

**U.S. DEPARTMENT OF COMMERCE**  
**Office of Inspector General**

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**NATIONAL INSTITUTE OF  
STANDARDS AND TECHNOLOGY**

*Advanced Technology Program Award  
Process Promotes Merit-Based Decisions  
CFDA No. 11.612*

*Audit Report No. DEN-10960-9-0001 / March 1999*

**PUBLIC RELEASE**

*Office of Audits, Denver Regional Office*



5/26/99  
UNITED STATES DEPARTMENT OF COMMERCE  
Office of Inspector General  
Washington, D.C. 20230

March 31, 1999

MEMORANDUM FOR: Raymond G. Kammer  
Director  
National Institute of Standards and Technology

FROM: Johnnie E. Frazier  
Acting Inspector General

SUBJECT: *Advanced Technology Program Award Process*  
*Promotes Merit-Based Decisions*  
*CFDA No. 11.612*  
Final Audit Report No. DEN-10960-9-0001

The Office of Inspector General has completed a performance audit of the National Institute of Standards and Technology's solicitation, review, and selection process for its discretionary cooperative agreements awarded in fiscal year 1997 under the Advanced Technology Program, classified as No. 11.612 in the *Catalog of Federal Domestic Assistance*. The final report is attached. The executive summary is on page i and a recommendation for NIST's action is on page 13 of the report.

NIST agreed with the recommendation in our draft audit report. Its response is summarized in the executive summary, and we have attached the complete response as an appendix to the report.

Please provide your audit action plan addressing the recommendation within 60 calendar days, in accordance with Department Administrative Order 213-5. The plan should be in the format specified in Exhibit 7 of the DAO. Should you have any questions regarding the preparation of an audit action plan, please contact William R. Suhre, Regional Inspector General for Audits, at (303) 312-7650. We appreciate the cooperation extended by your staff during our audit.

Attachment

cc (w/att): Dr. Lura Powell, Director, Advanced Technology Program  
Linda J. Bilmes, Acting Chief Financial Officer and Assistant  
Secretary for Administration  
Sonya G. Stewart, Director, Office of Executive Budgeting and  
Assistance Management  
Susan Sutherland, Acting Director, Office of Executive Assistance  
Management  
Marilyn Khan, NIST Audit Liaison

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## EXECUTIVE SUMMARY

The Office of Inspector General conducted an audit of the fiscal year 1997 criteria, procedures, and practices for soliciting, reviewing, and selecting applications for financial assistance under the National Institute of Standards and Technology's (NIST) Advanced Technology Program (ATP), classified as No. 11.612 in the *Catalog of Federal Domestic Assistance (CFDA)*. The audit was conducted as part of a Department-wide review of Commerce's discretionary financial assistance programs initiated at the request of the Chairman of the Senate Committee on Commerce, Science, and Transportation.

Discretionary financial assistance programs are those programs for which federal agencies have the authority to independently determine the recipients and funding level of awards. These programs involve a significant portion of the Commerce Department's budget and operations, approximately \$1 billion annually. If not properly administered, they are susceptible to fraud, waste, and misuse of funds.

NIST's ATP is a cost-sharing program designed to assist U.S. industry to pursue high-risk technologies with significant broad-based commercial and economic benefits for the nation. ATP enables award recipients to pursue research and development projects that, because they are high-risk, are unlikely to be developed without federal government financial support. In fiscal year 1997, NIST awarded 64 ATP cooperative agreements, totaling \$61.8 million, from the seven 1997 competitions, and also awarded eight cooperative agreements, totaling \$5.2 million, from a 1996 competition that were not funded in fiscal year 1996 due to budget constraints. Additionally, in fiscal year 1997, NIST processed 74 renewals of prior year cooperative agreements totaling \$149.8 million.

As part of our review, we followed-up on NIST's implementation of recommendations included in three prior Office of Inspector General (OIG) audit reports and a General Accounting Office (GAO) audit report concerning NIST's administration of the ATP award selection process. We found that NIST adequately addressed the specific audit report findings including NIST's failure to: (1) document the bases for selecting successful proposals, (2) document the rationale by which Source Evaluation Boards (SEB) overturned recommendations of proposal reviewers, (3) adequately track award contingencies, and (4) sufficiently involve grant office personnel in the review process (see page 7).

We examined NIST's criteria, procedures and practices for the solicitation, review, and selection of ATP applications and found that they met the Department's minimum requirements and were generally adequate to promote merit-based decisions. Specifically, our audit disclosed that NIST:

- Used merit-based technical and public policy criteria, which were consistent with the objectives of the program, to evaluate applications and which addressed the criteria for making awards set forth in the ATP statute (see page 9).
- Established adequate procedures for reviewing ATP proposals (see page 10).

- Followed established procedures in soliciting applications for ATP awards. Procedures used were sufficient to obtain a nationwide response from eligible applicants (see page 11).
- Followed established procedures for reviewing applications, with the exception of a minor documentation deficiency noted below. We believe NIST's efforts to enhance the independence and objectivity of the ATP proposal review process by using a mix of reviewers from outside the Department, as well as NIST personnel, to review ATP proposals constitutes a best practice that should be used in other funding programs as appropriate (see page 11).
- Followed established procedures for ranking and selecting applications for funding under the ATP that were sufficient to satisfy statutory, departmental and NIST requirements (see page 12).

At the same time, we identified opportunities for improving the ATP's award procedures and practices. We found that NIST:

- Had a minor deficiency in documenting the review of applications for ATP awards. Generally, established procedures were sufficient to provide an independent and qualified competitive review of each applicant. However, the program staff failed to mention 12 proposals submitted for four ATP competitions in the Source Evaluation Board (SEB) minutes. The minutes document official decisions of the SEB for all proposals submitted under ATP competitions. This issue was brought to the program staff's attention and they have revised their procedures to prevent future occurrences (see page 11).
- Reported three new ATP cooperative agreements and six ATP award renewals under the incorrect CFDA code number during fiscal year 1997. As a result, the Department's Office of Executive Assistance Management received inaccurate data for inclusion in its database system used to report on and track awards (see page 13).

We recommend that the NIST Director ensure that all future ATP cooperative agreement award and renewal actions are reported under the correct CFDA number (see page 13).

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NIST agreed with the recommendation in our draft audit report. However, NIST requested that we (1) delete several minor findings as unrelated to the scope of our audit and (2) make clarifications to information presented in the report. NIST also requested that we reduce the number of proposals identified in our finding as not being mentioned in the respective SEB minutes, since 7 of the 12 proposals were duplicates that did not need to be reflected in the minutes.

First and foremost, the findings concerning follow-up on OIG and GAO reports are not beyond the scope of our audit and have not been deleted. It is standard OIG practice to follow-up on previous audit report findings and recommendations that could affect the objectives of our current audit, to determine if management has taken corrective action. Moreover, we believe the prior OIG and GAO findings and recommendations on the ATP award selection process were the impetus for many of NIST's current procedures and practices.

Regarding NIST's specific suggestions to further clarify points included in the draft audit report, we revised the wording in various sections of the final report, as appropriate, to clarify and more accurately reflect the information presented. We did not, however, modify the number of proposals identified as improperly excluded from SEB minutes. To maintain the integrity and consistency of the SEB minutes, final determinations and actions for all ATP proposals that are assigned tracking numbers should be reflected in the minutes. As we noted in the audit report, NIST has already instituted procedures to correct this finding. NIST's response is summarized starting on page 13, and we have included its complete response as Appendix II.

