MA-96-004

AUDIT REPORT

AUDIT OF SELECTED CONTRACT AWARDS

MARSHALL SPACE FLIGHT CENTER

JULY 10, 1996

National Aeronautics and Space Administration

OFFICE OF INSPECTOR GENERAL

National Aeronautics and
Space Administration
Headquarters
Washington, DC 20546-0001

Reply to Attn of: W

JUL 10 1996

TO: Marshall Space Flight Center
DA01/Director

FROM: W/Assistant Inspector General for Auditing

SUBJECT: Final Audit Report
Selected Contract Awards
Assignment No. A-MA-95-002
Report No. MA-96-004

The NASA Office of Inspector General (OIG) has completed a review of selected contract awards. The review was initiated to determine the adequacy of internal controls governing contract awards resulting from Small Business Innovation Research (SBIR) Program solicitations or the acceptance of unsolicited proposals.

We found that internal controls over unsolicited proposals were generally adequate. We also determined that the Marshall Space Flight Center (MSFC) is effectively managing the SBIR Program. Although no significant problem areas were identified, some SBIR contract awards were made to businesses not meeting or adhering to SBIR guidelines. We recommended that the MSFC Director of Procurement should, to the maximum extent practicable, establish appropriate procedures to ensure information provided SBIR contractors is accurate and reliable. We also recommended that the MSFC Director of Procurement should review the six SBIR contracts identified in the audit that were awarded based on inaccurate information and, if appropriate, initiate cost recoveries.

We issued a discussion draft report on January 26, 1996. An exit conference was held on February 28, 1996. Appropriate changes were made to the report as a result of the exit conference discussions. A draft report was issued on May 29, 1996, and we received a written response from the Center on July 3, 1996. MSFC's management reply is responsive to the audit recommendations and is incorporated into the report with the complete management response included as Appendix A.

We consider recommendations 1 and 2 to be closed with the issuance of this report.

We appreciate the cooperation and assistance provided by MSFC officials during the review.

Debra A. Guentzel

Enclosure

cc:
BE01/L. Cucarola

ABBREVIATIONS AND ACRONYMS

COTR	Contracting Officer's Technical Representative
MSFC	Marshall Space Flight Center
NASA	National Aeronautics and Space Administration
NHB	NASA Handbook
OIG	Office of Inspector General
PI	Principal Investigator
SBIR	Small Business Innovation Research
R/R&D	Research/ Research & Development
US	United States

INTRODUCTION

The NASA Office of Inspector General (OIG) has completed a review of selected contract awards at Marshall Space Flight Center (MSFC). We are issuing this report to recommend actions to strengthen the Small Business Innovation Research (SBIR) Program.

SBIR PROGRAM

NASA invites eligible small business concerns to submit proposals for the SBIR Program. Eligible firms with research or research and development capabilities (R/R&D) in any listed topic or subtopic area identified in the program solicitation are encouraged to participate. Through SBIR, NASA seeks innovative concepts addressing program needs as well as offering commercial application potential.

SBIR program objectives are established by law. These program objectives include:

- Stimulating technological innovation in the private sector;
- Strengthening the role of small business concerns in meeting federal research and development needs;
- Increasing the commercial application of federally supported research results; and,
- Fostering and encouraging participation by socially and economically disadvantaged persons and women-owned small businesses in technological innovation.

The SBIR program has three phases. The purpose of Phase I is to determine the technical feasibility of the proposed innovation and the quality of the small business concern's performance with a small NASA investment. The objective of Phase II is to continue development of selected Phase I innovations that have the highest potential value to NASA and the U.S. economy. Phase III is pursuit by SBIR contractors of commercial applications of their project results, using private sector funds, in support of the Government's policy to stimulate technological innovation and provide for return on investment from Government-funded R/R&D that aids the national economy.

Shown below are the number and total dollar value of SBIR awards made by MSFC for 1990 to 1994.

