

Articles  
on  
NSF Supported Centers

from Semi-Annual Reports  
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Office of Inspector General



## CENTERS

President Clinton's FY 1995 budget submission to Congress stated: "NSF support for centers is based on the premise that some scientific questions and research problems can best be addressed through the multi-disciplinary, long-term coordinated efforts of many researchers on the many facets of a complex problem." NSF expends a significant portion of its funds on this innovative program. NSF estimates that centers receive approximately \$200 million a year, which is divided among a variety of centers, including Science and Technology Centers (STC), Engineering Research Centers (ERC), Long Term Ecological Research Sites, Materials Research Centers, and Minority Research Centers of Excellence. We are concerned that centers can pose greater management risks than individual investigator research awards because

- centers are often organized separately from university departments;
- centers receive large awards from NSF, often from \$1 million to \$3 million annually; and
- cost sharing between industry or state and local governments and institutional commitments are stressed in all center programs.

We conducted audits at four STCs and three ERCs. We also conducted an inspection at an ERC (see page 35). We are using the results of these reviews to help identify common risk factors. Based on selection criteria that we are developing from this analysis, we will identify the centers that we will audit over the next several years.

Our reviews of NSF centers began at the ERCs and STCs. NSF established the ERC program in 1985 to address fundamental research issues that are crucial to the next generation of engineering systems and to educate engineering students using a cross-disciplinary, team approach to problemsolving. NSF established the STC program in 1987 to support innovative interdisciplinary research and education and to support the transfer of knowledge in basic science and mathematics. ERCs and STCs are located primarily on college and university campuses nationwide. In FY 1993, NSF provided 18 ERCs and 25 STCs approximately \$100 million. In FY 1994, NSF will provide these centers a projected \$110 million. NSF provides funding for the ERCs and STCs through cooperative agreements made with academic institutions. The institution provides the rest of the funding and is responsible for managing the center's operations. Under these cooperative agreements, NSF offers academic institutions an initial, 5-year funding commitment with funding available for an additional 6 years (for a maximum of 11 years).

## Audit of Engineering Center at NSF's Request

We audited one ERC at NSF management's request. In 1987, NSF and a western university established an ERC to develop high-performance computing systems. The ERC's FY 1994 budget is about \$7 million, including \$1.9 million provided by NSF. NSF's Division of Engineering Education and Centers requested that we review the ERC's financial systems because the ERC had incurred a \$1,536,829 operating deficit from FYs 1990 through 1992. We conducted this review to determine whether the ERC's financial management system provided accurate, current, and complete financial results of grant activities;

- the causes of the operating deficits; and
- the manner in which the operating deficits should be liquidated.

We found the ERC had a financial management system that could provide accurate, current, and complete disclosure of the financial activities under the awards. The system provided for a comparison of budgeted versus actual grant expenditures and the source and application of funding. Nonetheless, the center had incurred an operating deficit largely because it did not adhere to budgets for the various programs,

- financial reports did not include all ERC funds
- program managers were assigned responsibility for program and fiscal controls and
- the ERC operated



without an accountant for a long time.

The center has repaid \$680,920 of the deficit and has formulated a schedule for repaying the \$855,909-balance over 4 years. The center has hired an accountant and required that reports prepared for the dean's office include all accounts. The university also drafted policies and procedures that prohibit university officials from charging additional costs to accounts that have deficit balances. This control should ensure that center officials will not be able to incur additional deficits or increase deficit balances.

During our review of the center's deficit management process, we found additional deficiencies that the center needs to address. Although these findings were not as serious as those that prompted our visit, we recommended that the university • identify cost sharing in its accounting records; • request audits of subgrantees and take corrective action when necessary; • and make available manuals, guides, and training to staff members who conduct grant-related functions. The center generally concurred with our findings and recommendations.

### **Audits at Six Centers Identify Common Issues**

We conducted audits at two other ERCs and four STCs to ensure that they were conducting the activities defined by their cooperative agreements. We audited about \$47.9 million in costs claimed under NSF cooperative agreements. We identified the following common issues:

- claimed cost sharing was not supported by adequate documentation;
- costs claimed on Federal Cash Transactions Reports exceeded actual costs;
- centers were not always complying with NSF award documents and other federal requirements;
- indirect costs were incorrectly charged on equipment and participant support costs;
- salary and tuition costs were not supported by personnel activity reports;
- adequate support was not provided for consulting services, participant support, and other direct costs; and
- centers had not always established adequate internal controls.

Recommendations associated with our audits of these ERCs and STCs will be finalized in the next reporting period. We will continue our reviews at all centers to determine whether • promised cost sharing is being met, • a system exists to account for and monitor cost sharing, and • claimed cost sharing is supported by adequate documentation.