

MEMORANDUM

TO: Mary Santonastasso, Director
Division of Grants and Agreements

Donna Fortunat, Director
Division of Contracts, Policy, and Oversight

FROM: Deborah H. Cureton
Associate Inspector General for Audit

SUBJECT: Audit Report No. 02-1001: National Consortium on Violence Research at Carnegie Mellon University, Award No. SES-9513040

Please find attached our audit report on the National Consortium on Violence Research at Carnegie Mellon University. Our review found the University's accounting system did not track its cost-sharing obligations adequately. Specifically, the system did not segregate the University's cost-sharing expenses from NSF costs. Therefore, in order to determine its progress in meeting its cost-sharing obligations, the University had to analyze each transaction at the end of the fiscal year. While the University ultimately was able to support nearly all of its \$6.8 million claimed costs, this year-end analysis was both cumbersome and prone to error. As of June 30, 2000, the end date of our audit, we identified \$48,408 that the University had overcharged NSF. We also found that the cost-sharing certifications in the annual progress reports were inaccurate, that the University did not comply with federal requirements for reporting time and effort spent on awards, that the PI spent less time on consortium research than was required, and that the consortium did not meet NSF standards for subaward management.

We recommended that the Directors of DGA and CPO work with the Office of Naval Research, Carnegie Mellon University's cognizant agency, to ensure that the University's accounting system segregates NSF and cost-sharing expenses, and that the University establishes a time-and-effort certification system that complies with federal requirements. We also recommended that the NSF Directors verify whether or not the University has adjusted the amount of unbilled award costs by \$48,408 to correct for its overcharge, and ensure that the University complies with NSF's cost-sharing certification requirements and the terms of each award amendment, and that the consortium improves its annual reporting of expenditures to NSF and its subrecipient award management.

In response to our recommendations the University stated that it agreed and had instituted changes to address all but the following recommendations: The University concluded that its cost-sharing certification process complied with the Cooperative Agreement, that its existing unwritten conflict-of-interest procedures was adequate, and that it already required annual written progress reports. We disagreed with the University and, therefore, reaffirmed our recommendations.

Regarding other matters, we found that NCOVR had obligated and spent only about half of the money provided specifically for research on violence in public housing and that it spent less on research and more on administration than budgeted. Finally, SES was interested in knowing how many different institutions had received NCOVR funding and whether the consortium had realized NSF's goal to "increase the participation of underrepresented groups." We found that the consortium made subawards to 36 institutions, including the University, and that 83 percent of its award recipients were white and 83 percent were male.

In accordance with OMB Circular No. A-50, *Audit Followup*, and NSF's Standard Operating Guidance 2001-4, *Policies and Procedures for Audit Reports Issuance and Resolution of Audit Findings Contained in Audits of NSF Awardees*, we request NSF's Cost Analysis and Audit Resolution Branch coordinate its proposed actions to address these recommendations with the OIG Office of Audits.

If you have any questions about the report, please contact Mr. James Noeth at 703-292-5005.

Attachments

cc: Dr. Daniel Newlon, Division Director (Acting), SES

NATIONAL CONSORTIUM ON VIOLENCE RESEARCH

**CARNEGIE MELLON UNIVERSITY
Pittsburgh, Pennsylvania**

From May 15, 1996 through June 30, 2000

EXECUTIVE SUMMARY

Purpose

The National Science Foundation (NSF) Division of Social and Economic Sciences (SES) and the Division of Grants and Administration (DGA) asked the Office of the Inspector General (OIG) to address several issues of concern regarding an award to Carnegie Mellon University (CMU) for the National Consortium on Violence Research (NCOVR). Specifically, we were asked to review whether (1) CMU complied with the NSF award requirements in its accounting for NSF and cost-sharing expenditures; (2) there were adequate procedures and accountability for subrecipient management; (3) NCOVR spent \$2 million for research on violence in public housing, as required by the Cooperative Agreement; (4) expenditures for administrative and research were consistent with the original proposal and the award agreement; and (5) NCOVR provided award funds to a diverse range of institutions and individuals across the country. Our review was conducted in response to this request.

Background

NSF Cooperative Agreement SES-9513040 awarded \$12.2 million over five years to CMU to support NCOVR. Including the nearly \$3 million of required cost sharing, the total award amount was expected to be almost \$15 million. The NSF portion of the funding included \$2 million from the Department of Housing and Urban Development (HUD) for research related to violence in public housing. As of June 30, 2000, two months into the award's fifth and final year, CMU had claimed expenditures approaching \$6.8 million, or 56 percent, of the award.

NSF has funded a total of 105 awards at CMU with expiration dates after August 1997, representing an investment of \$89 million and \$15 million of associated cost sharing.

Results in Brief

CMU's accounting system does not meet federal requirements for accurate, current and complete disclosure of the financial results of each federally sponsored project. CMU/NCOVR provided us four different sets

of accounting records to support costs it claimed under its NSF award, none of which agreed with any of the others. In addition, the summary reports of cost-sharing expenditures did not agree with detailed supporting records. Also, the NSF and cost-sharing amounts reported in the Fourth Annual Progress Reports to NSF did not match actual expenditures for prior years.

As a result of these accounting system inadequacies, CMU did not detect variances between required and actual cost sharing at the times the discrepancies occurred, and had to make many subsequent cost-sharing adjustments. In addition, as of June 30, 2000, the amount of NSF-funded expenditures reported to NSF was overstated by \$48,408.

The accounting discrepancies occurred because CMU accumulated in one account both expenditures funded by NSF and expenditures CMU paid for as cost sharing. This commingling of expenditures occurred from the beginning of the award until November 1999, when CMU converted to a new accounting system. In addition, accounting records did not identify cost-sharing amounts at the time the associated costs were incurred. Thus, at the end of each fiscal year CMU had to review each individual transaction in the combined account, separately identify costs funded by CMU as cost sharing, and make a lump sum adjustment to place these costs in a separate cost-sharing account. Even after the conversion to the new accounting system, CMU had to make cost-sharing adjustments, because of system transition problems and data corruption in the new software. In making its cost-sharing adjustments CMU did not ensure that each change was made to all affected reports, and thus these reports each reported different cost-sharing amounts. Because this accounting system affects all of CMU's awards from NSF, CMU may have inaccurately reported and claimed incurred and cost-sharing amounts on other of its total \$89 million in NSF awards expiring after August 1997.

In the review of the NCOVR award we also found that cost-sharing certifications in the annual progress reports to NSF were inaccurate, because they included obligated and estimated, as well as actual expensed amounts, although CMU did not always achieve all of the estimated and obligated cost sharing. The effect of certifying to incorrect amounts of cost sharing is that NSF did not have accurate information regarding the amount of actual cost sharing that CMU had provided at any point in time. The fact that the progress reports were due before the end of the grant years may have led NCOVR to include obligated and estimated amounts as part of the reported cost sharing.

Our review further showed that the Heinz School's¹ process of not requiring the PI's affirmative agreement with recorded time and effort amounts spent on the NCOVR award did not comply with federal requirements. As a result, inaccuracies in the reported time and effort being cost shared had to be adjusted as much as a year after-the-fact. In addition, other inaccuracies in the Heinz School's labor cost system may go undetected.

We also found that the PI spent 25 percent less time on NCOVR research activities in Fiscal Years 1999 and 2000 than was required by the special conditions in the Cooperative Agreement and its amendments. Thus, NSF has less assurance that the intended scope of the research was fulfilled. NCOVR overlooked the stated requirement for minimal time commitments on the part of "key personnel," and did not discover variances in the effort-certification process. Nor did the CMU Office of Sponsored Research, which had overall responsibility for the administration of the award, detect the discrepancies.

In the area of subrecipient management we found that the processes used to preclude conflicts of interest and to monitor subawards of more than one-year duration did not meet the requirements of OMB Circular A-110.² NCOVR had no written conflict-of-interest policy to ensure that a reviewer of a subaward proposal had no personal or professional stake in award evaluation and selection. This deficiency reduces NSF's confidence that the most meritorious subaward candidates are selected through an objective and unbiased process. Also, NCOVR's proposal guidelines did not require written annual progress reports in all subawards lasting more than one year. Oral progress reports, although useful, do not provide a written record comparable to the annual reports NSF requires of its own awardees. The lack of a written progress report for any subawards of more than 12 months duration reduces NCOVR's and NSF's ability to monitor programmatic and compliance issues.

