



UNITED STATES DEPARTMENT OF COMMERCE
The Inspector General
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STATEMENT BY

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BEFORE THE
SUBCOMMITTEE ON TECHNOLOGY
COMMITTEE ON SCIENCE
HOUSE OF REPRESENTATIVES

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Madame Chairwoman and Members of the Committee, I am pleased to appear before you today to discuss the Office of Inspector General's recent audit and inspection work at the Technology Administration, which includes the Office of Technology Policy, the National Institute of Standards and Technology, and the National Technical Information Service. Our work has been varied and wide-ranging, as we have reviewed issues unique to TA as well as crosscutting issues that pertain to more than one Commerce operating unit. Much of our effort has focused on work related to NIST's capital improvement facilities plan, our audits of NIST's discretionary financial assistance programs, and our concerns about NTIS's future. We also spent considerable resources on our financial statement audit work in TA, and I am pleased to state that once again all three agencies received unqualified opinions on their fiscal year 1999 statements. And, of particular note, the opinions on TA's, NIST's, and NTIS's statements have contributed to the Department of Commerce receiving its first unqualified "clean" opinion on its consolidated

statements. Today I will provide you with an update on our work related to these topics, as well as highlight some of the other work we have completed.

OIG Continues to Monitor NIST's Construction and Renovation Efforts

Since I last testified, NIST has taken significant steps to upgrade its facilities to support the type of cutting-edge, precise research and measurement services that the agency is known for. A year ago this week, many of us, including the Secretary of Commerce, Senators Sarbanes and Mikulski, and the chairwoman of this committee, Representative Morella, witnessed the dedication of the new Advanced Chemical Sciences Laboratory in Gaithersburg. This 200,000-square-foot facility should go a long way toward helping NIST improve the accuracy of chemical measurements, standards, and methods used for pharmaceutical manufacturing, medical diagnosis, pollution monitoring and cleanup, nutritional analysis, and other chemical industries and sciences, as well as provide a safer working environment.

However, NIST's long-term plan for meeting its facilities construction, renovation, and maintenance needs remains an issue that warrants continued OIG oversight. The plan, which totals more than \$926 million, includes a discussion of the agency's short- and long-term facilities management goals, a six-year, \$333.6 million spending plan for fiscal years 1998 - 2003, and a list of approximately \$593 million in "potential projects" to be completed beyond the plan's six-year time frame. Facilities-related expenditures planned through fiscal year 2003 include \$218 million for construction of the Gaithersburg Advanced Measurement Laboratory (AML) and \$115.6 million for safety, maintenance, and other facilities improvement projects related to failing or inadequate infrastructure on NIST's campuses in Gaithersburg, Maryland, and Boulder, Colorado.

NIST soon will break ground and begin construction of its long-awaited Gaithersburg AML. This facility is expected to provide stringent controls on particulate matter, temperature, vibration, and humidity that are unattainable in current NIST buildings. Such controls are

needed to enable NIST to conduct the most advanced metrology, physics, chemistry, electronics, engineering, and materials science research. When completed, NIST expects that it will be among the most advanced laboratories of its type in the world. While we had concerns initially about some of the earlier funding approaches and plans to acquire AML capabilities for NIST, including NIST's plans to build two AMLs—one in Gaithersburg and one in Boulder—we have consistently supported the construction of the Gaithersburg AML. We issued reports on NIST's plans for the AMLs in March 1996 and January 1997. In them, we supported the need for the AML in Gaithersburg, and urged NIST to push for unified construction of the AML in Gaithersburg, rather than constructing a second AML in Boulder.

The President's fiscal year 2001 budget includes approximately \$35.9 million for NIST construction and renovation. Of this amount, we understand that approximately \$20.4 million represents a down payment toward the cost of addressing a long list of critical safety, capacity, and maintenance deficiencies at both the Gaithersburg and Boulder campuses. An additional \$15 million is included for the eventual fit-out of the Gaithersburg AML. The balance—\$500,000—is planned for the design of a new primary electrical service for NIST's Boulder campus to address its inadequate power supply.