Year	SBIR Phase	Number	Dollar Value
90-1	I	40	$ 1,929,279
91-1	I	45	2,169,382
92-1	I	46	2,285,084
93-1	I	49	3,352,518
94-1	I	52	3,536,964
90-1	II	20	9,199,220
91-1	II	21	10,783,959
92-1	II	23	11,301,237
			$44,557,643

UNSOLICITED PROPOSALS

Unsolicited proposals are a valuable means for NASA to obtain innovative or unique methods or approaches to accomplish its mission. An unsolicited proposal is a written proposal submitted to the agency on the initiative of the submitter to obtain a contract and is not in response to a formal or informal request from NASA. A valid unsolicited proposal must:

- Be innovative and unique;
- Be independently originated and developed by the offeror;
- Be prepared without Government supervision;
- Include sufficient detail to permit a determination that Government support would be worthwhile and the proposed work could benefit the agency's research and development; and,
- Not be an advance proposal for a known agency requirement that can be acquired by competitive methods.

During 1990 to 1994, MSFC received 50 unsolicited proposals from small businesses. Of these unsolicited proposals, approximately 19 contracts valued at $3.4 million were awarded.

OBJECTIVES, SCOPE, AND METHODOLOGY

OBJECTIVES

The overall audit objective was to determine the adequacy of internal controls governing contract awards resulting from Small Business Innovative Research (SBIR) Program solicitations or the acceptance of unsolicited proposals.

SCOPE AND METHODOLOGY

To meet our audit objectives, we reviewed selected contract awards resulting from SBIR Program solicitations or unsolicited proposals to determine the accuracy and reliability of contractor supplied information. We evaluated the independence of NASA procuring, evaluating, and monitoring officials assigned to selected contracts. We also assessed relationships between selected contractors, colleges/universities, non-profit organizations, their related subcontractors and NASA.

INVESTIGATIVE REFERRALS

During the audit certain acts or matters came to our attention that were referred to the OIG Investigations staff for further action. Those procurement actions referred to OIG investigations involved five SBIR contract awards. A subsequent investigation and/or audit report may be issued once these matters are fully assessed.

MANAGEMENT CONTROLS REVIEWED

We reviewed significant management controls relating to contract awards resulting from SBIR Program solicitations and unsolicited proposals. Management control weaknesses were identified and are described in detail in the Observations and Recommendations section of this report.

AUDIT FIELD WORK

Audit field work was conducted from October 1994 through July 1995 at MSFC. The audit was performed in accordance with generally accepted government auditing standards.

OBSERVATIONS AND RECOMMENDATIONS

OVERALL EVALUATION

Our review showed that internal controls over unsolicited proposals were generally adequate. We also determined that MSFC is effectively managing the SBIR Program. Although no significant problem areas were identified, some SBIR contract awards were made to businesses not meeting or adhering to SBIR guidelines. These contract awards were based, in part, on inaccurate and unreliable contractor supplied information. As a result, NASA awarded $320,972 in SBIR contracts based on erroneous information.

INACCURATE/ UNRELIABLE INFORMATION

MSFC procurement personnel rely on SBIR contractor supplied information in making contract decisions. Our review showed that this information is sometimes inaccurate or unreliable. SBIR guidelines require potential SBIR contractors to meet specific requirements to qualify for an SBIR contract. As a result, NASA awarded $320,972 in SBIR contracts based on erroneous information.

A review of 18 SBIR contracts showed that six awards were made to contractors providing inaccurate or unreliable proposal information or certifications (See Exhibit 1). This faulty information included proposed costs that were not incurred or inaccurate statements by the contractor to MSFC procurement personnel.

Primary Employment. For example, one SBIR contractor received two Phase I awards totaling $49,900 each which were based, in part, on inaccurate employee information. The SBIR Program requires that the principal investigator's (PI) primary employment be with the SBIR contractor. Primary employment with the small business concern must average a minimum of 20 hours per week. A PI is required to spend more than half his total employment time, including all concurrent positions, consulting and self-employment, with the small business concern.

In one instance, the company owner, who was the PI on the SBIR contract, was the only employee. The PI was also a full time employee with an aerospace contractor. The PI took a 2-month leave of absence from his primary employer to work on NASA contract NAS8-39816, his company's SBIR contract. In addition, he requested a waiver of employment requirements concerning other employment on this contract. However, procurement personnel denied his request.