Recommendations

We recommended that the Directors of NSF's Divisions of Grants and Agreements (DGA) and Contracts, Policy and Oversight (CPO) work with the Office of Naval Research (ONR), CMU's cognizant agency, to ensure that the university's accounting system segregates NSF and cost-sharing expenses, and that CMU establishes an affirmative time-and-effort certification system that complies with federal requirements. We also

¹ The H. John Heinz III School of Public Policy and Management at CMU certified to the time and effort of NCOVR personnel.

² See OMB Circular A-110, Subpart C, Section 42 (conflict of interest), Section 51 (reports and records), and Subpart A, Section 5 (applicability of A-110 to subrecipients).

recommended that NSF verify whether or not CMU has adjusted the amount of unbilled award costs to NSF by \$48,408 to correct for its overcharges. In addition, we made a number of other recommendations to ensure that CMU's accounting system complies with applicable federal regulations, and to improve NCOVR's annual reporting of expenditures to NSF, the accuracy of cost-sharing certifications, compliance with the terms of each award amendment, and subrecipient award management.

CMU Response and OIG Comment

CMU stated that it has instituted changes to address three of our recommendations.³ Therefore, we requested that the Directors of DGA and CPO ensure that these changes adequately address our findings. CMU disagreed with two of our recommendations. The university concluded that its existing cost-sharing certification procedures complied with the Cooperative Agreement, although Section B.3 of the Agreement specifically requires CMU's certification of actual amounts of the prior year's cost sharing. We therefore reaffirmed our recommendation. With regard to subrecipient monitoring, CMU stated that NCOVR's unwritten conflict-of-interest policies were adequate. However, we believe that written conflict-of-interest policies ensure consistency when there are staff changes and facilitate a thorough review of potential conflicts of interests and adequate procedures to address conflicts that may occur. We again reaffirmed our recommendation. CMU also said that NCOVR already requires annual written progress reports for awards lasting more than one year. However, we found that "Proposal Process," the NCOVR guidelines for research proposals, routinely requires only written *final* reports; therefore, we modified our recommendation to ensure that NSF's Directors of DGA and CPO require NCOVR to state in its "Proposal Process" the requirement to include annual, as well as final written progress reports.

Other Matters

Our review also addressed three matters requested by NSF's Division of Social and Economic Sciences (SES). The NSF award to NCOVR included \$2 million of funds from the Department of Housing and Urban Development (HUD) for research on violence in public housing. With only ten months remaining before the intended expiration of the award on April 30, 2001, NCOVR was unlikely to obligate or spend the large

³ The text of CMU's responses to our audit draft, except for attachments, appears in Appendix III. In addition to responses to recommendations addressed below, CMU replied to other sections of the audit report, and several of these responses were factually inaccurate. The attachments to CMU response and our communications with CMU/NCOVR regarding the inaccuracies are available in the NSF Office of the Inspector General.

amounts necessary to utilize the remainder of the \$2 million provided for HUD to support research on violence in public housing. As of June 30, 2000, NCOVR had obligated \$452,821 (23%) and spent \$228,901 (11%) on public-housing awards, according to SES criteria. Using NCOVR's own more expansive criteria, the consortium had obligated \$738,655 (37%) and spent \$393,914 (20%) of the \$2 million.

NCOVR had not obligated or spent more of the \$2 million on this research because it did not understand that the \$2 million of HUD money was to be used solely to fund research on violence in public housing. Also, NCOVR indicated that it did not want to obligate money on awards lacking in merit just to use the funds and that its efforts to get access to data for a pending initial \$400,000 award in this research area have been slow.

Also, the actual outlays for administration and research activities of this award did not agree with the original budgeted amounts. As of June 30, 2000, NCOVR had spent \$1.7 million (23%) of the award funds on administrative expenses, compared to the budgeted amount of \$1.1 million (11%); and it had spent and/or obligated \$2.6 million (35%) funds on subrecipient research, although it had budgeted \$ 5.1 million (52%). As a result, more NSF funds were spent on administration at the CMU campus and less were used for research at other institutions than NSF had anticipated.

Finally, in terms of institutional diversity, NCOVR had provided funds to researchers at CMU and 35 other institutions. As for ethnic, cultural, and gender diversity, we found that as of June 30, 2000, out of a total of 58 individuals who had received research funds, 83 percent were white and 83 percent were male.

Report Release Restriction

This report may not be released to anyone outside of the National Science Foundation without the approval of the National Science Foundation Office of Inspector General, except to an agency involved in negotiating or administering its awards. Information contained in this report may be confidential. The restrictions of 18 U.S.C. 1905 should be considered before this information is released to the public. Furthermore, information contained in this audit report should not be used for purposes other than those intended without proper consultation with the National Science Foundation, Office of Inspector General regarding its applicability.

CONTENTS

Executive Summary	i
Introduction	
Background	1
Objective, Scope, and Methodology	2
Review Results	
CMU Accounting System Needs Improvement	3
Cost-sharing Certifications Were Inaccurate	6
CMU Time Keeping System Not in Compliance With OMB Requirements	8
Cost Sharing for the Principal Investigator Less Than Required	9
Subrecipient Award Management	10
Section III – Other Matters	
HUD Funds Have Not Been Fully Utilized	12
Actual Expenses and Obligations for Research and Actual Expenses for Administration Do Not Agree With Original Budgeted Amounts	14
Institutional Diversity	15
Ethnic, Cultural, and Gender Diversity	15
Appendix I: Table I Adjustments	17
Appendix II: Recipients of NCOVR Research Awards	21
Appendix III: CMU's Response to Draft Report	22

ACRONYMS

The following acronyms are used in this report:

CMU	Carnegie Mellon University
CPO	NSF Division of Contract, Policy and Oversight
DCAA	U.S. Department of Defense's Defense Contract Audit Agency
DGA	NSF Division of Grants and Agreements
FCTR	Federal Cash Transaction Report
GC-1	General Grant Conditions (applies to all NSF grants)
HUD	U.S. Department of Housing and Urban Development
NCOVR	National Consortium on Violence Research
NSF	The National Science Foundation
OIG	NSF Office of the Inspector General
OMB	U.S. Office of Management and Budget
ONR	Office of Naval Research
PI	Principal Investigator
RIF	Research Initiation Funds
SES	NSF Division of Social and Economic Sciences

INTRODUCTION

Background

The National Consortium On Violence Research (NCOVR) is an interdisciplinary, multi-institutional, research and training center located in the H. John Heinz III School of Public Policy and Management (the Heinz School) at Carnegie Mellon University (CMU) in Pittsburgh, Pennsylvania. In 1996 NSF awarded CMU \$12.2 million for five-years to fund the consortium. Including the nearly \$3 million in mandatory cost sharing, the total amount for this award was expected to be more than \$15 million.

As the official recipient of the NCOVR award (SBR/SES-9513040), CMU is responsible for its financial accounting, with input from NCOVR and Heinz School staff. NCOVR provides information on costs for research, equipment, and operations; and the Heinz School provides information on personnel effort allocated to NCOVR and cost sharing. Until 1999 CMU used an in-house accounting system, which combined the NSF-funded portion of costs with cost-sharing costs provided by the university. On November 1, 1999, three and a half years into the award, CMU converted from the in-house accounting system to a commercial system (Oracle), which for the first time, enabled the university to segregate the federal portion of award costs from cost sharing. The new software made it possible in principle for CMU to identify cost-sharing entries at the time the associated expense was incurred. However, in fact, the Oracle system required some technical alterations, and adjusting entries continued to be required.

During the period covered by this audit report, CMU maintained detailed transaction and summary records, and NCOVR maintained its own accounting records. The reporting and certification of cost sharing in the Annual Progress Reports, required by NSF, did not rely on official CMU records, but on NCOVR and Heinz School records. However, the NSF portion of NCOVR costs that CMU claimed for reimbursement on its quarterly Federal Cash Transactions Report (FCTR) was based on CMU records. As of June 30, 2000, the cut-off date of this audit, CMU had claimed costs of \$6,791,425 (56%) on its Federal Cash Transactions Report (FCTR) for the NCOVR award.

NSF has provided funds to this university under 105 awards, including the NCOVR award, with expiration dates after August 31, 1997. Total funding for these awards is \$89 million, with cost sharing of \$15 million. The NCOVR award thus represents about 14 percent of the total NSF funds committed to CMU and about 20 percent of cost sharing CMU has provided for these awards.