As for NIST's long-range plans, we have supported the need to reduce the significant safety, capacity, and maintenance backlogs at NIST. In addition, while we believe that NIST has in the past generally been able to adequately demonstrate its need for the construction of new buildings and renovation of its existing facilities, we have also found instances where NIST had not fully justified planned or completed projects. Unfortunately we are not able to comment on the efficacy of NIST's current list of approximately \$593 million in potential projects to be completed in the long term. The plans are, at this point, all too indefinite for us to be able to make any judgments. Nevertheless, as we have in the past, we would again urge NIST to continue to reassess the need for and prioritize these projects.

We should also note that during the past few months we have been working with NIST officials as we completed a review of a small ballistics testing facility that the agency proposed to build in an existing building adjacent to its Gaithersburg campus. Our review confirmed that NIST's facility is not adequate to support its plans to continue to conduct ballistics testing and research. However, in our opinion, there were better and more cost-efficient options available to NIST than the proposed renovation. During our review, NIST abandoned plans for this renovation project due to its projected high cost and is now considering other options. We are working with NIST officials and encouraging them to carefully weigh and document the costs and benefits of various options (including contracting out all or portions of its testing program) before it proceeds with any alternative plan to support its ballistics testing program.

OIG Security Concerns About Short-term Visiting Researchers Being Addressed

We have expressed concerns about NIST's "open-door" policies in regard to its short-term visiting researchers at its laboratories. These are non-federal researchers working at NIST for less than 10 days a year. Each year, NIST has hundreds of these visitors. While conducting a 1998 review of NIST's interagency agreements, we found that, in general, NIST had a reliable process to monitor its interagency agreements, and it did require non-federal laboratory researchers to enter into a written agreement with NIST if they worked at its facilities for longer than 10 days a year. However, we found no such controls over the shorter term visiting researchers. Moreover, these visitors could come and go without any record since NIST did not keep a log of their visits.

We observed two potential security weaknesses in NIST's practice of permitting these informal short-term collaborations with non-federal researchers. First, visiting researchers could obtain unauthorized access to proprietary material, expensive equipment, and other property. We pointed out that if equipment was stolen or damaged by a visiting researcher, NIST might not be able to even identify all the people who may have had access to the equipment. In addition, because NIST did not have a record of the visitors, it could not identify any who exceeded the

10 day limit. At a minimum, we recommended that NIST keep a log or other record of all short-term researchers. Since our work on this matter was completed, NIST has agreed to go one step further and require a written agreement for *all* non-federal researchers at NIST.