## INTRODUCTION

The National Institute of Standards and Technology's (NIST) primary mission is to promote U.S. economic growth by working with industry to develop and apply technology, measurements, and standards. To accomplish a portion of its mission, NIST administers the Advanced Technology Program (ATP), classified as No. 11.612 in the *Catalog of Federal Domestic Assistance* (CFDA). The program's objectives, as stated in the CFDA, are to "work in partnership with industry to foster the development and broad dissemination of challenging, high-risk technologies that offer the potential for significant, broad-based economic benefits for the nation."

The Omnibus Trade and Competitiveness Act established ATP for the purpose of assisting U.S. businesses in creating and applying the generic technology and research results necessary to commercialize significant new scientific discoveries and technologies rapidly and to refine manufacturing technologies. Under ATP, NIST provides financial assistance, through cooperative agreements, to single companies and joint ventures to pursue these high-risk technologies. The program enables award recipients to pursue research and development projects that, because they are high-risk, are unlikely to be developed without federal financial support. ATP conducted six focused competitions in fiscal year 1997: (1) motor vehicle manufacturing technology, (2) information infrastructure for healthcare, (3) digital data storage, (4) technologies for the integration of manufacturing applications, (5) component-based software, and (6) tissue engineering. Additionally, a seventh general competition was conducted to capture all proposals submitted that could not be categorized in one of the six focused competitions.

General information governing the seven fiscal year 1997 ATP competitions was published in the *Federal Register* on December 4, 1996, December 30, 1996, and February 19, 1997. In fiscal year 1997, NIST awarded 64 ATP cooperative agreements, totaling \$61.8 million, from the seven 1997 competitions, and also awarded 8 cooperative agreements, totaling \$5.2 million, from a 1996 competition that were not funded in fiscal year 1996 due to budget constraints. Additionally, in fiscal year 1997, NIST processed 74 renewals of prior year cooperative agreements totaling \$149.8 million.

Discretionary assistance programs are those for which federal agency officials have the authority to decide (1) which eligible applicants will receive awards, and (2) how much will be awarded. Technically, all Commerce financial assistance programs are discretionary, rather than entitlement programs. However, the authorizing legislation for the programs provides for varying degrees of discretion in making awards. The use of competitive selection procedures is generally agreed to be the most effective method of ensuring that financial assistance awards are made on the basis of merit. One of the primary purposes of the Federal Grant and Cooperative Agreement Act (31 U.S.C. §6301) is to encourage competition in the award of federal financial assistance to the maximum extent practicable in order to fairly and objectively identify and fund, based on merit, the best possible projects proposed by applicants, and thereby more effectively achieve program objectives.

The Office of Management and Budget (OMB) has issued guidelines for administering competition-based financial assistance programs for use by federal agencies. An interagency study group, convened in 1979 by OMB to examine competition in financial assistance programs, determined that financial assistance award processes, to ensure effective competition, should include three basic elements. These elements, which were discussed in OMB's June 1980 report, *Managing Federal Assistance in the 1980's*, and are still applicable, include:

- Widespread solicitation of eligible applicants and disclosure of essential application and program information in written solicitations;
- Independent application reviews that consistently apply written program evaluation criteria; and
- Written justification for award decisions that deviate from recommendations made by application reviewers.

Also, OMB has issued the following policies and procedures to be followed by federal agencies in administering their financial assistance programs:

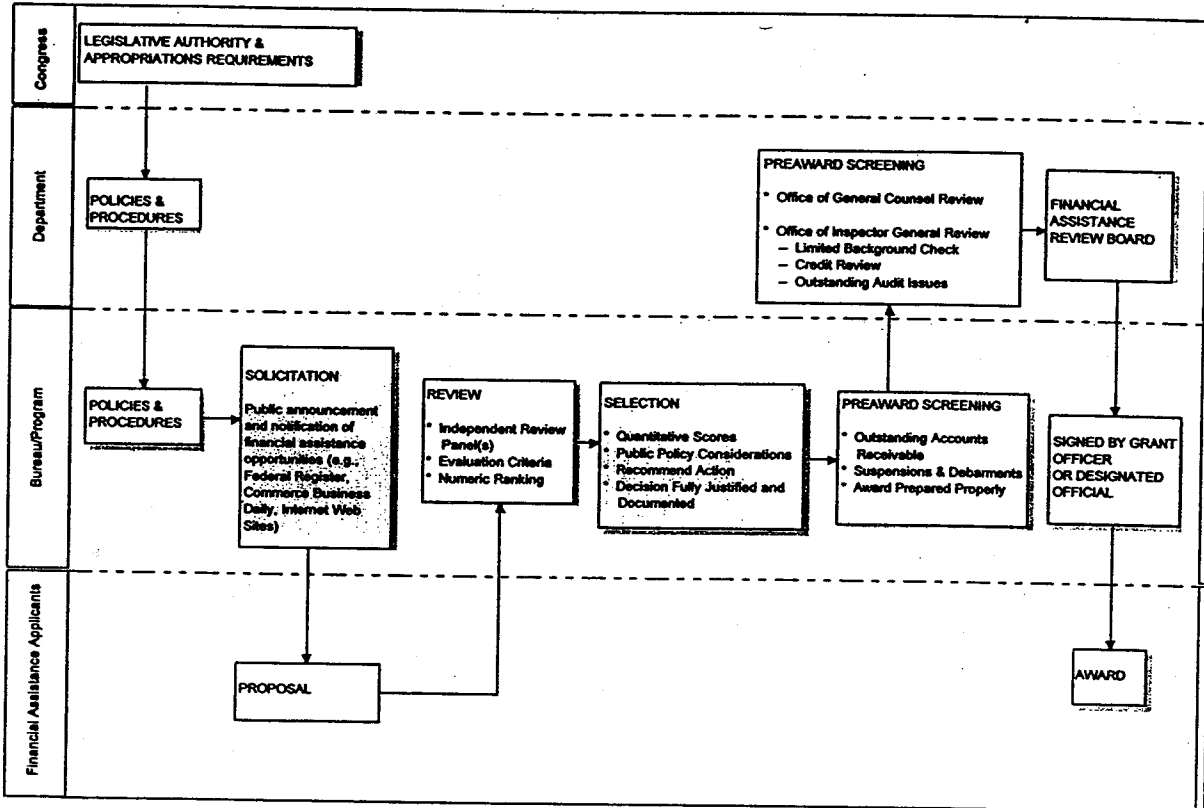
- OMB Circular A-89, *Federal Domestic Program Information*, implements the Federal Program Information Act (P.L. 95-220) requiring agencies to systematically and periodically collect and distribute current information to the public on federal domestic assistance programs, which is accomplished through the semiannual publication of the CFDA.
- OMB Circular A-102, *Grants and Cooperative Agreements with State and Local Governments*, requires agencies to provide the public with advance notice in the Federal Register, or by other appropriate means, of their intended funding priorities for discretionary assistance programs unless such priorities are established by federal statute. Under A-102, when time permits, an agency must provide the public with an opportunity to comment on funding priorities. Finally, A-102 requires all grant awards over \$25,000 to be reviewed for consistency with agency priorities by a policy level official.
- OMB Circular A-110, *Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations*, requires agencies to provide the public with advance notice of their intended funding priorities for discretionary assistance programs unless such priorities are established by federal statute.
- OMB Circular A-123, *Management Accountability and Control*, implements the Federal Managers Financial Integrity Act (P.L. 97-255) requiring agencies to establish management controls for federal programs and operations, including financial assistance programs, that provide reasonable assurance that activities are effectively and efficiently managed to achieve agency goals.