Objective, Scope, and Methodology

The objectives of our review were to determine whether (1) CMU complied with the NSF award requirements in its accounting for NSF and cost-sharing expenditures; (2) NCOVR had adequate procedures and accountability for subrecipient management; (3) NCOVR spent \$2 million for research on violence in public housing; (4) expenditures for administrative and research were consistent with the original proposal budget and award agreement; and (5) award funds were successfully provided to a diverse range of individuals and institutions.

The scope of the audit was developed in consultation with the NSF Divisions of SES and DGA. The review covers the period from May 15, 1996, to June 30, 2000, a timeframe representing all but the last 10 months of the award. During our review, we were on site at CMU from November 6 to 17, 2000, and January 8 to 12, 2001. We interviewed NSF, CMU, and NCOVR personnel, and reviewed CMU's applicable policies and procedures as they relate to the NCOVR award.

To accomplish our objective regarding CMU's accounting for costs, we verified NSF and cost-sharing expenditures as stated in CMU's accounting system and determined whether or not CMU was in compliance with applicable federal guidelines, Office of Management and Budget (OMB) circulars A-110,⁴ and A-21.⁵ We compared claimed amounts of cost sharing with amounts reported in CMU's accounting system, and determined whether or not CMU was in compliance with NSF cost-sharing requirements reflected in the Grant General Conditions (GC-1) and the Cooperative Agreement and its Modifications. To accomplish the second objective, we interviewed NCOVR's Executive Director, and reviewed written guidelines for research proposals. For the remaining three objectives, we provide audited data, as the NSF program office requested, so that it would have information to facilitate decision making on the award. We present the results of these three issues in the "Other Matters" section of our report.

We conducted our review in accordance with the Comptroller General's *Government Auditing Standards*, and, accordingly included such tests of accounting records and other auditing procedures that we considered necessary for the specific circumstances to address the review objectives.

⁴ The subject of OMB Circular A-110 is Uniform Administrative Requirements for Grants and Agreements With Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations.

⁵ The subject of OMB Circular A-21 is Cost Principles for Educational Institutions.

REVIEW RESULTS

CMU Accounting System Needs Improvement

Federal guidelines require that recipients' financial management systems shall provide accurate, current, and complete disclosure of the financial results of each federally sponsored project. This disclosure includes both the financial status of NSF award funds as well as the awardee's cost-sharing obligation. Contrary to these requirements, CMU reported several different amounts for the NSF and the cost-sharing portions of the award as of June 30, 2000. As a result, NSF cannot be sure CMU is providing its proportionate share of project costs. The different amounts occurred because the CMU accounting system combined project costs paid by NSF and CMU-provided cost sharing in one account without separately identifying whether the costs were paid by NSF or CMU. At the end of each fiscal year, CMU removed cost-sharing amounts from the single account. Because costs were not identified as NSF or CMU-provided cost sharing at the time the cost was incurred, the end-of-year entries were frequently inaccurate, resulting in many subsequent cost-sharing adjustments. Even with the new accounting system (Oracle), cost-sharing amounts were not accurate, since the software needed modifications in order to function correctly.

Various CMU Accounting Records Did Not Agree

OMB Circular A-110 states that recipients' financial management systems shall provide "[a]ccurate, current and complete disclosure of the financial results of each federally sponsored project or program. . . ." In so far as this provision pertains both to NSF-provided funds and to an awardee's cost-sharing obligations, strong internal controls require that an awardee should use separate accounts for its NSF costs and cost-sharing costs. Without segregation of these two accounts, accurate, current, and complete disclosure of the financial result of a federally sponsored program in the FCTR and in Annual Progress Reports to NSF cannot be ensured.

In conducting our audit of the NCOVR award, we found that CMU could not readily or accurately disclose the status of either the NSF-awarded or the CMU-funded expenditures, and that it did not segregate the NSF and cost-sharing portions of the NCOVR award until about 70 per cent of the award period had elapsed. In particular, for the audit period ending June 30, 2000, we were provided with four different amounts on four different reports for total NSF award costs. NCOVR's own accounts showed \$6,511,214, CMU's Summary of Expenditures claimed \$6,844,873 in NCOVR costs, whereas the Transaction Detail of Expenditures showed \$7,028,378. All of these amounts differed from the FCTR, which reported \$6,791,425. Similarly, the CMU Summary of Cost Sharing differed from the CMU Transaction Detail of Cost Sharing: The former showed \$1,669,845, and the latter showed \$1,486,282. In total, costs charged to the NSF award varied as much as \$517,164 among the four reports and as much as \$183,563 on the reported cost-sharing amounts.

Further, during the course of the audit, we received many revisions of both NSF costs and of cost-sharing adjustments to reconcile variances among CMU and NCOVR accounting records. In fact, we were provided with four revisions of the CMU Transaction Detail of Expenditures, 10 revisions of the NCOVR Summary of Expenditures, and nine spreadsheets and one subsequent modification showing prior period cost-sharing adjustments to be done in FY 2001.

Table I below shows the discrepancies among the accounting records and the required adjustments necessary for reconciliation. With the adjustments, the amount of the NSF portion of NCOVR costs as of June 30, 2000, is \$6,743,017. The adjusted amount of cost sharing after FY 2001 adjustments will be \$1,995,741.⁶

TABLE I
CMU'S Expenditures as of June 30, 2000

	Originally Reported	Adjustments	Adjusted Total
NSF COSTS			
NCOVR Summary of Expenditures	\$6,511,214	\$231,801	\$6,743,015
CMU Summary of Expenditures	\$6,844,873	(\$101,856)	\$6,743,017
CMU Transaction Detail of Expenditures	\$7,028,378	(\$285,361)	\$6,743,017
FCTR	\$6,791,425	(\$48,408)	\$6,743,017
COST SHARING			
CMU Summary of Cost Sharing	\$1,669,845	\$325,896⁶	\$ 1,995,741
CMU Transaction Detail of Cost Sharing	\$1,486,282	\$509,459,⁶	\$ 1,995,741

During the audit, NCOVR did not explain the discrepancy of \$231,801 between NCOVR's original and final report of expenditures, and subsequently stated that the variance reflects the omission of overhead charges for May and June 2000. However, we were not able to verify these overhead expenses. The adjustments to the CMU accounts resulted from overhead changes necessitated by a flaw in the new Oracle software and/or cost sharing removed from (added to) one account but not from another. More complete explanations of the adjustments in Table I appear in Appendix I to this report.

In addition to these discrepancies our review disclosed, as shown in Table II, that as of April 30, 1999, reported expenditures for grant years one, two, and three in the Fourth Annual Progress Report understated actual expenditure amounts by \$766,897.⁷

⁶ The adjustment of \$325,896 to cost sharing, incorporated in the summary and transaction detail accounts, is based on CMU's March 29, 2001 response to the discussion draft of this audit report. NSF has not audited this adjustment and cannot verify its accuracy.

⁷ Of the Annual Progress Reports submitted for years one, two, three, and four, only the Fourth Annual Progress Report contained actual expenditure amounts. The other three reported actual and obligated amounts together.

One reason for this discrepancy is that NCOVR did not update expenditures for years one, two, and three in its Fourth Annual Progress Report, submitted in December 1999.

TABLE II
NCOVR Expenditures:
Fourth Annual Progress Report and CMU Summary of Expenditures

Period of Performance	NCOVR Fourth Annual Progress Report	CMU Summary of Expenditures	Variance
05/15/96-04/30/97	\$ 713,111	\$ 708,777	\$ 4,334
05/01/97-04/30/98	\$ 1,167,764	\$ 1,539,702	\$ (371,938)
05/01/98-04/30/99	\$ 1,635,001	\$ 2,034,294	\$ (399,293)
Total	\$ 3,515,876	\$ 4,282,773	\$ (766,897)

As a result of the accounting deficiencies, CMU could not be sure it was accurately reporting the financial status of its NSF award or its cost-sharing obligation. Only through a rigorous, complicated, and time consuming analysis was the university ultimately able to reconcile most of the differences between its accounting reports and supporting records. This analysis indicated that CMU had overcharged NSF in the amount of \$48,408. Although this amount is not material, the significant effort required to make this determination suggests CMU had major control weaknesses in its accounting process. These internal control weaknesses could have resulted in higher overcharge amounts on the NCOVR award, and, more importantly, could have resulted in overcharges on other awards in the nearly \$89 million of total NSF awards to CMU with expiration dates after August 1997. In addition, the control weaknesses increase the risk that CMU may not be properly accounting for the required \$15 million of cost sharing on these NSF awards.