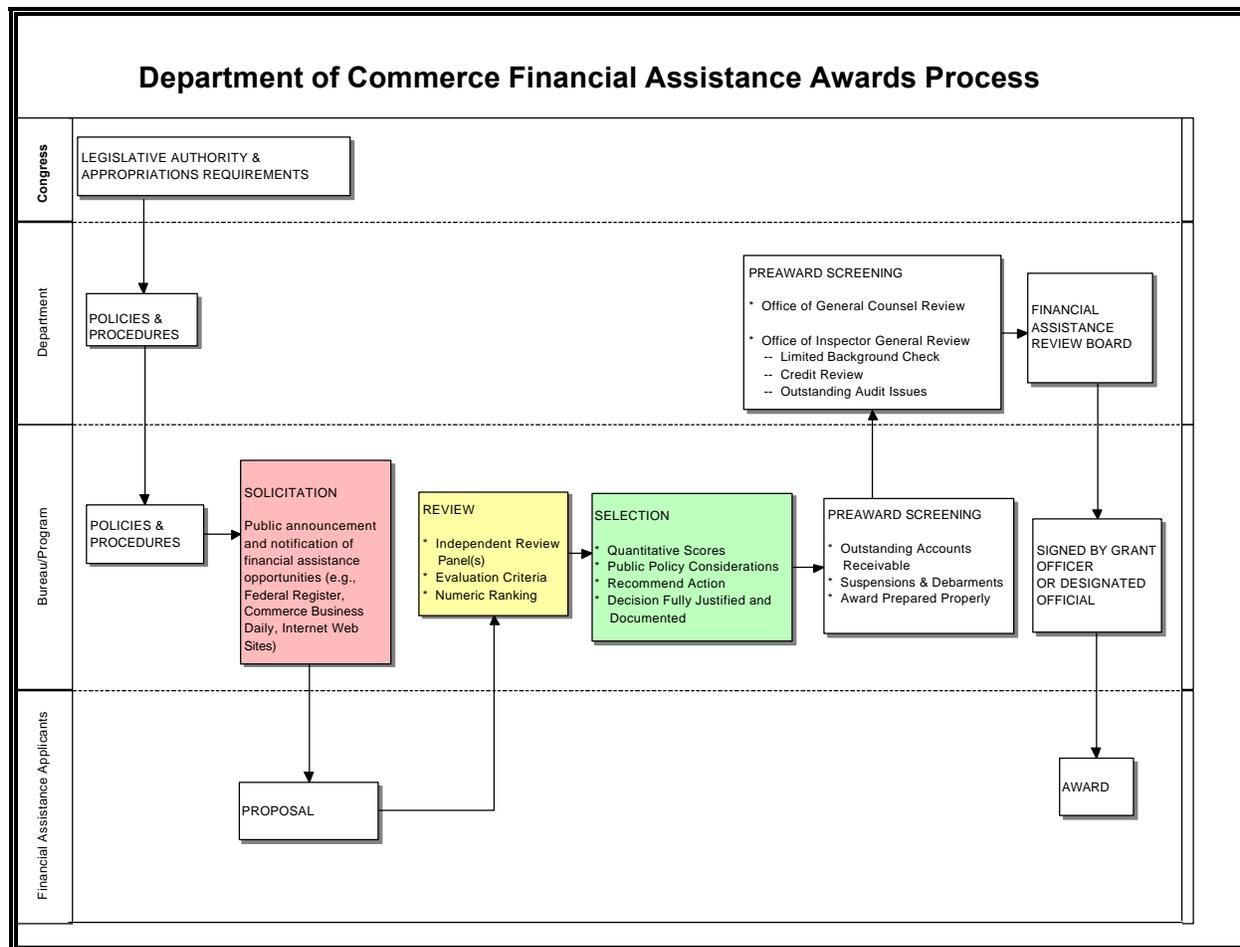
OIG Assistance Improves NIST's Efforts in Providing Financial Assistance

NIST's Financial Assistance Award Processes Are Designed to Promote Merit-Based Funding Decisions, Opportunities Exist to Enhance Competition

In my testimony last year, I briefly discussed the audit work my office was conducting of NIST's procedures and practices for soliciting, reviewing, and selecting applications for financial assistance under its five discretionary financial assistance programs. This work was part of a Department-wide review of financial assistance awards conducted at the request of the Chairman of the Senate Commerce, Science, and Transportation Committee. The Chairman had 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 funding decisions are made.

Discretionary financial assistance programs involve a significant portion of the Department's budget and operations. Six Commerce agencies, including NIST, administer about 70 financial assistance programs providing more than a billion dollars a year to state and local governments, educational institutions, nonprofit and for-profit organizations, and individuals.

The chart presented on the following page depicts the basic process and controls for the solicitation, review, and selection of financial assistance awards as established by the Department. The processes we reviewed during our audits are in color.



In fiscal year 1999, NIST reported 518 awards representing more than \$276 million in financial assistance under three programs:

- The **Advanced Technology Program (ATP)**, which assists U.S. businesses in creating and applying the generic technology and research results necessary to commercialize significant new scientific discoveries rapidly and to refine manufacturing technologies.
- The **Manufacturing Extension Partnership (MEP)** program, which assists U.S. manufacturers in enhancing their productivity and technology performance.