Commerce has relied on these guidelines in developing and issuing policies and procedures for its discretionary funding programs. Department Administrative Order (DAO) 203-26, *Department of Commerce Grants Administration*, requires that (1) all Commerce discretionary grant program awards be made on the basis of competitive reviews unless a special waiver is obtained, (2) competitive review processes meet minimum standards outlined in the DAO, and (3) all Commerce agencies publish, at least annually, a notice in the *Federal Register* announcing the availability of funding, soliciting award applications, and specifying the criteria and the process to be used in reviewing and selecting applications for funding.

The chart presented on the following page depicts the basic process and controls for the solicitation, evaluation, and selection of financial assistance awards as set forth in DAO 203-26. The processes we reviewed during our audit are color coded for this chart and the NIST process chart located in Appendix I.

### Department of Commerce Financial Assistance Awards Process



## PURPOSE AND SCOPE

This audit was conducted as part of a comprehensive review of the Department of Commerce's discretionary funding programs initiated at the request of the Chairman of the Senate Committee on Commerce, Science, and Transportation. The Chairman requested that the Inspectors General of the Departments of Commerce and Transportation and the National Science Foundation review the discretionary funding programs of their respective agencies to assess the manner in which discretionary funding decisions are made. More specifically, the Chairman requested that each IG review and report on the criteria developed, either statutorily or administratively, to guide agency officials in making discretionary spending decisions, and on the extent to which the criteria are appropriately applied.

We are conducting our Department-wide review in two phases: a survey phase (completed), and an individual program audit phase (ongoing). During the survey phase, we identified and examined the body of laws, regulations, and other guidance applicable to the administration of federal financial assistance programs. We also examined the authorizing legislation for each Commerce financial assistance program and classified each program as either a "full discretion" program or a "limited discretion" program, based on the extent to which the legislation limits the agency's authority to independently determine the recipients and funding levels of the awards made under the program. Finally, we examined legislation related to the Department's fiscal year 1997 appropriations to identify any legislatively mandated projects.

During the second phase of our review, we are conducting individual audits of the award solicitation, review, and selection processes of each program we have classified as a "full discretion" program, including the NIST ATP. We are evaluating the adequacy of each program's established award criteria and procedures for evaluating individual applications. For those programs with procedures deemed to be adequate, we are ascertaining whether those procedures were followed in making awards in fiscal year 1997. Finally, we are examining the legislatively mandated projects identified for each program and determining their significance and impact on fiscal year 1997 award decisions. We plan to issue individual reports, with any appropriate recommendations, on each program, followed by a capping report summarizing the results of the individual audits and providing recommendations for the Department and its bureaus.

On July 21, 1998, the Acting Inspector General and the Chief Financial Officer and Assistant Secretary for Administration testified before the Senate Commerce, Science, and Transportation Committee on the Department's discretionary funding programs. The Acting IG reported on the results of the survey phase of the OIG's review, and discussed some of the preliminary observations from the individual program audits.

This performance audit focused on funding decisions made during fiscal year 1997 under ATP. Specifically, we:

- Reviewed the authorizing legislation and information summarized in the CFDA to identify criteria for funding decisions.

- Reviewed policies and procedures for soliciting and reviewing proposals, and ranking and selecting applications for funding (see Appendix I for flow-chart of process). We also reviewed NIST's *Administrative Manual* as it applied to the solicitation, review, and selection process and assessed whether it was in accordance with Office of Federal Assistance Financial Notice No. 17, *Department of Commerce Guidelines for the Preparation of Federal Register Notices Announcing the Availability of Financial Assistance Funds - Requests for Applications*; 15 C.F.R. Part 295, *ATP Final Rule*; and DAO 203-26, *Department of Commerce Grants Administration*.
- Compared NIST's procedures with its practices to determine if the process contained adequate internal controls to provide for competitive, merit-based awards.
- Examined pertinent documents in individual program award files to determine if departmental and NIST policies and procedures were followed.
- Interviewed NIST program office officials concerning NIST's solicitation, review, and selection procedures.
- Examined fiscal year 1997 appropriations legislation to identify legislatively mandated projects for this program. None were found, therefore, there is no discussion in the body of the report on this area.
- Reviewed prior OIG and General Accounting Office (GAO) audit reports on the ATP award selection practices.

We did not rely upon computer-based data supplied by NIST and the Department's Office of Executive Assistance Management (OEAM) during the audit, and cited in the report, as a basis for our audit findings and recommendations. Consequently, we did not conduct tests of either the reliability of the data, or the controls over the computer-based system that produced the data.

We performed the audit fieldwork at NIST's ATP Program Office in Gaithersburg, Maryland, during March and September 1998. We conducted the audit in accordance with generally accepted government auditing standards, and under the authority of the Inspector General Act of 1978, as amended, and Department Organization Order 10-13, dated May 22, 1980, as amended.

## FINDINGS AND RECOMMENDATION

We found that ATP's criteria, procedures, and practices for the solicitation, review, and selection of ATP award recipients generally complied with statutory, departmental, and NIST requirements and appeared designed to result in merit-based awards. Also, NIST has taken appropriate steps to improve the ATP award selection process, based on recommendations in prior OIG and GAO audit reports. We did, however, find that NIST failed to mention 12 proposals submitted under four 1997 ATP competitions in the Source Evaluation Board (SEB) minutes. The SEB minutes are used to document official decisions of the SEB for all proposals submitted under ATP competitions. Additionally, ATP reported three new ATP cooperative agreements and six ATP award renewals under the incorrect CFDA code number during fiscal year 1997. As a result, OEAM received inaccurate data for inclusion in its database system used to report on and track awards.

With the exception of the above-noted findings, we found that NIST has adequate procedures for reviewing and approving ATP recipients for federal financial assistance. We also found that NIST has adequate procedures for renewals of ATP awards and that NIST properly followed them.

### **I. NIST Has Adequately Addressed Prior Audit Report Findings**

We reviewed three prior OIG audit reports and a prior GAO report concerning NIST's administration of the ATP award selection process. In July 1995, the OIG reported that NIST had not maintained adequate documentation of the bases for its determinations and selections of recipients under the fiscal year 1994 ATP competition.<sup>1</sup> Specifically, the OIG found that NIST (1) maintained documentation of its reasons for rejecting proposals, but not the bases for selecting successful proposals, and (2) did not document the rationale by which SEBs overturned recommendations of proposal reviewers. The report stated that a lack of internal guidelines for ATP SEBs were the cause for the inadequate documentation in the selection process. The report noted that NIST was highly responsive to our concerns and immediately initiated procedures to correct the deficiencies.