We believe that there are two primary causes of the variances in the CMU and NCOVR accounting records. The first cause of the discrepancies is that for three and a half years of the award, CMU accounting records did not segregate expenses funded by NSF from those cost shared by CMU. In addition, records did not identify costs funded by the university as cost sharing at the time the associated expenses were incurred. As a result, in preparing the annual financial status reports to NSF, CMU had to review each individual transaction in the combined account, separately identify those costs funded by CMU as cost sharing, and make a lump sum adjustment to remove those costs to a separate cost-sharing account.

The second cause of the discrepancies among accounts is that CMU experienced transition difficulties when it changed from the in-house accounting system to the Oracle system in November 1999. The accounting records were partially on the old system, which did not segregate NSF and cost-sharing costs, and partially on the new system, which did segregate these costs. Reconciliation was cumbersome and difficult. Further, the new Oracle system did not correctly compute subrecipient overhead costs that were to be cost shared, and manual adjustments to the accounting records were necessary to

correct errors resulting from this software flaw. The complexities associated with reconstructing the cost-sharing account balance after-the-fact, required the numerous revisions to the year-end adjustments. In addition, CMU did not consistently ensure that the revisions were made to all of the affected reports. Therefore, each report reflected a different amount depending on whether it contained the most recent revision.

Recommendations

We recommend that the Directors of NSF's DGA and CPO work with the Office of Naval Research (ONR), CMU's cognizant agency, to ensure that CMU's accounting system segregates NSF and cost-sharing expenses, that the Oracle system accurately computes cost sharing and overhead on subcontracts in a timely manner so that manual adjustments are not necessary, and that CMU's accounting system otherwise complies with federal requirements for "accurate, current, and complete disclosure" of the financial results of federally sponsored programs. We also recommend that the Directors direct NCOVR to update its reporting of prior years' expenditures in its Annual Progress Reports. In addition, we recommend that the Directors determine whether or not CMU has credited the \$48,408 overcharge to the award.

CMU Response

CMU replied that the Oracle system allows automatic segregation of cost-shared expenses, and that cost-sharing expenditures are now separately charged and accounted for in a dedicated and unique cost-sharing account. The university said that the \$48,408 "overcharge to NSF" consisted of post-period correcting adjustments, which were subsequently credited to the award when the cost-sharing calculations were identified and completed; and that therefore, there is no need to adjust the amount of unbilled award costs by \$48,408. Although it stated that all NSF funds were used for allowable project expenses, CMU agreed that it would be better to do cost-sharing calculations automatically or at least in a more timely manner, and that to avoid such errors in the future the university now calculates these values monthly. CMU added that Oracle has promised to have a system-wide software correction ready soon so that the manual work-around will no longer be necessary.

OIG Comments

We are pleased that CMU has taken actions to improve its accounting for cost sharing. Based on CMU's response to this report, we have modified our recommendation to provide for NSF follow-up on the university's implementation of these actions.

Cost-sharing Certifications Were Inaccurate

The NSF Grant General Conditions (10/95), section 22 d, require that where the cost sharing is \$500,000 or more, an awardee's "actual" participation in an award must be documented on an annual and final basis, reported to NSF program managers in annual and final progress reports, and certified by the authorized organizational representative.

In addition, Cooperative Agreement, section III B 3, requires that the “Amount of Previous Year’s Cost Sharing” must be similarly documented and certified.

Cost sharing certified to NSF in the annual reports included expensed, obligated, and estimated amounts; and CMU did not realize all of the estimated amounts. For example, the Fourth Annual Progress Report certified \$2.1 million in projected cost sharing through April 30, 2000, whereas, according to the CMU Summary records, actual cost sharing as of June 30, 2000 totaled \$1.7 million, a \$400,000 shortfall. As a result of certifications of incorrect amounts of cost sharing in the annual reports, NSF program and grants managers did not have accurate information regarding the amount of actual cost sharing as of a given date. The fact that the progress reports were due before the end of grant years led NCOVR to include obligated and estimated amounts as part of the actual cost-sharing amounts. In addition, by relying on reporting guidance in Cooperative Agreement, Section III C 1 c, which requires annual reporting of budget projections for the upcoming project year, it overlooked the separate cost sharing reporting requirements of Section III B 3, which requires annual certification of the amount of the previous year’s cost sharing. Finally, CMU said that prior to the audit no one from NSF objected to a certification on projected expenses.

Recommendations

We recommend that the Directors of NSF’s DGA and CPO require CMU to certify only actual cost-sharing amounts, as required by the Cooperative Agreement, rather than estimated and obligated amounts.⁸

CMU Response

CMU replied that the recommendation was to NSF, that if a change was made in NCOVR’s Cooperative Agreement, it would comply; but that in the interim it would continue to report as required by the Cooperative Agreement.

OIG Comments

CMU’s response implies that the Cooperative Agreement does not mandate certification of actual cost sharing. In fact, Section III B 3 requires the authorized organizational representative to certify annually to: “Amount of Previous Year’s Cost Sharing.” The amount of the prior year’s cost sharing will be an actual, not an estimated amount. Therefore, we affirm our recommendation.

⁸ This recommendation is premised on CMU’s ensuring that its detailed transaction and summary records are accurate and that they agree.

CMU Time Keeping System Not in Compliance With OMB Requirements

OMB Circular A-21 requires that the after-the-fact confirmation system for payroll distribution must ensure in essence that “the costs distributed represent actual costs.”⁹ OMB Circular A-21 also states that the signature or initials of the principal investigator or the individual with primary responsibility for the financial management of an award, or the use of a password, would “normally be sufficient” documentation.¹⁰

However, CMU relied on a process of negative assurance to report its labor charges on the NSF award, because it thought such a system met the requirements of section J 8 of Circular A-21. The process consisted of monthly e-mails from a Heinz School administrative associate to the PI in order to confirm the time and effort spent on the NCOVR project. The PI responded only if a change was necessary. Although the administrative associate had no first-hand knowledge of the accuracy of the allocated effort, she frequently certified the time on the basis of no response from the PI. Without an affirmative confirmation from the PI, CMU could not ensure the accuracy of its labor effort allocations to the NSF award. In fact, our review identified two instances of incorrect labor effort reporting. In the first case, 50 percent (\$110,691) of the Research Director’s FY 2000 effort plus associated fringe benefits and overhead, will be adjusted as cost sharing in FY 2001, up to a year after the fact. In the second instance, CMU claimed as cost sharing 1.4 months of the PI’s secretary’s time for all of FY 1997, although the effort report indicated that she only spent .4 months on NCOVR. An affirmative confirmation by the PI might have prevented such discrepancies.

Recommendations

We recommend that the Directors of NSF’s DGA and CPO work with ONR to ensure that CMU requires that its Schools with federally funded projects develop a time and effort certification process requiring positive confirmation. We also request that the Directors review CMU’s Labor Distribution Procedure Manual¹¹ with ONR to ensure that it requires after-the-fact confirmation by a person with actual knowledge of the time and effort of all faculty and staff working on federally sponsored projects.

CMU’s Response

CMU stated that it had revised its Labor Distribution Procedure Manual to provide effort reports by employee, and to allow sufficient time for users to review distributions and to submit adjustments prior to effort report creation. It said that it continues to educate campus faculty and staff on the importance of timely and accurate reporting and costing of their effort on sponsored research projects.

⁹ OMB Circular A-21, Section J 8 b (2)(b).

¹⁰ OMB Circular A-21, Section C 4 d (4).

¹¹ The revised CMU Labor Distribution Procedure Manual appears at:
http://www.as.cmu.edu/~fmp/documentation/FMPDO070_LDM_official.pdf

OIG Comment

The revised labor distribution procedures require the PI, who has actual knowledge of employees' effort on a given award, to review "Planned Effort by Account" reports. The PI's only required feedback consists of communication of "changes" to this report. Subsequent to payroll distribution, a university business manager, who has no actual knowledge, certifies after-the-fact to employees' effort on the award. Because there is no requirement that the PI affirmatively certify that the planned effort is correct and the certifying official lacks actual knowledge, we do not think CMU's revised labor distribution procedures adequately address the requirements of OMB Circular A-21, J 8. Therefore, we have expanded our recommendation to ensure that CMU's labor distribution procedures comply with federal requirements.

