assistance clause in one of the solicitations. All offerors submitted proposals based on the same requirement and competed using the same fixed dollar amount (\$250,000 or 20 percent of the contract value) to represent certain activities within the scope of the contract which were undefined at the time of the procurement. This type of technical assistance clause is appropriate for certain NSF requirements including survey design work, where progress or design of a survey may depend upon or be modified by events in the survey as they transpire. In an internal review, NSF's Inspector General found that the use of the technical assistance clause is appropriate when it is limited to a dollar amount or a certain percentage of the contract. NSF issued specific guidance to this effect on the use of this clause in May of 1992. NSF, and we understand NASA (and perhaps other agencies), uses this type of fixed dollar amount to assure that all offerors are competing fairly and equally when one aspect of the government's requirement is unknown or cannot be specifically detailed. NSF views this use of the technical assistance clause to be appropriate in this instance. While it may be subject to disagreements on grounds of best practice, we strongly disagree with the GAO report's characterization of it as a clear weakness in contracting practices regarding statements of work. We believe this is another instance where the report overstates the actual rate of "weaknesses" from a statistical standpoint.

See comment 6.

Noncompetitive Contracts

GAO criticized NSF written Justifications for Other than Full and Open Competition (JOFOC's) regarding the award of 6 of 11 noncompetitive contracts. Each of these awards was made to the National Academy of Sciences. The report neglects to indicate that NSF has standing waivers from the Office of Federal Procurement Policy and Small Business Administration from synopsis requirements for awards to the Academy. The

justifications for sole source awards to the Academy discuss in detail many of its unique capabilities as the only organization of its type, its unique standing and Congressional charter, and its role as the contact point representing the United States in certain international activities. The Academy is prohibited by its charter from competing for contracts. GAO criticized a lack of documentation regarding removing obstacles to competition and a description of actions NSF is taking to remove any such barriers based on its review of the Academy JOFOC's. The Academy awards are unique and such statements are not always appropriate. Certainly this criticism is not true of other NSF sole source justifications and would not have held true had the statement been expanded beyond the documentation for Academy awards. We object to GAO's finding of weaknesses in NSF's process for awarding noncompetitive contracts based solely on the Academy contracts.

Recommendations

While we believe some of GAO's characterizations of weaknesses in NSF contracting processes are overstated and subject to misinterpretation as to the degree of seriousness, we concur with GAO's recommendations regarding development of detailed guidance, sole source contracting and documentation for future competitions. Since the 1990-1991 time period which GAO reviewed, NSF has, in fact, issued detailed and supplemental guidance to all contracting staff (December, 1991; May, 1992), distributed handbooks to contracting personnel (August, 1992), reorganized its contracting functions and staff (May, 1993), and written a new chapter of guidance to program and other NSF staff regarding procurement (November, 1993).

Nevertheless, NSF will continue to develop further guidance to assist program officials in the preparation of Statements of Work, including a description of the types of information to be included and weaknesses to avoid. NSF will use weights, relative weight descriptions and other indications of relative importance in RFP's to advise potential offerors of the predominance of evaluation factors where appropriate. NSF will also develop further guidance which will remind contracting staff of their responsibilities to assure that evaluation criteria are properly scored or returned to technical panel members for resolution of inconsistencies.

Regarding the last two recommendations, the NSF Procurement Executive, the Competition Advocate and Contracting Officers will continue to exercise their responsibilities relative to full and open competition and assure that any real or perceived barriers to competition are removed. In future contracts with the Academy, NSF will ensure that the availability of other offerors has been considered and documented accordingly. In addition, NSF will ensure that all NAS contracts include documentation concerning any effort to be taken in removing obstacles to future competition.

The following are GAO's comments on the Director's letter dated November 24, 1993.

GAO's Comments

1. These comments state that the report does not recognize the changes and improvements that NSF has made to its contracting activities. As noted in the report, we reviewed contracts that were awarded in fiscal years 1990 and 1991. This period was chosen because complete fiscal year 1992 data were not available at the time we began our review in June 1992. However, we did evaluate and consider contracting guidance that NSF issued in 1991 and 1992 and acknowledge that NSF reorganized its contracting function in May 1993 to improve management and oversight of the contract awards. To reflect recent changes, however, we have added a statement in the report to note that NSF revised its contracting policies and procedures manual in November 1993—guidance issued after completion of our audit work. But more importantly, even though the manual is an improvement, it does not address the specific weaknesses we identified. Additional guidance is needed, as evidenced by NSF's agreement with our recommendation that detailed guidance is needed in the areas of statement of work clarity, evaluation factors, and evaluation criteria scoring.

2. These comments state that we did not find that the outcome of any contract awards should have been different, an implication that NSF ultimately awarded the contracts to the appropriate firm. We believe that this statement needs to be clarified. Our objective was to determine whether weaknesses exist in the process for awarding contracts, not whether the outcome of the contract awards should have been different or whether different offerors should have received the contract awards. The appropriateness of an agency's contract awards is generally not questioned unless an interested party, such as a potential offeror or competing offeror, chooses to protest the award.