- The **Measurement and Engineering Research and Standards Program (MERS)**, which provides financial assistance to a wide array of recipients to further scientific research in the areas of fire research, building research, precision measurement, automated manufacturing, advanced ceramics, and other areas.

Two other NIST financial assistance programs, although included in our audit work, have not awarded any grants or cooperative agreements since FY 1997, and do not anticipate any future solicitations. They are:

- The **State Technology Extension Program (STEP)**, which provided financial assistance to state governments and non-profit organizations to enable them to develop manufacturing assistance programs aimed at small and medium-sized manufacturers.
- The **National Standard Reference Data System Program (NSRDS)**, which made scientific and technical data that had been critically evaluated readily available to scientists, engineers, and the general public.

The use of competitive selection procedures is widely recognized as the most effective method of ensuring that financial assistance awards are made on the basis of merit. Consequently, I am pleased to report that we have completed our review of NIST's financial assistance programs, and found that all but one program were administered competitively. Specifically, we have issued final audit reports for four of the financial assistance programs: ATP, MEP, STEP, and NSRDS. For these four programs, our reviews found that the criteria, procedures, and practices used by those programs to solicit, review, and select applications met the Department's minimum requirements for maximizing competition and were generally adequate to support merit-based funding decisions. Furthermore, we believe NIST's efforts to enhance the independence and objectivity of the ATP review process by using reviewers from outside the Department to review proposals constitutes a best practice that can be used in other funding programs as appropriate.

We did, however, identify some minor problems with the four programs. For instance, three of the programs did not publish annual program notices in the *Federal Register* as required by the Department, and only used in-house reviewers. NIST agreed with our findings and recommendations. The final audit in this series—MERS—is nearing completion.

Reviews of Recipients Results in Better Management

In addition, as time and resources permit, we are continuing to perform financial-related audits of NIST's largest and most visible financial assistance programs—ATP and MEP. We have been reviewing aspects of these programs since their inception to provide the oversight, advice, and help needed to better ensure that they are efficiently and effectively managed. In the past, we have performed accounting system surveys of first-time recipients of financial assistance awards as well as interim and final cost audits of ATP awards. Not only do the surveys help “prevent” problems and the other audits help identify any questioned costs, our final audits provide the financial information NIST needs to close out awards in a timely manner. Any remaining unneeded funds can then be “deobligated” and used to offset future ATP budget requests.

Getting back to specific work products, for ATP this year we have issued final reports on eight NIST-requested audits and are in the process of completing a ninth. The completed audits were of five joint venture partners and three single company award recipients. The audits consisted of seven accounting system surveys and interim cost audits, and one final cost audit of a specific cooperative agreement. The cooperative agreements averaged about \$2 million each. The surveys and interim cost audits disclosed only minor questioned costs and adequate compliance with NIST financial requirements in all but one case. The audit of the last agreement is still in process. Because of the importance that both NIST and my office place on good financial management of this multimillion-dollar financial assistance program, we are working together to identify additional awards for surveys and audits.

Our MEP-related fieldwork in process includes a review of a potential matching share deficiency at one MEP center. We also identified a significant amount of questioned costs during an audit of another center.

*Reviews of NIST's Administration of ATP Intramural
and Focused Programs Identifying Only Minor Issues*

We have also completed the field work and issued draft reports on two performance audits that address various aspects of NIST's administration of ATP. The first audit addresses NIST's management of intramural research projects funded with ATP appropriations and performed by NIST's laboratories. The ATP statute allows NIST to use up to 10 percent of the program's appropriation internally for standards development and technical activities in support of the ATP mission. For fiscal years 1996-98, NIST sponsored 366 such intramural projects for about \$35 million. Based on our work, we found that ATP had developed appropriate policies and procedures for selecting projects that met the intent of the statute. However, we found opportunities for ATP to improve its management of the projects. For instance, intramural project files contained very little written documentation of ATP's monitoring of the projects. Thus, while ATP officials told us that they were actively involved in managing the projects and approved all changes in research direction, we were unable to find much documented evidence to that effect.