Cost Sharing for the Principal Investigator Less Than Required

The Cooperative Agreement, section III D, as amended,¹² required the PI to spend 75 percent of his time¹³ on work for NCOVR. The Cooperative Agreement also stated that NSF must be notified immediately of any changes in the time commitments of key personnel and that any such change required the prior written approval of the NSF Grants and Agreement Officer. Contrary to these requirements, the PI only spent 50 percent of his time on NCOVR for FY 1999 and FY 2000;¹⁴ and CMU did not request written prior approval for this 25 percent reduction in the PI's effort.

As a result, NSF was not aware that the PI had not met the required time commitment and may not have taken all the necessary proactive measures to ensure that the intended scope of the project was met. This reduced level of effort by the PI may have contributed to the performance issues raised by NSF during the last reverse site visit in December 2000. The site team consisting of six members recommended unanimously that the NCOVR proposal be disapproved based, in part, on the "absence of clearly articulated overall goals and a comprehensive conceptual framework for NCOVR's research"

The PI stated that he did not know about the 75 percent time and effort requirement for those two years. The Manager of the Office of Sponsored Research stated that he always sent copies of award amendments to the NCOVR executive director, financial and operations manager, and business manager. Thus, we conclude that the NCOVR staff did not notify the PI about the time and effort requirement of the amendments. In addition, the Office of Sponsored Research, which had overall

¹² See: Amendment Two (June 11, 1997), Amendment Three (September 26, 1997), and Amendment Four (October 6, 1999).

¹³ $6.75/9 = 75$.

¹⁴ "Teaching Commitments/Cost-Sharing for Research NCOVR," corrected 1/10/01, Heinz School spreadsheet, NCOVR AY Commitments.xls.

responsibility for the management of the award, did not detect the 25 per cent discrepancy between the PI's required and actual cost sharing for either year.

Recommendations

We recommend that the Directors of NSF's DGA and CPO require CMU to ensure that its Office of Sponsored Research establishes and implements procedures to monitor compliance with the terms and conditions of each award amendment, and particularly the required time commitments of key personnel, at the time each amendment is signed.

CMU Response

CMU replied that currently the Office of Sponsored Research monitors administrative and financial progress monthly, that it evaluates compliance with award terms and conditions prior to close out, and that the new Oracle system will provide the office with additional monitoring tools to ensure compliance throughout the award.

OIG Comment

Since CMU has installed a new system that should facilitate compliance monitoring, we recommend that NSF follow-up to ensure that CMU's use of the Oracle software fully addresses our recommendation.

Subrecipient Award Management

In the area of subrecipient management we found that CMU's processes to preclude conflicts of interest and to monitor subawards of more than one-year duration did not meet the requirements of OMB Circular A-110 or award requirements.¹⁵ In addition, the process that NCOVR uses to prevent conflicts of interest is not as rigorous as the process used by NSF in award evaluation and selection.¹⁶

¹⁵ See OMB Circular A-110, Subpart C, Section 42 (conflict of interest), Section 51 (reports and records), and Subpart A, section 5 (applicability of A-110 to subrecipients). Also, for NSF reporting requirements, see Grant General Conditions (4/01) Section 14 a, stated as section 15a in the Grant General Conditions of 10/95 and 10/98.

¹⁶ For panel reviews, Program Officers or other responsible personnel must inform panelists of potential conflicts-of-interest by reading the following statement at the beginning of the panel meeting:

If, when we come to consider any particular proposal, you recognize that you could have a relationship with the organization or persons submitting the proposal that could be construed as creating a conflict-of-interest, please let me know. I'll ask you to describe the relationship in your own words and will determine from your description what to do about the situation. You must not participate in reviewing any application in which you or a member of your immediate family or any organization of which you are or may become a part has a financial interest. Otherwise, we'll often just make a note in the file to consider when making final recommendations.

To avoid conflicts of interest, NCOVR asks members of the Advisory Committee to be the primary reviewers of submitted proposals, since no Advisory Committee members conduct NCOVR research.¹⁷ This process does not screen out Advisory Committee members who may have undisclosed financial, organizational or personal interests in potential subrecipients. Thus, the NCOVR conflict-of-interest process does not ensure unbiased and objective selection of the most meritorious proposals.

In addition, once an award is made, NCOVR frequently relies on oral communication, such as telephone discussions, conversations at committee meetings and conferences, and presentations at the annual summer workshops, to monitor the progress of its subaward recipients. This process, although useful, does not provide a written record comparable to the annual reports NSF requires of its own awardees. The result is that neither NCOVR nor NSF has such a record to use in monitoring programmatic and compliance issues for subawards lasting more than a year.

Recommendation

We recommend that the Directors of NSF's DGA and CPO require that NCOVR adopt written conflict-of-interest policies and procedures for panelists participating in the evaluation and selection of subrecipients. In addition, we recommend that the Directors ensure that NCOVR include in its "Proposal Process" a written requirement that all subrecipients with awards lasting more than one year submit annual written progress reports.

CMU Response

CMU replied that although it does not have a written conflict-of-interest policy, it has followed NSF's conflict-of-interest procedures. Citing NCOVR's "Proposal Process," the university also stated that since the beginning of operations, the consortium has in fact required annual written progress reports for all of its funded projects.

OIG Response

Because a written conflict-of-interest policy ensures continuity when there is staff turnover and facilitates a thorough review of potential conflicts of interests and adequate procedures to address such conflicts should they occur, we reaffirm our recommendation that NSF's Directors of DGA and CPO require that NCOVR adopt written conflict-of-interest policies for panelists participating in the evaluation and selection of subrecipients. Also, NCOVR's "Proposal Process" requires that persons who already have received NCOVR funds submit a progress report on the prior award with any new proposals. It also requires a written final report. However, it does not require written

¹⁷ The Advisory Committee members are listed on the NCOVR website, which is at <http://www.ncovr.org>

annual progress reports for all awards lasting more than one year. Therefore, we have modified our original recommendation to NSF to ensure that NCOVR states the requirement for written annual progress reports in its “Proposal Process.”

OTHER MATTERS

As part of our audit, the NSF Division of SES asked us to provide information on several issues for its use in administering the NCOVR award. Specifically, we were asked to determine (1) whether \$2 million of the HUD funds included in the NCOVR award had been spent on the intended purpose of research into violence in public housing, (2) the dollar amount and percentage of funds NCOVR had spent on administrative as opposed to research costs, and (3) whether NCOVR had achieved institutional, gender, ethnic, and cultural diversity in the selection of NCOVR subrecipients to conduct research on violence. Each of these issues is discussed separately below.

HUD Funds Have Not Been Fully Utilized

Through an interagency agreement with HUD, NSF obligated \$2 million to NCOVR for research on violence in public housing. The Interagency Agreement stated the purpose of the \$2 million was:

To help support the establishment and operation of a National Consortium devoted to violence research. This consortium will consist of an interdisciplinary collaboration of researchers from universities, research centers and other institutions. The conducting of basic research on violence in public housing will be an important facet of the consortium’s work.

The Cooperative Agreement stated that funding included:

\$2,000,000 provided by the Department of Housing and Urban Development to support research related to violence in Public Housing.

Table III shows that as of June 30, 2000, NCOVR had spent \$228,901 (11%) and obligated another \$452,821 (23%) of the \$2 million of HUD funding. These figures include research that used the words “Public Housing” in the title, award, or abstract, the criteria specified by the NSF program office.

TABLE III
Awards on Violence in Public Housing Research Listing
“Public Housing” in the Title, Award, or Abstract

Funds Obligated by NSF (HUD) for Violence in Public Housing Research	Funds Obligated by NCOVR For Violence in Public Housing Research By 6/30/00	Funds Expended By 6/30/00 (Cost Sharing Subtracted)	Unobligated Fund Balance (\$2 million funds minus funds obligated by 6/30/00)	Unobligated Fund Balance (\$2 million funds minus funds expended by 6/30/00)
\$ 2 Million	\$452,821	\$228,901	\$1,547,179	\$ 1,771,099

Table IV shows that using NCOVR’s own broader criteria, which counted not only the above awards, but also awards “related” to public housing (“Public Housing” and “Neighborhood Effects” awards), as of June 30, 2000, NCOVR had spent \$393,914 (20%) and obligated an additional \$738,655 (37%) of the \$2 million for research on violence in public housing.