A second OIG audit report, issued in February 1996, highlighted NIST's efforts in responding quickly to the earlier OIG report findings and recommendations related to improving documentation of the award selection process.<sup>2</sup> The report states, "In this second review, we found that ATP's selection, monitoring, and evaluation processes are significantly improved from the program's earlier years."

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<sup>1</sup>*The Advanced Technology Program Must Improve Documentation of Selection Decisions*, TTD-7074-5-0001, July 1995.

<sup>2</sup>*ATP Has Improved Procedures for Selecting, Monitoring, and Evaluating Projects*, TTD-8089-6-0001, February 1996.

A third OIG audit report, issued in July 1997, examined the fiscal year 1995 ATP award competitions.<sup>3</sup> The OIG found that NIST issued many ATP cooperative agreements with contingency clauses, rather than waiting for outstanding issues to be resolved prior to the award date. The OIG found that NIST rushed the awards through the process due to concerns about current and future program funding, and that NIST prematurely notified successful applicants that they had been selected to receive ATP awards. The notifications were premature because the business reviews of the ATP proposals had not been completed.

Further compounding this problem was the fact that NIST did not have a system to track contingencies and verify that they had been satisfied. The July 1997 report highlighted an instance where NIST's failure to follow up on a contingency allowed a recipient to receive approximately \$58,000 from NIST prior to resolving an award contingency, even though the award specifically stated that no federal funds were to be disbursed until the contingency was satisfied.

The July 1997 audit report recommended that NIST (1) announce winners of ATP award competitions only after the grants office has completed necessary review and processing tasks, (2) appoint grants office personnel to ATP SEBs to demonstrate the importance of their input and allow them to complete their work earlier in the process, and (3) develop a system to track award contingencies. NIST generally agreed with the audit report recommendations and agreed to implement the first and third recommendations. Additionally, NIST instituted procedures that involve grants office personnel earlier in the review process, thereby implementing the intent of the second recommendation.

We also reviewed a prior GAO audit report entitled, "*Information on the Advanced Technology Program's 1997 Award Selection*," dated February 24, 1998.<sup>4</sup> The purpose of GAO's audit was to determine what information NIST used to determine whether (1) ATP applicants could probably find funding elsewhere, or (2) a delay in the project's progress would not be a serious national economic concern. NIST had asserted to Congress that it rejected proposals if either condition applied.

GAO found that NIST used information contained in the proposals and gathered during oral reviews with applicants to determine whether applicants could probably find funding elsewhere. The GAO audit report noted that, as of December 1997, NIST required ATP applicants to state what efforts they have made to secure at least partial private funding of their ventures before applying to ATP. GAO found that, although proposal reviewers were asked to evaluate various economic aspects of the project, the ATP office did not define what it considered to be a serious

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<sup>3</sup> *Advanced Technology Program Needs Financial and Management Improvements*, ENT-8984-7-0001, July 1997.

<sup>4</sup> *Federal Research: Information on the Advanced Technology Program's 1997 Award Selection*, GAO/RCED-98-82R, February 1998.

national economic concern. Therefore, GAO was unable to determine how reviewers determined that a delay in the project's progress would not be a serious national economic concern.

The Secretary of Commerce responded to GAO's findings in a letter dated February 27, 1998. The Secretary clarified areas of the GAO report dealing with ATP's determination of whether projects pose a "serious national economic concern." The Secretary pointed out that NIST does not assess whether funding projects will pose a "serious national economic concern;" rather, NIST's review procedures are designed to assess whether a project has the potential to provide "broad-based economic benefits to the U.S." The procedures to which the Secretary referred are included in the ATP selection criteria, in 15 C.F.R. Part 295.6. We found that NIST's review procedures adequately address the issue of broad-based economic benefits.

## II. ATP Implemented Appropriate Review Criteria

ATP implemented criteria which were consistent with the objectives of the program and complied with statutory provisions for making awards, as set forth in the ATP Statute, 15 U.S.C. Section 278n. The ATP Final Rules were set out in 15 C.F.R. Part 295.

15 C.F.R. Part 295.6, "Criteria for Selection," lists the criteria to be used in evaluating applications for ATP awards. Proposals of applicants meeting the basic requirements of the competition are reviewed using these selection criteria (weighted as indicated):

- (1) *Scientific and Technical Merit of the Proposal* (30 percent).  
The quality, innovativeness, and cost-effectiveness of the proposed technical program is reviewed and appropriateness of the technical risk and feasibility of the project is considered. The technical program is reviewed for coherency and clarity of vision of technical objectives. The adequacy of systems-integration and multidisciplinary planning, and the potential broad-based impact on U.S. technology is also considered.
- (2) *Potential Broad-based Economic Benefits of the Proposal* (20 percent).  
The proposal is reviewed for potential to improve U.S. economic growth, timeliness of the project, degree to which ATP support is essential for the achievement of the broad-based benefits, and cost-effectiveness of the proposal.
- (3) *Adequacy of Plans for Eventual Commercialization* (20 percent).  
Evidence is gathered to determine if the applicant will pursue further development of the technology toward commercial application if the project is successful. The proposal is reviewed to identify potential applications of the technology and if the applicant has credible plans to assure prompt and widespread use of the technology and to ensure adequate protection of the intellectual property by the participants and, as appropriate, by other U.S. businesses.
- (4) *Proposer's Level of Commitment and Organizational Structure* (20 percent).  
The level of commitment proposed by the applicant is reviewed by evaluating contributions of personnel, equipment, facilities, and cost-sharing. Joint ventures are reviewed on their structure and the appropriate participation by small

businesses. Additionally, the appropriateness of subcontractor, supplier, and collaborator participation and relationships, and the clarity and appropriateness of the management plan is reviewed.

- (5) *Experience and Qualifications of the Proposing Organization* (10 percent). The adequacy of the proposer's facility, equipment, design and manufacturing tools, as well as other technical, financial, and administrative resources; the quality and appropriateness of the technical staff to carry out the proposed work and to identify and overcome barriers to project objectives; and the past performance of the company or joint-venture in carrying out similar kinds of effort are considered.

Based on our review, we concluded that the ATP criteria for evaluating applicants are designed to result in merit-based awards and that NIST addressed the criteria for making awards, as set forth in the ATP statute.

### III. ATP Established Adequate Evaluation Procedures

Our audit disclosed that NIST established adequate procedures for evaluating ATP proposals. DAO 203-26, Section 4.02h.1, mandates that, among other things, bureau competitive review processes must meet the following requirements:

- Applications are treated fairly under the review process.
- Each application receives an independent, objective review by one or more review panels qualified to evaluate the applications submitted under the program.
- Each review panel uses the selection criteria cited in the application solicitation notice.

All proposals submitted for ATP funding involve a four-phase evaluation process based on the criteria listed in the ATP Program Rule, 15 C.F.R. Part 295. This multi-step selection process is detailed as follows:

**Phase I** - All proposals are screened by an SEB assigned to the specific competition for conformance with ATP regulations. Proposals are rejected during Phase I if they are incomplete, inappropriate for ATP, outside of the technical scope of a focused competition, or not in compliance with ATP statute or rules. Proposals meeting Phase I requirements proceed to Phase II of the evaluation process.