Our second performance audit is an evaluation of ATP's focused program selection process. A focused program is one of the two types of competitions held by ATP to solicit proposals from companies interested in obtaining ATP funding. General competitions are open to proposals in all areas of technology, whereas focused program competitions support specific, predefined technology and business goals. The companies conceive and submit proposals on technology development projects in response to the announced competitions. Although NIST is not currently conducting any focused programs, it has not ruled out the possibility of using such competitions in future years.

We examined how focused programs were selected, whether the bases for the selections were properly documented, and whether ATP follows its own selection criteria. We also looked at the extent to which ATP used outside information and expert viewpoints during the evaluations. We found that ATP uses external reviewers in the selection process, a practice we highly endorse. We also found that ATP established criteria for selecting technology areas from ideas submitted by industry. However, because NIST did not document key steps in the selection process, we were unable to assess to what extent NIST applied its criteria in selecting the focused programs.

*Review of Department's Business Centers Includes
Focus on MEP Program Performance Measures*

The Government Performance and Results Act of 1993 (GPRA) requires that each federal agency develop performance measures for its programs and activities, and collect information and report on its performance against these measures to the Congress. The first performance reports are to be sent to the President and Congress no later than March 31, 2000. Because of the importance of submitting accurate and reliable performance data, we are evaluating MEP's performance measures, including increased sales attributable to MEP assistance. This review is part of our broader review of the performance measures of the Department's five business centers. Besides MEP, the audit will include the Economic Development Administration's Trade Adjustment Assistance Program and University Center Program, the International Trade Administration's Export Assistance Center Program, and the Minority Business Development Agency's Minority Business Development Center Program. All these programs operate separate national networks of specialized centers that primarily serve businesses. We plan to focus on determining the best practices for verification and validation of agency performance information.

Management of NTIS Agreements Requires Additional Improvements

NTIS uses interagency and other special agreements to pursue its mission of being the federal government's central clearinghouse for unclassified scientific and technical information.

Through such agreements, NTIS acquires information from federal agencies, government contractors, and foreign governmental sources to include in its collection of publications. As part of our Department-wide review of such agreements, we evaluated the policies, procedures, and practices followed by NTIS in preparing, reviewing, and managing its agreements. Overall, we found that NTIS properly used the agreements. However, we also identified several areas needing improvement. For instance, NTIS did not have any written policies or procedures for drafting the agreements. Neither did it ensure that all agreements underwent sufficient legal review. In addition, the required business plans for entering into joint ventures with private parties were inadequate or in some cases not prepared at all. NTIS generally agreed with our recommendations for corrective action.

Financial Statement Audits Result in Unqualified “Clean” Opinions

The Chief Financial Officers Act of 1990 and the Government Management Reform Act of 1994 were designed to improve the financial management practices of federal agencies. The acts required audited financial statements that present an entity’s financial position and results of operations and provide other information needed for the Congress, agency executives, the public, and others to assess management’s performance and stewardship. I am pleased to report that financial statement audit reports for TA, NIST, and NTIS were issued last week and all three agencies received unqualified opinions on their fiscal year 1999 financial statements. This is the fourth straight year of an unqualified (clean) opinion for TA, the sixth for NIST, and the second for NTIS. TA’s, NIST’s, and NTIS’s success at receiving clean opinions on their final statements contributed to the Department of Commerce’s first ever clean opinion on its consolidated statements.

In addition, the Independent Public Accounting (IPA) firms conducting the audits did not identify material weaknesses for any of the three agencies. Material weaknesses represent serious conditions where the design or operations of an internal control component does not minimize

the risk that errors, fraud, or noncompliance in material amounts may occur and not be readily detected.