TABLE IV
Violence in Public Housing Research
Including “Public Housing” and “Neighborhood Effects” in Awards

Funds Obligated by NSF (HUD) for Violence in Public Housing Research	Funds Obligated by NCOVR for Violence in Public Housing Research By 6/30/00	Funds Expended By 6/30/00 (Cost Sharing Subtracted)	Unobligated Fund Balance (\$2 million funds minus funds obligated by 6/30/00)	Unobligated Fund Balance (\$2 million funds minus funds expended by 6/30/00)
\$ 2 million	\$738,655	\$393,914	\$1,261,345	\$1,606,086

Thus using either criteria, less than one year before the award expiration date, NCOVR had expended and obligated only about half of the \$2 million of HUD funds.

Further, NCOVR contends that the total amounts above should also include allocations for \$4,928,090¹⁸ of “Other Expenses,” such as education, outreach, the Data Center, summer workshops, working groups, and administration. It states that research on violence in public housing comprised 18 percent of all of its research costs as of June 30, 2000¹⁹ and thus that 18 percent of all other expenses, or \$887,056, should be added to

¹⁸ We have not audited this amount and can not determine its accuracy.

¹⁹ Using its own broader definitions of research on violence in public housing in Table IV, NCOVR states that its total research obligations as of June 30, 2000 were \$4,115,026. ($\$738,655/\$4,115,026 = 18\%$).

The \$4.1 million figure varies substantially from the \$2.6 million amount of NCOVR expenses and obligations for subcontracts and Research Initiation Funds, as of June 30, 2000, reported in Table V of this report.

the totals. Although some portion of the costs²⁰ of other NCOVR activities could be allocated to research on violence in public housing, we do not agree with the dollar amounts or percentages NCOVR has suggested. We conclude that as of June 30, 2000, NCOVR had not spent or obligated sufficient HUD funds to assure NSF that it would be able to fund \$2 million of research in violence in public housing before the April 30, 2001 expiration date.²¹

There were several reasons why NCOVR had not spent or obligated more of the HUD money for research on violence in public housing. First, it did not understand that in accordance with the Cooperative Agreement the \$2 million from HUD was only to be used for research on violence in public housing. Second, NCOVR did not want to make awards that were not meritorious, just to use the HUD money. Third, NCOVR has been trying to get access to data for a pending initial \$400,000 award for research on violence in public housing and neighborhood effects; and it has taken years to negotiate this issue.

Actual Expenses and Obligations for Research And Actual Expenses for Administration Do Not Agree With Original Budgeted Amounts

The NSF Program Office was concerned that NCOVR had spent less for research and more for administration than expected and asked us to compare budgeted and actual amounts for these two categories. Table V shows the fund status of the NCOVR award together with a comparison of actual expenditures plus future obligations,²² and budgeted amounts. As of June 30, 2000 NCOVR's expenditures and obligations for Research Initiation Funds and other subawards comprised 35 percent of its total expenditures and obligations, although it had budgeted 52 percent for these two categories. In other words, it spent and obligated 17 percent less on these research activities than it had planned. In addition, NCOVR spent 23 percent of its total expenditures on administration, compared to the budgeted amount of 11 percent. Thus it actually spent 12 percent more of its total expenditures on administration than it had estimated.

²⁰ The amount of costs awarded to public housing research as of June 30, 2000 divided by the total amount of NCOVR research costs is a reasonable allocation ratio.

²¹ On March 14, 2001, Amendment 6 to the Cooperative Agreement extended the expiration date of the NCOVR award from April 30, 2001 to April 30, 2003, and authorized the expenditure of year five funds withheld under Amendment 5. According to the budget that NCOVR submitted to NSF by e-mail on May 29, 2001 for years five and six, the consortium planned several research projects through April of 2003. However, the budget did not specify which of those projects pertained to research on violence in public housing.

²² The obligation amount of \$688,778 for subcontractors and Research Initiation funds has not been audited. CMU could not provide us with this obligation amount during our second site visit in January 2001.

TABLE V

NCOVR Expenses: Budgeted, and Actual and Obligated

NCOVR Records Expense Category	Budget	Actual	Obligated	Total: Actual + Obligated	Variance Budgeted- Total	Budgeted Percent	Total (Actual + Obligated) Percent	Variance (Actual + Obligated) - (Budgeted) (h) g-f (%)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	(\$)	(\$)	(\$)	(\$)	(\$)	(%)	(%)	(%)
Administration	1,089,031	1,681,174	N/A	1,681,174	-592,143	11	23	12
Education	1,697,227	877,522	N/A	877,522	819,705	17	12	-5
Communications	254,181	146,186	N/A	146,186	107,995	3	2	-1
Research Support	211,588	383,544	N/A	383,544	-171,956	2	5	3
Data Center	642,674	857,336	N/A	857,336	-214,662	7	12	5
Member Interaction	684,987	803,044	N/A	803,044	-118,057	7	11	4
Research Initiation/ Subcontractor ²³	5,086,112	1,893,955	688,778	2,582,743	2,503,369	52	35	-17
Equipment	200,000	100,255	N/A	100,255	99,745	2	1	-1
TOTAL	9,865,800	6,743,016	688,778	7,431,794	2,434,006	100	100	0

Percents in columns f and g include slight rounding error.

Institutional Diversity

The NSF program office was interested in knowing how many different universities and institutions were represented in NCOVR’s research awards. We found that for subrecipients, Research Initiation Funds, and “NCOVR Direct Payments,” NCOVR had awarded funds to 36 universities and institutions, including CMU. The institutions are listed in Appendix II.

Ethnic, Cultural, and Gender Diversity

The NSF Program Solicitation stated that a goal of the consortium was participation of underrepresented groups in research on violence, and that special efforts should be made to include women and minorities, such as African Americans, Hispanics, and Native Americans. The Cooperative Agreement stated that one of the specific goals of NCOVR, from the outset was to “increase the capacity of historically underrepresented groups to conduct fundamental research on violence and related areas.” With regard to gender, Table VI shows that as of June 30, 2000, out of a total of 58 individuals (subrecipients, and recipients of Research Initiation Funds and NCOVR Direct Payments), 10 (17%) were female and 48 (83%) were male.

²³ NCOVR uses the word subcontract to refer to its subawards of NSF funds.

TABLE VI
Gender Diversity in NCOVR Awards

Gender	Number	Percent of Total (%)
Female	10	17%
Male	48	83%
Total	58	100%

The ethnic and cultural composition, as shown in Table VII, indicates that of the 58 subrecipients and recipients of Research Initiation Funds and NCOVR Direct Payments, there was one Asian (2%), four Hispanic (7%), five African-American (9%) and 48 White Americans (83%).

TABLE VII
Ethnic and Cultural Diversity in NCOVR Awards

Race	Number	Percent of Total (%)
African American	5	8%
White	49	83%
Hispanic	4	7%
Asian	1	2%
TOTAL	58	100%

Appendix I

Explanations of Adjustments Required For the NSF Portion and CMU Portion (Cost Sharing) of NCOVR Project Costs as of June 30, 2000

Table I of the audit report (p. 4) presented summaries of four accounts of NSF costs, two records of cost-sharing amounts, and the adjustments needed to all six of these accounts. This appendix explains each of the adjustments. After these modifications, the amount of the NSF portion of NCOVR costs as of June 30, 2000, is \$6,743,017, and the amount of cost sharing after FY 2001 adjustments will be \$1,995,741.

NSF Portion of Project Costs

The NSF costs in four accounts did not reconcile. These four accounts are: 1) NCOVR Summary of Expenditures, 2) CMU Summary of Expenditures, 3) CMU Transaction Detail of Expenditures, and 4) the June 30, 2000 FCTR.

NCOVR Summary of Expenditures

The amount of the NSF portion of project costs originally reported in the NCOVR Summary of Expenditures was \$6,511,214. The amount reported in the last NCOVR Summary of Expenditures was \$6,743,015, an increase of \$231,801. Although we asked for an explanation of this \$231,801 variance, NCOVR was never able to explain the discrepancy during the audit. It subsequently stated that the variance was due to the omission of overhead charges for May and June 2000, which were not included in NCOVR's original calculation. However, we were not able to verify this \$231,081 of overhead expenses. The \$231,801 adjustment will reconcile NCOVR expenditures with CMU accounting records, once other adjustments in Table I are also completed.