**Phase II** - Phase II involves both a technical and business evaluation of the proposal. NIST uses independent technical and business reviewers to perform these evaluations. The key technical and business strengths and weaknesses of each proposal and a recommendation are presented to the SEB. Upon completing Phase II, proposals rated as "recommended" by the SEB proceed to Phase III of the evaluation process and are classified as "semifinalists".



**Phase III** - Phase III involves a final scoring and ranking of semifinalist proposals by the SEB. Proposers in the semifinalist stage are invited to NIST to participate in an oral review. The oral review focuses on detailed technical and business questions, and may subsequently involve a site visit to the company. Phase III concludes with the SEB's recommendation to fund the highest-ranking proposals.

**Phase IV** - During Phase IV, a selecting official designated for the specific competition selects recipients based upon (1) the rank order of the applications on the basis of the selection criteria mentioned above, (2) ensuring an appropriate distribution of funds among technologies and their applications, and (3) the availability of funds. The decision of the selecting official is final. The program reserves the right to withhold awards in any case where a search of federal records discloses information that raises a reasonable doubt as to the responsibility of the applicant.

Based on our review, we concluded that NIST established adequate procedures that led to competitive, merit-based selections under the seven 1997 competitions.

#### **IV. Solicitation Practices Were Adequate**

NIST's procedures and practices in soliciting applications for awards under ATP met the regulatory requirement for public notice. NIST published "Notices of Availability of Funds" for the seven 1997 ATP competitions in the *Federal Register* on December 4, 1996, December 30, 1996, and February 19, 1997. The *Federal Register* notices referred applicants to the ATP Program Rule, 15 C.F.R. Part 295, for information on eligibility requirements, and selection procedures, and directed interested parties to refer to the *Commerce Business Daily* for specific ATP instructions and proposal deadlines. In addition to the *Federal Register* and *Commerce Business Daily* notices, NIST mailed approximately 40,000 proposal preparation kits, including applications, to companies and individuals. NIST distributed another 5,000 kits through outreach forums such as technical conferences and seminars. NIST received 565 proposals in response to the seven ATP competitions in fiscal year 1997.

#### **V. Established Review Procedures Were Followed But a Minor Documentation Deficiency Was Noted**

Based on our review, we concluded that NIST followed its established review procedures. NIST formed an SEB for each of the seven competitions to review and rank all proposals received. The SEBs were composed of senior-level scientists, engineers, managers, and specialists with backgrounds in economics and business. We found that NIST used reviewers from outside the Department, as well as NIST personnel, to review and rank ATP proposals. We believe NIST's efforts to enhance the independence and objectivity of the ATP proposal review process by using outside technical and business reviewers constitutes a best practice that should be used in other funding programs as appropriate.

We did note, however, a minor discrepancy in documentation for reviews of a small number of proposals. Specifically, 12 of the 565 proposals received were not mentioned in any of the respective SEB minutes.

NIST uses a multi-step system for tracking ATP proposals through the review process and documenting decisions regarding the proposals. These steps include initial logging and assignment of proposal numbers, entry into the computer database, acknowledging receipt of proposals, assignment of technical and business sponsors, assignment of technical and business reviewers, recording sponsor recommendations, recording SEB decisions on technical and business summary sheets, and preparing SEB minutes.

In theory, an examination of the review process should enable the tracking of each proposal from the beginning of the first phase of the review process (see discussion below) through the SEB's recommendation of whether to fund the proposal by examining the collection of SEB minutes for the particular competition under which the proposal was submitted. We tested this process and found that 12 proposals were not mentioned in SEB minutes. However, we do not consider this to be a serious deficiency because ATP program staff were able to track the 12 proposals in the other components of the multi-step system. For its part, NIST recognized the need for accurate reporting in the SEB minutes and instituted procedures to ensure that all proposals will be mentioned in the respective SEB minutes of future ATP competitions. We commend NIST for its prompt attention in addressing this issue.

#### VI. Ranking and Selection Practices Were Adequate

NIST received a \$225 million appropriation to manage and fund ATP for fiscal year 1997. In response to its *Federal Register* notice, NIST received 565 proposals.

NIST complied with the Department's requirements for selecting recipients. DAO 203-26, Section 4.02 h.1(f)-(g), establishes procedures to be followed in ranking and selecting applications for funding, as follows:

- After the review panel has evaluated the applications, the organizational unit prepares a ranking of the applications based solely on the evaluations of the review panel.
- The organization unit determines the order in which applications will be selected for funding based on the following factors:
  - Any priorities or other program requirements that have been published in the *Federal Register* that apply to the selection of applicants for new awards, and
  - The ranking of applicants established by the review panel on the basis of the selection criteria.

NIST followed procedures contained in the DAO and NIST *Administrative Manual* for ranking and selecting applicants for each of the seven 1997 ATP competitions. After an SEB completed its review and scoring of the applications based on the weighted criteria, an SEB's recommendations were presented to the designated selecting official.

There were three instances when a selecting official did not select applicants recommended by an SEB. We found that NIST had adequately justified, in writing, the basis for each selecting official's decision not to fund a proposal recommended by the SEB. [REDACTED]

#### **VII. ATP Cooperative Agreements and Award Renewals Were Improperly Categorized**

NIST did not report the correct *Catalog of Federal Domestic Assistance* category code number to OEAM for three new ATP awards and six award renewals in fiscal year 1997. As a result of the incorrect reporting, data maintained by OEAM inaccurately portrays the number and dollar value of ATP award actions. OMB Circular A-89 requires agencies to track data on approved federal domestic assistance programs. This data is used to track approved federal funding in each program and should accurately reflect actual activity.

Additionally, the OEAM report, developed by the Federal Assistance Awards Data System, on fiscal year 1997 ATP cooperative agreement actions included several errors, such as:

- the same cooperative agreement action listed twice,
- incorrect award numbers,
- awards included that were not funded during fiscal year 1997, and
- incorrect federal obligation.

As a result of these errors, the OEAM listing is not an accurate representation of fiscal year 1997 ATP cooperative agreement actions.

NIST processed 146 ATP cooperative agreement actions during fiscal year 1997, totaling almost \$216.8 million in federal funding. These figures are based on data provided by the ATP program office. According to OEAM, however, there were only 142 cooperative agreement actions, totaling almost \$206.4 million, under the CFDA code for ATP - 11.612. The result is an underreporting by OEAM of both the number of cooperative agreement actions and approximately \$10.4 million in 1997 ATP funding.

#### **VIII. Recommendation**

We recommend that the NIST Director ensure that all future ATP cooperative agreement award and renewal actions are reported under the correct CFDA number.

#### **NIST's Response to the Draft Audit Report**

NIST recommended that sections of the report, including several minor audit findings, be deleted because it feels that these sections are unrelated to the scope of the review.

NIST agreed with the finding and recommendation regarding ATP cooperative agreement award and renewal actions reported under the incorrect CFDA number.

However, NIST disagreed with the finding regarding the 12 proposals not mentioned in any of the respective SEB minutes and feels it should be revised. NIST feels that this finding is incorrect as there were only five proposals from one competition that had been inadvertently omitted from the minutes of an SEB meeting. The other seven proposals were duplicates which did not have to be identified in the SEB minutes. ATP has prepared an addendum to the SEB minutes in which the five proposals were considered to reflect the SEB's review and decisions.