3. These comments question whether our statistics generally reflect pervasive weaknesses in NSF's contracting process. NSF states that it agrees with certain of the weaknesses we identified but believes that other weaknesses are subject to differences in opinion about the best contracting practices. First, we disagree with NSF's view that certain of the contracting weaknesses that we identified can be explained away as "legitimate differences of opinion." We identified two types of weaknesses: those that reflect violations of procurement regulation or law and those that reflect poor contracting practices. Second, in connection with the

statistical characterization of the weaknesses, we present the results of our random sample of competitive contracts as an estimate of the percentage of contracts in the universe with the identified weaknesses. We provide the lower bound and upper bound of the estimate of contracts with weaknesses. On the basis of finding weaknesses in 6 of the 10 competitive contracts in our sample, we estimate that between 28.1 percent and 84.4 percent of the 32 contracts in our universe of contracts contained a weakness. To avoid misinterpretation, the lower and upper bounds of estimates are included in a footnote in the report and in appendix I.

4. These comments state that the application of the significant evaluation factor criteria as defined in GAO's Sperry Rand decision was improperly applied to two contract solicitations included in our sample, thereby distorting the sample results. The decision states that when one factor is assigned a predominant value over the other factors, this importance should be disclosed to potential offerors. In one of the three solicitations that we found to be deficient, one evaluation factor was 7.5 times more important than another evaluation factor. We concluded that the solicitation was inconsistent with our interpretation of the procurement regulation, which requires agencies to state the relative importance of evaluation factors in the solicitations. NSF agreed. In the second two solicitations—the ones NSF is challenging—an evaluation factor was 2.5 times more important than another evaluation factor. We do not state in the report, nor do we mean to imply, that NSF's actions in these two cases were inconsistent with procurement regulation or at odds with the Sperry Rand decision. Instead, as a matter of sound procurement policy, we believe that the fullest possible disclosure of all of the evaluation factors and their relative importance is preferred to relying on the reasonableness of the offerors' judgment as to the relative importance of the various evaluation factors. Consequently, on this basis we concluded that a clearer explanation of the factors' importance would have helped offerors.

NSF also states that our report fails to acknowledge the Federal Acquisition Regulation, which states that the relative importance of solicitation factors is within the broad discretion of agency acquisition officials. This section of the regulation applies to the weight that agencies give the evaluation factors, and we agree that agencies need this discretion to tailor a procurement to meet their needs. However, this issue is not a subject of our report. The issue discussed in our report involves the information that NSF provides to potential offerors about the importance of the evaluation

factors, not NSF's determination of the importance of the evaluation factors.

5. This comment relates to NSF's disagreement with the report's characterization of a statement of work requirement for additional technical assistance (worth \$250,000, or 20 percent of the contract's value) as a statement of work weakness. NSF added that all offerors submitted proposals on the basis of the same requirement and competed using the same dollar amount. While this latter statement is true, it does not adequately address the issues involved. Offerors must be given sufficient detail in a solicitation to enable them to compete intelligently on requirements that are free from ambiguity. Similarly, the statement of work contained in the solicitation should describe the agency's minimum needs accurately. For example, in *University Research Corporation, B-216461, Feb. 19, 1985, 85-1 CPD ¶ 210*, we found that a statement of work that listed "other specific programs" as its need was too general and vague to allow offerors to submit intelligent proposals. In the NSF contract, the statement of work asked for "additional technical support" services that had not been clearly defined. Therefore, we maintain that our finding is valid.

NSF also stated that its Inspector General, in an internal review, agreed with the use of a technical service clause when it is limited to a dollar amount or a certain percentage of the contract and that it has issued guidance to that effect. Although the Inspector General did agree that the use of technical service clauses is appropriate in some instances, in that same report, the Inspector General stated that "well-written procurement contracts have (1) well-structured statements of work...." Also, the Inspector General stated that "a contract with a loosely defined technical service clause of substantial dollar value or that represents a significant proportion of the contract's total cost does not meet basic procurement standards." The Inspector General's report identified a contract in its sample of contracts that it considered to have a modest technical service amount of \$10,000 (3 percent) and others with dollar amounts and percents of contract value ranging from \$70,000 to \$300,000 (14 to 38 percent, respectively) that the Inspector General considered significant. By comparison, the contract we reviewed falls into the latter or "significant" category—\$250,000, or 20 percent of the contract's value.

6. The comments object to our finding of weaknesses in NSF's process for awarding noncompetitive contracts based solely on the National Academy of Sciences' contracts. Also, the comments state that NSF's justifications

**Appendix II
Comments From the National Science
Foundation**

for sole-source awards to the Academy discuss the unique capabilities of the Academy in detail and that we neglect to indicate that NSF has a waiver from the synopsis requirement (public notification of proposed contract actions and contract awards) for awards made to the Academy. We agree that the uniqueness of the Academy is discussed in NSF's justifications for other than full and open competition to the Academy. However, merely discussing the Academy's unique capabilities and status in the justifications does not satisfy the legislative and regulatory requirements to document whether other eligible sources are available and to describe what actions NSF has taken, or plans to take, to remove barriers to competition. In addition, the exemption from the synopsis requirement to advertise procurements in the Commerce Business Daily does not exempt the Academy contracts from the justification requirements for sole-source procurements. The fact that the Academy's charter prohibits it from competing for contracts has nothing to do with the federal procurement requirements.

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