NCOVR Summary of Expenditures

Originally Reported	Adjustment	Adjusted Total
\$6,511,214	\$231,801	\$6,743,015

CMU Summary of Expenditures

The CMU Summary of Expenditures and the Transaction Detail of Expenditures also needed adjustments to reconcile with each other and with the other two reports of NSF costs. The adjustment to the CMU Summary of Expenditures required the subtraction of \$101,856 from the \$6,844,873 originally reported. This adjustment resulted from corrections to overhead amounts charged prior to June 30, 2000.

According to a January 20, 2001, CMU spreadsheet,²⁴ \$103,591 of overhead charged to the project but not cost shared in FY 2000, due to an Oracle software error, will be deducted from the NSF NCOVR account in FY 2001. However, \$1,735 of travel and consulting overhead cost will be added in that fiscal year, due to the same Oracle error. Thus, the net adjustment to the CMU Summary of Expenditures is \$101,856. ($\$103,591 - \$1,735 = \$101,856$). With the subtraction of \$101,856 from the \$6,844,873 originally reported, the adjusted total of the NSF portion of project costs in the CMU Summary of Expenditures is \$6,743,017.

CMU Summary of Expenditures

Originally Reported	Adjustment	Adjusted Total
\$6,844,873	(\$101,856)	\$6,743,017

CMU Transaction Detail of Expenditures

The CMU Transaction Detail of Expenditures originally reported \$7,028,378 of NSF project costs as of June 30, 2000.²⁵ This amount required adjusting subtractions totaling \$285,361, comprised of two parts. The first part is the \$101,856 corrected overhead amount, also deducted from the CMU Summary of Expenditures. The second part is \$183,505, an amount of cost sharing which was removed from the CMU Summary of Expenditures but not from the Detail Transactions account. ($\$101,856 + \$183,505 = \$285,361$). With the subtraction of \$285,361 from the CMU Transaction Detail of Expenditures, the amount of the NSF portion of costs is \$6,743,017, which reconciles with the adjusted amount in the CMU Summary of Expenditures.

CMU Transaction Detail of Expenditures

Originally Reported	Adjustment	Adjusted Total
\$7,028,378	(\$285,361)	\$6,743,017

FCTR of June 30, 2000

The amount of the NSF portion of project costs which CMU reported to NSF on the June 30, 2000, FCTR was \$6,791,425.²⁶ This amount was overstated (NSF was overcharged) by \$48,408 according to the adjusted expenditure amounts reported by CMU and NCOVR. Thus, the FCTR amount should have been \$6,743,017 ($\$6,791,425 - \$48,408$).

²⁴ NCOVR NSF Expenditures.xls, 1/30/01, page 2 of 2. We have not verified all the corrections to be made in FY 2001

²⁵ CMU replied that the total \$7,028,378 included, per NSF's request, all project expenses, which included both NSF expenses and cost sharing expenses.

²⁶ CMU stated that at the time the FCTR was submitted, the amount reported did reflect exactly what was reported on CMU's financial statement, and that the resultant difference was caused by subsequent retroactive expenditure reallocations and June 30, 2000 post closing adjustments.

NSF Portion of Costs Reported on June 30, 2000 FCTR

Originally Reported	Adjustment	Adjusted Total
\$6,791,425	(\$48,408)	\$6,743,017

Cost Sharing (CMU Portion of Costs)

CMU Summary of Cost Sharing

Regarding cost sharing, as of June 30, 2000, the CMU Summary of Cost Sharing originally reported \$1,669,845. This amount must be revised upward by \$325,896, according to CMU's March 30, 2001 cost-sharing revision.²⁷ This adjustment consists of prior period cost-sharing adjustments to be made in FY 2001, as itemized below:

**Prior Period Cost-sharing Adjustments
To Be Made in FY 2001**

Overhead on subrecipient costs incurred prior to June 30, 2000	\$103,591
Cost sharing of 50 percent of a key professor's FY 2000 effort	\$110,691
Other subrecipient overhead incurred prior to June 30, 2000	\$ 93,445
FY 2000 cost-sharing entry mistakenly posted to FY 2001	<u>\$ 18,169</u>
Total Adjustment	<u>\$325,896</u> ²⁸

With the \$325,896 adjustment, the June 30, 2000 CMU Summary of Cost Sharing will be \$1,995,741. ($\$1,669,845 + \$325,896 = \$1,995,741$).

CMU Summary of Cost Sharing

Originally Reported	Adjustment	Adjusted Total
\$1,669,845	\$325,896	\$1,995,741

CMU Transaction Detail of Cost Sharing

²⁷ Letter to Ms. Bandana Sen, Office of the Inspector General, NSF, March 29, 2001, page 4. We have not verified the accuracy of these expenses.

²⁸ Although these amounts were not removed from the NSF portion of expenses (and cost shared) as of June 30, 2000, CMU has stated its intention of making these adjustments.

The amount of cost sharing as of June 30, 2000, originally reported in the CMU Transaction Detail was \$1,486,282. This amount requires two adjustments to reconcile with the CMU Summary of Cost Sharing. The first adjustment is the addition of \$183,563, which represents the amount of cost sharing deducted from the CMU Summary of records but not from the CMU Transaction Detail records.²⁹ The second addition is for the \$325,896 of cost-sharing adjustment to be made in FY 2001, itemized above. After these adjustments, the amount of cost sharing reported on the CMU Transaction Detail of Cost Sharing will reconcile with the amount reported on the CMU Summary of Cost Sharing. ($\$1,486,282 + \$183,563 + \$325,896 = \$1,995,741$).

CMU Transaction Detail of Cost Sharing

Originally Reported	Adjustment	Adjusted Total
\$1,486,282	\$509,459	\$1,995,741

²⁹ The difference between cost sharing as of June 30, 2000, reported in the CMU Transaction Detail and the CMU Summary is \$183,505 ($\$7,028,378 - \$6,844,873 = \$183,505$), an amount virtually identical to the \$183,563 variance between cost sharing reporting in the CMU Summary and Detail cost-sharing records ($\$1,669,845 - \$1,486,282 = \$183,563$). In other words, it appears from both the NSF costs and cost-sharing accounts that approximately \$183.5 thousand of cost sharing was deducted from the NSF costs in the Summary records but not from the Detail records, or that the Transaction Detail did not capture adjustments that transferred costs to cost-sharing accounts.

Appendix II

Recipients of NCOVR Research Awards

The list of the universities and institutions which were represented in NCOVR's research awards, in addition to CMU, include:

The American Bar Association
Rand Corporation,
The Illinois State Police
National Development and Research Institutes
Vanderbilt University,
Temple University,
The University of Chicago
The University of Connecticut Research Foundation
The University of Delaware
The University of New Mexico
The University of Washington
The University of Illinois
Colgate University,
The University of Michigan
The University of California
New York University
UCLA
Georgia State University
Columbia University
Duke University
Georgetown University
Harvard University
Ohio State University
Pennsylvania State University
The University of Pittsburgh
The University of the State of New York at Albany
The University of Kentucky Research Foundation
The University of Maryland
The University of Wisconsin-Madison
The University of Missouri-St. Louis
The University of Montreal
The University of Toronto
The University of Nebraska-Omaha
The University of Texas at Dallas
The New Jersey Institute of Technology

Carnegie Mellon

Carnegie Mellon University
5000 Forbes Avenue
Pittsburgh, Pennsylvania 15213-3890

October 18, 2001

Mr. James J. Noeth, Senior Audit Manager
Office of Inspector General
National Science Foundation
4201 Wilson Boulevard
Arlington, Virginia 22230

Subject: NSF review of NCOVR

Reference: Cooperative Agreement SES-95113040
Undated draft report, received by Carnegie Mellon August 20, 2001

Dear Mr. Noeth:

We have reviewed the most recent NSF draft report and recommendations resulting from your review of the National Consortium on Violence Research at Carnegie Mellon. Addressed below are summary responses to the five stated recommendations addressed on pages 6 through 9 of your report. As an attachment, we have also provided supplementary elucidation on other areas of the report that we feel require clarification or university response.