However, the IPA firm did cite one reportable condition and one instance of material noncompliance with the Federal Financial Management Improvement Act of 1996 for NIST. Both of these problems involve NIST's general controls over its financial management systems. Since NIST's systems provide all accounting services that support TA's financial management and financial statements, the auditors also considered TA to be in noncompliance with the act. The NTIS audit did not identify any reportable conditions or instances of noncompliance with laws and regulations.

U.S. Library Commission Reviewing Departmental Plans for NTIS

Financial and operating problems continue to jeopardize the future of NTIS. Although in fiscal year 1999, NTIS reported a drop of more than \$3.4 million in total revenue to \$33.3 million, the agency was able to avert a loss, and actually reported a surplus of \$652,000 at the end of the year. But this was mainly accomplished by implementing major cost-reduction measures, which included transferring some of NTIS's staff to other Commerce agencies, consolidating office space, eliminating performance awards, and restricting travel.

While such drastic measures can help solve NTIS's short-term financial problems, they cannot address the agency's larger, more basic problem. I am referring to the steady decline in sales of its products and services brought on by fundamental changes in the marketplace.

By many accounts, federal agencies are increasingly bypassing NTIS as a distribution channel, and are instead offering their publications directly to the public over the Internet. A November 1998 consulting study commissioned by TA, at our recommendation, supports these conclusions. The study concluded that even with significant efforts to reduce costs and improve profitability, NTIS can no longer generate sufficient revenue to remain self-supporting.

To address the primary issues and concerns related to NTIS's short- and long-term operations, a working group made up of senior managers from the Department and TA was formed to consider options for taking corrective actions. Based on the group's efforts, the Department proposed closing NTIS by the end of fiscal year 2000; transferring its collection of scientific, technical, and engineering publications to the Library of Congress; and working with federal agencies to ensure permanent public access to such publications.

At the request of Congress, the United States Commission on Library and Information Sciences has been studying Commerce's proposal. Thus far, the Commission has held three public hearings and issued a position paper for public review and comment. The Commission's anticipated recommendations include keeping NTIS at Commerce through 2001 to allow for further study of the Department's proposal as well as other alternatives, appropriating sufficient funds, estimated at \$5 million, to help pay the costs of collecting, organizing, and preserving government information, and providing a one-time appropriation to help defray the costs of establishing a program for disseminating reports to the Federal Depository libraries.

According to the Commission, the problems that NTIS is experiencing are part of a larger issue of how best to provide public access to the vast amount of information that the federal government publishes each year. As the Commission notes in its position paper, the Commerce Department's proposed action provides a timely "window of opportunity" to vastly improve public access to government information.

Year 2000 Challenge Successfully Met

Last year at this time I spoke about our role in helping the Department address key issues related to the year 2000 problem in Commerce computer systems. With regard to TA's, NIST's, and NTIS's Y2K programs, the Department's Chief Information Officer expressed his concern that NTIS would not be able to repair its systems by OMB's March 1999 deadline. Throughout this year, we have worked closely with the Department and its operating units to ensure Commerce's

mission-critical systems met the governmentwide conversion date. Consequently, I am pleased to report that, as a result of this team effort, all the Department's critical automated systems, including those in NTIS, met the challenge and experienced no significant problems in coming into the 21st century.

Other Challenges Warrant Management's Attention

Finally, I would like to discuss two other areas that provide significant management challenges to the Technology Administration. The first area involves implementation of the Government Performance and Results Act. Implementation of GPRA presents an especially difficult challenge for agencies like TA that are engaged in scientific research and the formulation of technology policy. Measuring the benefits of investments in scientific research, especially in the long term, has proven difficult. For example, while NIST has made significant progress in developing a diverse and wide-ranging performance evaluation system, and on a limited level does some economic impact studies, it continues to have problems comparing the costs of its activities to their results. Meanwhile, the Office of Technology Policy still relies mostly on the number of reports issued when discussing its accomplishments. TA needs to press its agencies to continue to develop comprehensive performance measures to strengthen compliance with GPRA.