Consequently, to meet program requirements for the SBIR contract award, he provided a letter to MSFC procurement personnel showing a request for a temporary leave of absence from his job with the aerospace contractor. The requested leave of absence was for the period February 8, 1993, through June 15, 1993. However, the PI took a two-month leave of absence and returned to work for the aerospace contractor on April 12, 1993. As a result, an SBIR contract totaling $49,900 was awarded to a contractor not meeting SBIR Program requirements.

In the second instance, the contractor was awarded SBIR contract, NAS8-38923. The contractor advised NASA that he would take a six-month leave of absence. However, the contractor took a four-month leave of absence and returned to work with the aerospace contractor on May 6, 1991. However, the final report on the SBIR contract award was not issued until August 9, 1991, three months after his return to work with the aerospace contractor.

Company Ownership. In another example, an SBIR contract valued at $69,991 was awarded to a company that initially did not meet SBIR requirements concerning company ownership. At the time of award, the company was 50 percent owned by U.S. citizens, with the remainder owned by foreign nationals. The ownership arrangement of the company did not meet SBIR requirements.

SBIR guidelines require that the small business concern be at least 51 percent owned by, or for a publicly owned business, at least 51 percent of the voting stock be owned by U.S. citizens or lawfully admitted permanent resident aliens. However, MSFC procurement personnel did not ensure that the company met SBIR ownership requirements before contract award.

As a result, an SBIR award was made to a company that was less than 51 percent owned by U.S. citizens or lawfully admitted permanent resident aliens. NASA awarded a $69,991 contract to a firm not qualified to be in the SBIR Program.

Inaccurate Contractor Supplied Information. NAS8-40508 was awarded for $59,100 as the result of a proposal submitted by a contractor meeting the qualifications of the SBIR program. MSFC Procurement personnel accepted the contractor's proposal and awarded the contract. A review of information available to Procurement personnel at the time of the contract award showed that NASA paid approximately $11,500 more for the contract work than necessary.

The company was a sole proprietorship and the company owner was the only employee. MSFC Procurement personnel requested that the contractor provide information relating to the computation of the company's overhead. The company owner provided the following information used in computing the overhead rate.:

Federal Tax (15%)	$ 5,540.00
State Tax (5.5%)	1,700.00
Business License (.4%)	125.00
Social Security (15%)	4,620.00
State Unemployment (6%)	1,848.00
Total	$13,833.00

Our review showed that Federal and State (income) tax would have been included in the hourly labor rate and is not an allowable cost per Federal Acquisition Regulation (FAR) 31.205-41(b). Social Security would be included in overhead at 7.6% with the remainder included in the hourly labor rate. A sole proprietor would not pay state unemployment taxes and the company did not obtain a business license.

Improper Overhead Charges. The contractor for NAS8-40147 is a sole proprietor and the only employee of the company. The contractor included Alabama Unemployment Tax in computing the overhead rate. However, the contractor is not subject to unemployment tax because he is the owner and sole employee of the company. In addition, social security would be included in overhead at 7.6% with the remainder included in the hourly direct labor rate. As a result, NASA paid approximately $4,700 more for the contract than was necessary.

Business Location. NASA Contract NAS8-39313 was awarded in the amount of $49,910. The contractor's proposal stated that office space for use during the proposed efforts would be located at a specific Huntsville, Alabama, address and this office space would be shared with another small business. The contractor proposed office rental of $3,000. However, our review showed that the contractor neither shared office space with another firm nor was any space leased at the identified Huntsville location.

We also identified an error in the contractor submitted data supporting the proposed overhead rate for this contract. FICA was computed on direct labor of $35,000. However, the contractor proposed direct labor in the amount of $26,100. As a result, approximately $2,000 was erroneously paid to the contractor.

RECOMMENDATION 1

The MSFC Director of Procurement should, to the maximum extent practicable, establish appropriate procedures to ensure information provided SBIR contractors is accurate and reliable. The MSFC Director of Procurement should consider requiring:

- procurement personnel to verify contractor supplied data;
- contractors to certify to the accuracy of submitted information, when required; or,
- contractors to submit specific documentation to substantiate SBIR eligibility requirements.