NIST suggested that the wording in various sections of the report be revised and stated that the draft audit report had incorrectly reported the date and report number for a prior GAO audit report entitled, "*Information on the Advanced Technology Program's 1997 Award Selection.*" NIST suggested that we revise the final audit report to reflect the correct date and report number.

### OIG Comments

We do not agree with NIST's assertion that certain sections of the report are beyond the scope of our review. Under OIG audit guidelines, we follow-up on previous audit report findings and recommendations that could affect the current audit objectives to determine if management has taken corrective action. Our follow-up on the past OIG and GAO reports was particularly relevant because the prior OIG and GAO findings and recommendations on the ATP award selection process were the impetus for many of NIST's current procedures and practices. Therefore, we did not revise the report as requested by NIST.

NIST also disagreed with the report finding that 12 proposals were not mentioned in any of the respective SEB minutes. The 12 proposals not mentioned in the SEB minutes include 5 inadvertent omissions, 5 duplicates, and 2 transfers to a different ATP competition. NIST argues that duplicates do not have to be identified in the SEB minutes. During our review we noticed several instances where duplicates and transfers were, in fact, mentioned in the SEB minutes. To maintain the integrity and consistency of the SEB minutes, final determinations and actions for all ATP proposals that are assigned tracking numbers should be reflected in the minutes. As noted in the audit report, NIST has already instituted procedures to ensure that all proposals will be mentioned in the respective SEB minutes of future ATP competitions.

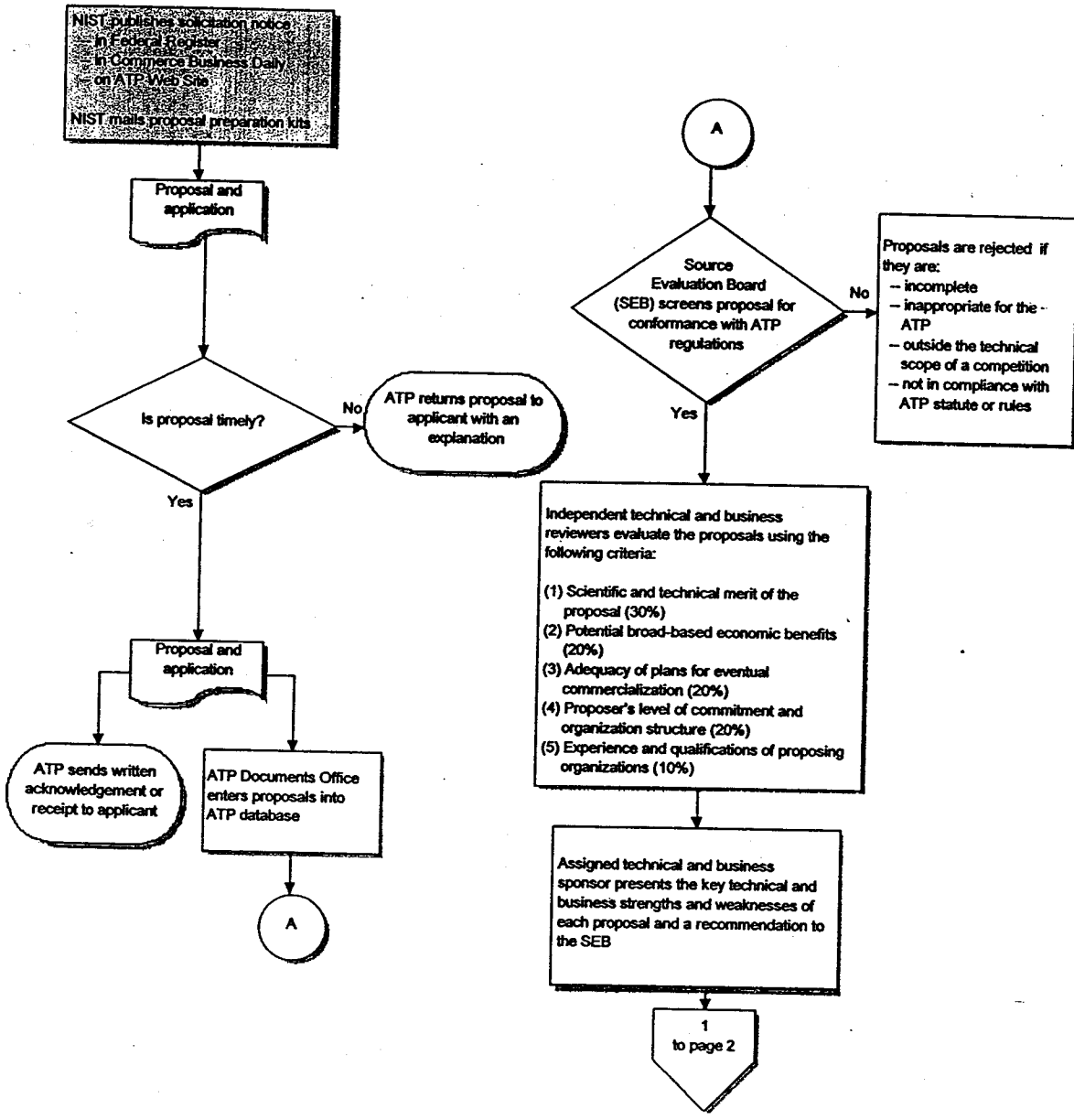
We revised the wording in sections of the report to more accurately reflect the information presented. The draft audit report stated, "*The minutes are used to track the review process for all proposals submitted for the 7 ATP competitions.*" The final audit report has been revised to read, "*The minutes document official decisions of the SEB for all proposals submitted under ATP competitions.*" Additionally, the draft audit report stated, "*Upon completing Phase II, proposals rated as 'recommended' by the technical reviewers, business reviewers, and the technical/business sponsor proceed to Phase III of the evaluation process . . .*" The final audit report, including NIST's suggested revision, reads, "*Upon completing Phase II, proposals rated as 'recommended' by the SEB proceed to Phase III of the evaluation process . . .*" NIST suggested that we make revisions to the paragraph in the draft audit report detailing the three-step system for tracking ATP proposals through the review process. NIST suggested that we mention the numerous steps involved in the receipt and handling of all proposals. When