The second management challenge for TA concerns the implementation of the Commerce Administrative Management System (CAMS), the system that the Department is developing to comply with OMB Circular A-127, *Financial Management Systems*. The circular requires that each agency establish and maintain a single, integrated financial management system. The Department is developing CAMS in stages. Now that CAMS has been successfully implemented at the Census Bureau, implementation will begin at NIST. NIST intends to determine its requirements and then develop an implementation plan during fiscal year 2000. After the Department conducts an independent verification and validation of the plan, NIST will proceed with implementation during fiscal year 2001. NIST should not underestimate the difficulties associated with installing a new financial management system. While we are hopeful that TA will

benefit from the experience of the Census Bureau in implementing CAMS, planning and implementation will have to be carefully managed to minimize delays, disruptions, and costs.

This completes my statement, Madame Chairwoman. I would be pleased to answer any questions you and the other Members of the Committee may have.

**Office of Inspector General
U.S. Department of Commerce
Recent Final Audit and Inspection Reports on the
Technology Administration
March 9, 2000**

Performance Audits:

1. *NIST Properly Tracked FY 1998 Superfund Charges to the Environmental Protection Agency*, Final Audit Report No. BTD-11485-9-0001 (January 1999)
2. *Advanced Technology Program Award Process Promotes Merit-Based Decisions* (CFDA No. 11.612), Final Audit Report No. DEN-10960-9-0001 (March 1999)
3. *Manufacturing Extension Partnership Program Award Process Promotes Merit-Based Decisions* (CFDA No. 11.611), Final Audit Report No. DEN-10959-9-0001 (March 1999)
4. *National Standard Reference Data System Program Award Process Promotes Merit-Based Decisions* (CFDA No. 11.603), Final Audit Report No. DEN-10962-9-0001 (March 1999)
5. *State Technology Extension Program Award Process Designed to Promote Merit-Based Decisions, but Process Needs More Discipline* (CFDA No. 11.613), Final Audit Report No. DEN-10961-9-0001 (September 1999)

Inspections:

6. *Management over Interagency and Other Special Agreements Requires Further Improvement*, Final Inspection Report No. IPE-11021 (June 1999)
7. *Policy of Allowing Informal Collaborations with Non-Federal Researchers Requires Additional Controls*, Final Inspection Report No. IPE-10854 (September 1998)

Financial Statement Audits:

8. *Technology Administrations's Financial Statements for FY 1998*, Final Audit Report No. FSC-10872-9-0001 (March 1999)
9. *NIST's Financial Statements for FY 1998*, Final Audit Report No. FSC-10868-9-0001 (March 1999)
10. *NTIS's Financial Statements for FY 1998*, Final Audit Report No. FSC-10871-9-0001 (March 1999)

11. *Technology Administrations's Financial Statements for FY 1999*, Final Audit Report No. FSD-11894-0-0001 (March 2000)
12. *NIST's Financial Statements for FY 1999*, Final Audit Report No. FSD-11889-0-0001 (March 2000)
13. *NTIS's Financial Statements for FY 1999*, Final Audit Report No. FSD-11892-0-0001 (March 2000)

Financial Assistance Audits:

14. *Apex Medical, Inc.*, Final Audit Report No. DEN-10921-9-0001 (October 1998)
15. *Precision Castparts Corporation*, Final Audit Report No. DEN-10737-9-0001 (October 1998)
16. *The East Coast Development Group, Inc.*, Final Audit Report No. DEN-11121-9-0001 (October 1998)
17. *IBIS Associates, Inc.*, Final Audit Report No. DEN-10909-9-0001 (November 1998)
18. *U.S. Surgical Corporation*, Final Audit Report No. DEN-10980-9-0001 (December 1998)
19. *Scientific Measurement Systems, Inc.* Final Audit Report No. DEN-10763-9-0001 (January 1999)
20. *GenPharm International, Inc.*, Final Audit Report No. DEN-10791-9-0001 (March 1999)
21. *MultiCell Associates, Inc.*, Final Audit Report No. DEN-10934-9-0001 (March 1999)