MANAGEMENT RESPONSE

Concur. At the present time, NASA Headquarters manages the SBIR program in accordance with Small Business Administration guidelines. Recently, a decision was made to transfer much of the program management responsibility for this program to Goddard Space Flight Center and Lewis Research Center. The SBIR program management office issues an annual announcement containing program requirements and applicable certifications and selects proposals to be awarded by the Field Centers. Perhaps additional clarification regarding the eligibility requirements and certifications should be included in the annual announcements. Consequently, the MSFC Procurement Office will forward a copy of this audit report to the new SBIR Program Manager at Goddard and representatives at Lewis so that eligibility requirements can be clarified as needed in future announcements.

The Marshall Space Flight Center Procurement Office will continue to rely on self-certification by the contractors selected by the NASA SBIR Program Manager.

RECOMMENDATION 2

The MSFC Director of Procurement should review the six SBIR contracts shown in Exhibit 1 that were awarded based on inaccurate information and, if appropriate, initiate cost recoveries.

MANAGEMENT RESPONSE	Concur. We have reviewed the six SBIR contracts highlighted by the report. Considering the successful completion and acceptance of the work by the Government, it is not deemed appropriate to initiate cost recoveries on the insignificant dollar amounts actually in questions in the rate pools under these firm-fixed price contracts.
EVALUATION OF MANAGEMENT'S RESPONSES	The actions taken are considered responsive to the intent of the recommendations.

MAJOR CONTRIBUTORS TO THIS AUDIT

MARSHALL SPACE FLIGHT CENTER	C. Thomas Hassell, Project Manager Randy J. Fowler, Auditor-in-Charge Teresa J. Danne, Auditor

Exhibit 1

Listing of SBIR Contracts Selected for Review

Contract Number	Amount	SBIR Phase	
NAS8-40124	$ 69,991	I	(1)
NAS8-39364	506,789	II	
NAS8-39922	496,627	II	
NAS8-40508	59,100	I	(1)
NAS8-39802	48,973	I	
NAS8-40103	69,634	I	
NAS8-40102	69,661	I	
NAS8-40555	595,692	II	
NAS8-39816	49,900	I	(1)
NAS8-40144	70,000	I	
NAS8-38923	49,900	I	(1)
NAS8-40147	42,171	I	(1)
NAS8-39313	49,910	I	(1)
NAS8-39917	494,323	II	

(1) Indicates that information provided by the contractor in the proposal was inaccurate.

Contract Number	Amount	SBIR Phase
NAS8-37306	50,000	I
NAS8-38918	50,000	I
NAS8-37401	469,985	II
NAS8-37629	49,715	I

(1) Indicates that information provided by the contractor in the proposal was inaccurate.

ENCLOSURE

National Aeronautics and
Space Administration

George C. Marshall Space Flight Center
Marshall Space Flight Center, AL 35812

Reply to Attn of: DE01

JUL 03 1996

TO: Office of Inspector General
Attn: W/Debra A. Guentzel

FROM: DE01/Susan McGuire Smith

SUBJECT: OIG Draft Survey Report on Audit of Selected Contract Awards, Assignment No. A-MA-95-002

We have reviewed the subject report, and our detailed comments are enclosed. We agree with the overall evaluation that MSFC is effectively managing its Small Business Innovation Research (SBIR) Program. It was gratifying to note that no significant problem areas were identified.

If you have any questions or need additional information regarding our comments, please contact BE01/Lana Cucarola at 544-0096.

Susan McGuire Smith
Associate Director

Enclosure

cc:
M-DI/Mr. Echerd

MSFC RESPONSE TO OIG DRAFT SURVEY REPORT ON AUDIT OF SELECTED CONTRACT AWARDS (A-MA-95-002)

Our comments and responses to the report recommendations are presented below.

(Pages 4-5) Finding - Primary Employment: The SBIR Program requires the Principal Investigator's (PI's) primary employment (average a minimum of 20 hours per week) to be with the SBIR contractor. One contractor received two Phase I awards based on inaccurate employee information. In both instances, the owner of the company/PI took a temporary leave of absence from an existing job to perform the contract, but returned to his job before the 6-month period of performance allowable for the contracts concluded.