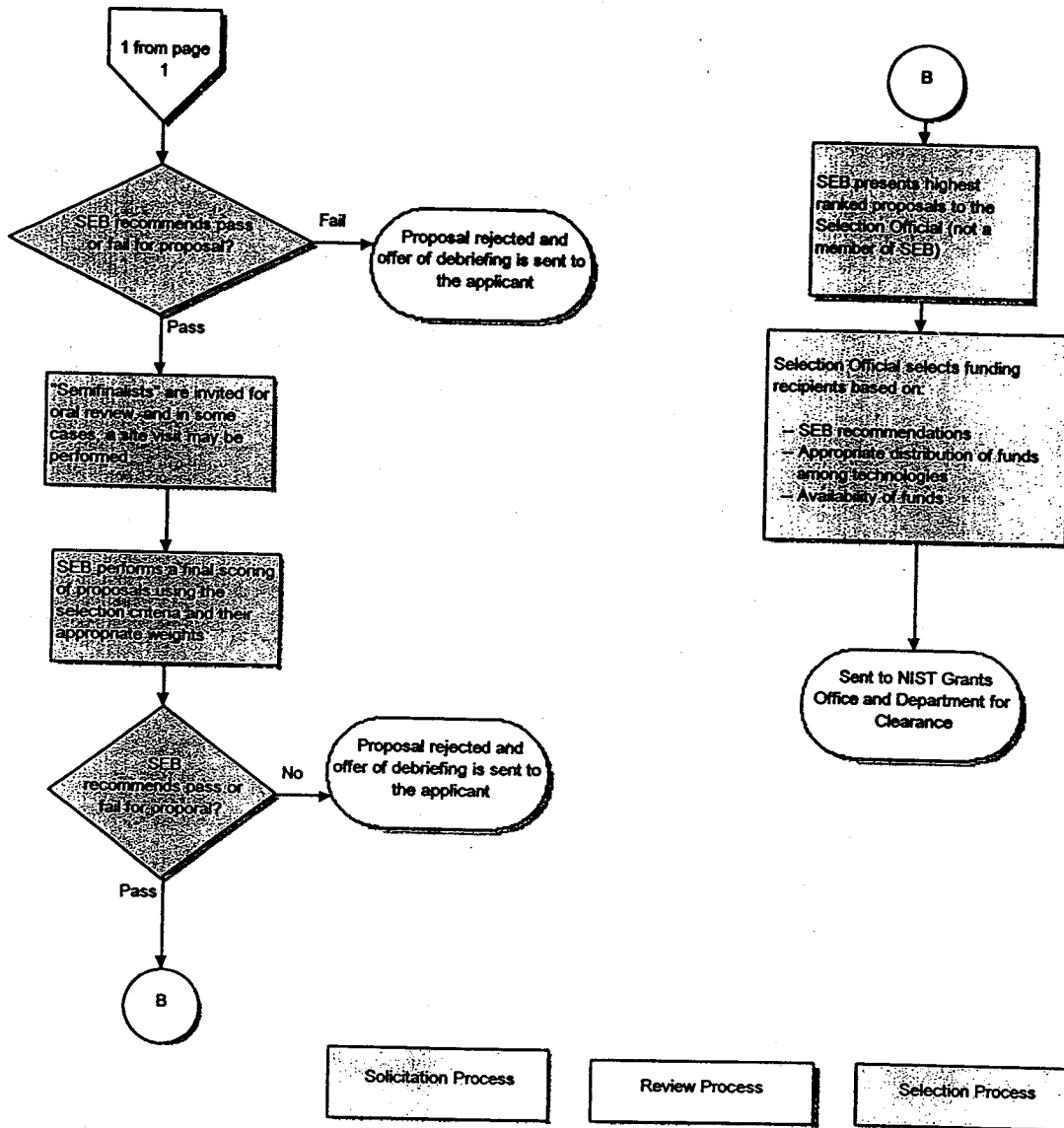
appropriate, the final audit report reflects NIST's suggested revisions. Finally, NIST felt that the following sentence in the draft audit report was misleading, "*NIST had \$225 million available for renewal of prior year cooperative agreements and new awards under the fiscal year 1999 ATP competition.*" NIST explained that the \$225 million was ATP's entire fiscal year 1997 appropriated funding level which includes salaries, expenses, and other object class categories. We have revised this sentence in the final audit report.

NIST clarified that business reviews are conducted by business reviewers assigned by the ATP Economic Assessment Office and not by the NIST Grants Office. Since the name of the particular NIST organization that conducts the business reviews is not essential to the statement in question, it has been deleted.

NIST suggested that we revise the date and report number for the GAO audit report cited in our draft audit report. Upon further examination we determined that the report date and number stated in the draft audit report are correct, in fact, and that NIST's proposed corrections reference GAO testimony related to the GAO report. Therefore, no change was made.

### ATP Procedures for Solicitation, Review and Selection of Awards







**NIST**

Appendix II  
**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Institute of Standards and Technology**  
Gaithersburg, Maryland 20899  
OFFICE OF THE DIRECTOR

MAR 24 1999

MEMORANDUM FOR George E. Ross  
Assistant Inspector General for Auditing

From: Karen H. Brown  
Deputy Director

Subject: NIST Comments to Office of Inspector General Draft Audit Report No. DEN-10960-9-XXX, Advanced Technology Program Awards Were Merit-Based, CFDA No. 11.612

Thank you for the opportunity to comment on the subject draft audit report dated February 16, 1999. Although the draft audit report was addressed to Dr. Lura Powell, Director, Advanced Technology Program, I am responding to it as it contains findings related to activities performed within the National Institute of Standards and Technology (NIST), albeit within two separate organizations within the Institute. As Dr. Powell advised you at the exit conference last month, it is important that the OIG distinguish between the programmatic operations and functions of the NIST Advanced Technology Program (ATP) and the award processing operations performed by the NIST Grants Office. The draft audit includes recommendations for the ATP Director to correct findings related to activities performed by the NIST Grants Office. This is not under the purview of the ATP Director. We request that OIG audit findings and recommendations on activities performed by program offices such as ATP or the NIST Grants Office be clearly delineated in OIG audit reports, and that they be transmitted to my office for a coordinated response.

We also recommend that the minor findings in your report which do not relate to the scope of the review requested by Senator McCain in his December 3, 1997, letter to the former Inspector General be deleted. We take great pride in the competitiveness of the ATP.

The following specific comments on the subject draft audit report are provided

#### EXECUTIVE SUMMARY

Page i, fourth paragraph, second sentence, (3) references a prior OIG audit finding regarding adequate tracking of award contingencies by the NIST Grants Office. Given that prior audit findings do not relate to the scope of the review requested by Senator McCain, they should be deleted.



Page i, fifth paragraph, first sentence states "... found that they met the Department's minimum requirements and were generally adequate to support merit-based decisions." We question the use of the word "generally" in this sentence and recommend that it be deleted. ATP's processes ensure that all award decisions are made on a merit-based basis.

Page ii, first full paragraph, first sentence states "At the same time, we identified opportunities for improving the program's award procedures and practices." We take exception to this statement and request that it be revised. The procedures and practices which were reviewed by the OIG were found to be very effective as discussed by the OIG in the preceding paragraphs on page ii of the draft audit report. It seems inappropriate that the OIG "identified opportunities for improving the program's award procedures and practices" especially since there was only one minor OIG finding.

Page ii, first full paragraph, first bullet, third sentence states "... program staff failed to mention 12 proposals submitted for 4 ATP competitions in the Source Evaluation Board minutes." This sentence is incorrect as there were only five proposals in one competition which had been inadvertently omitted from the minutes of the single SEB meeting in which the five proposals were considered. The other seven proposals were duplicates which did not have to be identified in the SEB minutes. Additionally, the five proposals which were not identified in the minutes had the other required documentation, i.e., appropriate technical and business reviews, technical and business sponsor evaluation worksheets, and SEB decisions reflected on the evaluation worksheets. ATP has taken the appropriate action to prepare an addendum to the applicable minutes of the single SEB meeting in which the five proposals were considered to reflect the SEB review and decisions. We do note that this finding has no relevance to the review requested by Senator McCain, and recommend that it be deleted. If the OIG, however, chooses to include the finding in the final audit report, it should be revised to more accurately reflect that there were only five proposals in one competition that were not included in the single SEB meeting minutes.