Response: The contractor certified on the Phase I proposal cover pages that primary employment would be with the SBIR firm at the time of award and during the conduct of the research. The contract file contains a leave of absence supplied in response to the contracting officer's request for such evidence. Our interest in the employment of the PI is to determine if sufficient time will be devoted to the project. Bimonthly reports, the prototype hardware, and final reports were delivered to MSFC as proposed and were accepted by the cognizant Contracting Officer's Technical Representative (COTR). Based on the contractor's successful performance, there was no harm to the Government in either instance.

(Page 5, Paragraphs 4-5) Finding - Company Ownership: The SBIR guidelines require that the small business concern be at least 51 percent owned by U.S. citizens or lawfully admitted permanent resident aliens. A contract was awarded to a firm that was ineligible for participation in the SBIR program.

Response: In 1994, we received a letter from a stockholder of that company outlining concerns of misrepresentation by the current president. Consequently, we contacted the Chief Counsel's Office and the OIG for advice. The OIG investigated the matter, and final payment for successful performance of the contract was withheld until the OIG completed its review regarding proof of citizenship of the shareholders. The payment was processed after the OIG notified us that it was appropriate to do so.

(Pages 6-7) Finding - Overhead Pools Contained Questionable Items: The audit found items in the overhead pools which were questionable, such as the cost of a business license that was never obtained, proposed office rental that was never

ENCLOSURE

incurred, state unemployment and the company share of social security paid on the owner of a sole proprietorship, and the inclusion of an additional $8,900 in the base for FICA computation.

Response: The SBIR Program is the first introduction to doing business with the Government for many small companies, and we recognize that the small business community is more likely to make errors than a company with extensive resources to devote to its business systems. The maximum $70,000 value of these contracts precludes audit by the DCAA, but there is a requirement to review fixed-price contracts at some level for reasonableness of price. Contract specialists request rate verification by DCAA, when available, or submission of overhead and General & Administrative (G&A) cost pools to justify proposed rates. However, the insignificant value of the items in the rate pools questioned by this audit do not justify the resources needed to verify the existence of 100 business licenses or rental agreements during the timeframe we have to award the SBIR Phase I contracts. Contract specialists awarding SBIR contracts will be notified of the findings of this audit to increase their awareness of allowable costs included in rate pools. This will be accomplished by the GP20 Division Chief prior to August 1996.

RECOMMENDATION 1:

The MSFC Director of Procurement should, to the maximum extent practicable, establish appropriate procedures to ensure information provided SBIR contractors is accurate and reliable. The MSFC Director of Procurement should consider requiring:

- procurement personnel to verify contractor supplied data;
- contractors to certify to the accuracy of submitted information, when required; or,
- contractors to submit specific documentation to substantiate SBIR eligibility requirements.

MSFC RESPONSE:

At the present time, NASA Headquarters manages the SBIR program in accordance with Small Business Administration guidelines. Recently, a decision was made to transfer much of the program management responsibility for this program to Goddard Space Flight Center and Lewis Research Center. The SBIR program management office issues an annual announcement

containing program requirements and applicable certifications and selects proposals to be awarded by the Field Centers. Perhaps additional clarification regarding the eligibility requirements and certifications should be included in the annual announcements. Consequently, the MSFC Procurement Office will forward a copy of this audit report to the new SBIR Program Manager at Goddard and representatives at Lewis so that eligibility requirements can be clarified as needed in future announcements.

The Marshall Space Flight Center Procurement Office will continue to rely on self-certification by the contractors selected by the NASA SBIR Program Manager.

RECOMMENDATION 2:

The MSFC Director of Procurement should review the six SBIR contracts shown in Exhibit 1 that were awarded based on inaccurate information, and if appropriate, initiate cost recoveries.

MSFC RESPONSE:

We have reviewed the six SBIR contracts highlighted by the report. Considering the successful completion and acceptance of the work by the Government, it is not deemed appropriate to initiate cost recoveries on the insignificant dollar amounts actually in question in the rate pools under these firm-fixed-price contracts.

Based upon this action, we consider this recommendation closed upon issuance of the final report.