Page ii, first full paragraph, first bullet, fourth sentence states "The minutes are used to track the review process for all proposals submitted for the 7 ATP competitions." This statement is incorrect. The minutes are not used to track the review process but rather to document the names of attendees at the SEB meetings and any official decisions of the SEB, particularly the voting results on each proposal considered during the meeting. If the finding is not deleted as recommended in the preceding paragraph when the final audit is issued, we request this statement be corrected.

Page ii, first full paragraph, second bullet, and two follow-on related paragraphs discuss a clerical error in data entry performed by the NIST Grants Office. NIST will take the appropriate action to correct this finding. However, we recommend that this finding be deleted as it is unrelated to the scope of the review requested by Senator McCain.

## INTRODUCTION

Page 1, fourth paragraph, second sentence states "Technically, all Commerce financial assistance programs are discretionary entitlement programs." We question the words "discretionary entitlement" as a financial assistance program is either discretionary or an entitlement. We suggest that the word "entitlement" be deleted.

Page 2, first paragraph, first sentence, states "The Office of Management and Budget (OMB) has issued regulations for administering competition-based financial assistance programs for use by federal agencies." The word "regulations" should be revised to read "guidelines or Circulars" because OMB has not issued any such regulations. Regulations for administering competition-based financial assistance programs are issued by individual grantor agencies, not OMB.

## FINDINGS AND RECOMMENDATION

Page 7, first paragraph, third sentence states "... NIST failed to mention 12 proposals submitted for four 1997 ATP competitions in the Source Evaluation Board minutes." This statement is incorrect as discussed in our comments above to page ii, first full paragraph, first bullet, third sentence of the draft OIG audit report.

Page 7, first paragraph, fourth sentence states "The SEB minutes are used to track the review process for all proposals submitted for the seven ATP competitions." This statement is incorrect as discussed in our comments above to page ii, first full paragraph, first bullet, fourth sentence of the draft OIG audit report.

Page 7, first paragraph, fifth and sixth sentences state "Additionally, ATP incorrectly reported three new ATP cooperative agreements and six ATP award renewals under the wrong CFDA code number during fiscal year 1997. As a result, the Department's Office of Executive Assistance Management (OEAM) received inaccurate data for inclusion in its database system used to report on and track awards." The OIG audit report did not identify what report had incorrect CFDA code numbers. After several calls to the OIG, we learned that the reporting referred to by the OIG was the Federal Assistance Awards Data System (FAADS). All FAADS reporting for ATP awards is performed by the NIST Grants Office. NIST will take appropriate action to correct this finding and ensure that FAADS reporting is accurately reported in the future. As noted above, we recommend that this finding be deleted as it is unrelated to the scope of the review requested by Senator McCain.

Page 7, section I. **NIST Has Adequately Addressed Prior Audit Report Findings.** We question the relevance of going into such detail to discuss audit findings in previously issued OIG and GAO audits. Specific sections which we recommend be deleted follow.

Page 8, first, second, and third paragraphs, discuss audit findings in a July 1997 audit which have been resolved, therefore, they should be deleted. These issues are not related to the current

report. We note, however, that the last sentence in the first paragraph states that the "NIST grants office had not completed business reviews of the ATP proposals." Please be advised that business reviews are conducted by business reviewers assigned by the ATP Economic Assessment Office. The NIST Grants Office does not conduct business reviews.

Page 8, fourth paragraph, first sentence cites the date of the GAO report as February 24, 1998 along with a footnote which identifies the GAO Audit No. as GAO/RCED-98-82R. The correct date of the audit is February 26, 1998 and the GAO Audit Report No. is GAO/T-RCED-98-92.

Page 10, section III. **ATP Established Adequate Evaluation Procedures, Phase II.** The last sentence states "Upon completing Phase II, proposals rated as "recommended" by the technical reviewers, business reviewers, and the technical/business sponsor proceed to Phase III of the evaluation process and are classified as "semifinalists." This sentence is misleading and should be revised to more appropriately read, "Upon completing Phase II, proposals rated as "recommended" by the Source Evaluation Board proceed to Phase III of the evaluation process and are . . ."

Page 11, section V. **Established Review Procedures Were Adequate But a Minor Documentation Deficiency Was Noted,** second paragraph, second sentence states "Specifically, 12 of the 565 proposals received were not mentioned in any of the respective SEB minutes." As stated earlier in this response to this draft audit, the number "12" should be revised to "5" as the other 7 were duplicate proposals and there is no requirement to include duplicates in SEB minutes.

Page 11, section V., third paragraph, describes a three-step system for tracking ATP proposals through the review process. The information in this paragraph is misleading. The description in this paragraph of a three-step serial system for tracking ATP proposals is incorrect as ATP does not have such a three-step system. There are numerous steps in the receipt and handling of all ATP proposals. These steps include initial logging and assignment of proposal numbers, entry into database, acknowledging receipt of proposals, assignment of technical and business sponsors, assignment of technical and business reviewers, recording sponsor recommendations, recording SEB decisions on technical and business summary sheets, preparing SEB minutes, etc. Pages 10 and 11, section III, **ATP Established Adequate Evaluation Procedures,** of this audit report describes the major steps or four-phase evaluation process. Each SEB has an Executive Secretary and SEB Chair who are responsible for ensuring proposals received in a competition have been considered by the SEB. There are different tools available to the Executive Secretary and SEB Chair to ensure that this is accomplished. For example, the Executive Secretary may use the EXECSEC Summary Sheet to record SEB actions. This summary sheet is for the sole use of the EXECSEC and has been a very effective monitoring tool to ensure that an SEB action is taken on every proposal, excluding duplicates. Another tool is the computer database. The technical and business review forms, technical and business sponsor evaluation worksheets, and minutes are used for documentation purposes and not for "tracking" purposes. For example, the

SEB minutes are not used as a tracking tool but rather to record the official minutes and SEB decisions on proposals. We recommend that this paragraph be revised or deleted.

Page 12, first complete paragraph, second sentence, should be revised to change "12" to "5" as discussed previously in this response. Additionally, the third sentence should be revised to change "the other two components of the three-step system" to more appropriately read "other forms of documentation."

Page 12, section VI. **Ranking and Selection Practices Were Adequate**, first paragraph states that "NIST had \$225 million available for renewal of prior year cooperative agreements and new awards under the fiscal year 1999 ATP competition." This sentence is misleading because \$225 million was ATP's entire FY 1997 appropriated funding level which includes salaries and expenses, and other object classes categories. This paragraph should be revised accordingly.

Page 13, section VII. **ATP Cooperative Agreements and Award Renewals Were Improperly Categorized**, reports minor clerical errors in FAADS reporting performed by the NIST Grants Office. NIST will take appropriate action to correct these findings and ensure that FAADS reporting is accurately reported in the future.

Page 13, section VIII. **Recommendation**, states "... that the ATP Director ensure ..." This should be revised to more accurately read "... that the NIST Director ensure ..." as the NIST Grants Office operations are not under the purview of the ATP Director.

Again thank you for the opportunity to review and provide comments on the subject draft audit. Any questions concerning this response should be directed to Barbara Lambis at 301-975-4447.

cc: Raymond G. Kammer  
Johnnie Frazier  
Linda Bilmes  
Sonya G. Stewart  
Susan Sutherland  
Marilyn Khan  
Jorge Urrutia