RECOMMENDATIONS

NSF Recommendation # 1, Page 6 in undated Draft Report:

We recommend that the Directors of NSF's DGA and CPO ensure CMU's accounting system accurately segregates NSF and cost sharing expenses. We also recommend that the NSF Directors of DGA and CPO direct NCOVR to update its reporting of prior years' expenditures in its Annual Progress Reports. In addition, we recommend that NSF adjust the amount of unbilled award costs by \$48,408 to recover the costs CMU has overcharged NSF.

Carnegie Mellon Response to recommendation # 1

As you know, in response to our cognizant agency, the Office of Naval Research, auditors from the Defense Contract Audit Agency, and internal concerns involving Y2K compatibility with our old financial systems, Carnegie Mellon acquired a comprehensive financial management system from Oracle Corporation and implemented this new system with a go-live date on November 1, 1999. For FY 2000, this meant that the first five months of our financial activities were based on our old financial system; the last seven months were based on the new Oracle financial system. As with any major system implementation, there were numerous conversion issues, training issues, system performance issues and bugs detected in the acquired software. This NSF Office

of Inspector General review and audit was conducted during a critical time in our overall implementation. Many individuals in the departments, including staff in the Office of Sponsored Research and at NCOVR, had not yet become fully trained on the new system and were therefore not fully able to interpret and explain its functions.

Carnegie Mellon's new Oracle system improves our cost sharing documentation and allows automatic segregation of cost shared expenditures. Cost sharing expenditures are now separately charged and accounted for in a dedicated and unique cost-sharing account.

Since its conversion to the new Oracle financial management system, Carnegie Mellon has been working with the company to fix a number of software bugs. In particular, calculations of cost-sharing and overhead on subcontracts could not be made correctly using the system. These calculations had to be done manually, so that adjusted values could be entered during the following period. The Office of Sponsored Research used the most accurate information available at the time for the NSF-funded expenditures for NCOVR in calculating its monthly NSF draw-down amount. The \$48,408 reported credit balance was a result of post-period correcting adjustments and was subsequently credited to the award when the cost sharing calculations were identified and completed. Consequently there is no need to "adjust the amount of unbilled award costs by \$48,408 to recover the costs CMU has overcharged NSF." Although all NSF funds were used for allowable project expenses, we agree that it would be better to do these calculations automatically or at least in a more timely manner. To avoid such errors in the future, CMU currently calculates these values monthly. Oracle promises to have a system-wide software correction ready soon so that the manual work-around will no longer be necessary.

NSF Recommendation # 2, Page 6 in undated Draft Report:

Regarding the inaccurate cost sharing certifications, we recommend that the Directors of NSF's DGA and CPO require CMU to certify only actual cost sharing amounts, as required by the Cooperative Agreement, rather than estimated and obligated amounts.

Carnegie Mellon Response to recommendation # 2

This is a recommendation to NSF. If this change is made in NCOVR's Cooperative Agreement, Carnegie Mellon will certainly comply. In the interim, we will continue to report as required by the Cooperative Agreement.

NSF Recommendation # 3, Page 7 in undated Draft Report:

We recommend that the Directors of NSF's DGA and CPO ensure that CMU requires that any of its Schools involving federal funds develop a time and effort certification process requiring positive confirmation.

Carnegie Mellon Response to recommendation # 3

Although Carnegie Mellon's effort certification system was in full compliance with OMB Circular A-21, we felt the process could be strengthened and have recently changed the Labor

Distribution Procedure. The June 11, 2001 revised Labor Distribution Procedure Manual may be viewed and printed from our web based document library, which can be accessed on the world wide web at http://www.as.cmu.edu/~fmp/documentation/FMPDO070_LDM_official.pdf. The changes now provide effort reports by employee, allow sufficient time for users to review distributions and submit adjustments prior to effort report creation and are more accurate, as they will include any adjustments. Our effort distribution process has been reviewed annually by the Defense Contract Audit Agency for compliance with Federal regulations and has been judged to be satisfactory.

Additionally, through various mailings, b-board postings, seminars and training sessions, we continuously educate campus faculty and staff on the importance of timely and accurate reporting and costing of their effort on sponsored research projects. We will also continue to emphasize this important reporting requirement.

NSF Recommendation # 4, Page 8 in undated Draft Report:

We recommend that the Directors of NSF's DGA and CPO require CMU's Office of Sponsored Research to monitor awards more closely so that the university's recipients of federal funds comply with all terms of their awards and amendments.

Carnegie Mellon Response to recommendation # 4

Currently the Carnegie Mellon University Office of Sponsored Research (OSR) monitors the administrative and financial progress on a monthly basis and prior to the award close out conducts a comprehensive award evaluation to assure compliance with all award terms and conditions. The new Oracle financial management system and cost sharing and segregation procedures will provide OSR with additional monitoring tools to assure compliance throughout the award.

NSF Recommendation # 5, Page 9 in undated Draft Report:

We recommend that the Directors of NSF's DGA and CPO require that NCOVR adopt written conflict-of-interest policies and procedures for panelists participating in the evaluation and selection of subrecipients. We recommend in addition that the Directors ensure that NCOVR requires its subrecipients with awards lasting more than one year to submit annual written progress reports.

Carnegie Mellon Response to recommendation # 5

Since its initiation, NCOVR has required annual written progress reports on all its funded projects and has also required interim annual reports on multi-year projects. In addition, NCOVR has written procedures for proposal submission, review, award, and progress reporting. Those procedures have been published on NCOVR's website for the past four years; copies of these procedures were submitted for review and approval to NSF/SBE prior to their posting and use. Copies of this documentation were given to the auditors on January 8, 2001 and at several other times during their visits to CMU.

While NCOVR does not have a written conflict-of-interest policy, we have followed NSF's standard conflict-of-interest procedures. In particular, any member of the Steering Committee involved in any way with a proposal under consideration was asked to absent themselves during the discussion to assure a fair and open review. In addition, we assigned a primary reviewer who submitted both a written and oral review and asked each member of the Steering and Advisory committees to complete an evaluation form prior to the review meeting. Full written records of these meetings, including notes on all discussions and copies of correspondence with proposers, are maintained by NCOVR for every proposal round. They were offered for review to the auditors who refused to look at these files. In addition, NSF staff received copies of all proposals before the proposal review meeting. They were also present at all subrecipient proposal review meetings and participated in the discussion of the proposals under review.

Other Carnegie Mellon comments on the draft report:

We believe that certain statements made by the Office of Inspector General in the draft report require a more complete response or clarification from the university to correct errors or misconceptions that a reader of the report may have. A list of these statements with our responses is enclosed, along with attachments as necessary. For example, Defense Contract Audit Agency auditors are on site at Carnegie Mellon nearly every business day during the year. OSR staff suggested to the NSF OIG auditors that they consult with the on-site DCAA auditors, but they chose not to do so. Carnegie Mellon's properly trained accounting personnel were not consulted at the beginning of the on-site Inspector General review. Therefore, conclusions in this draft report about Carnegie Mellon's accounting system may have been based on incomplete evidential matter and a failure to understand the university's significant system implementation and related work-around processes following the installation of the new Oracle financial management system. When later asked to assist in the audit, a trained financial systems representative from Carnegie Mellon's Office of the Controller ultimately reconciled all of the reports and resolved all of the outstanding questions.

We appreciate the time and effort NSF has allocated to this continuing evaluation and anticipate mutual benefits to both NSF and Carnegie Mellon as a result of this review. If you have any questions or would like to discuss this issue in more detail, please do not hesitate to contact me.

Sincerely,

Attachment

Carnegie Mellon responses to specific statements made in the undated Draft Report from the Office of Inspector General

Listed below are Carnegie Mellon's responses to certain substantive statements made in the undated Draft Report prepared by the Office of Inspector General documenting its review of the National Consortium on Violence Research at Carnegie Mellon University for the period May 15, 1996 through June 30, 2000. Each of these statements is identified below by a statement number along with the page number where it appears in the Draft Report, and is quoted in italics for clarity. Carnegie Mellon's response to each statement is presented following the quote.

Executive Summary

Statement 1, Page i: *"As of June 30, 2000, two months into the award's fifth and final year, CMU had claimed expenditures approaching \$6.8 million, or 56 percent, of the award."*

Statement 1 Response:

While this statement is not incorrect, it is misleading. It is true that as of June 30, 2000, NCOVR had claimed expenditures approaching \$6.8 million. However, this statement ignores the way that NCOVR transfers funds to research award grantees. NCOVR does not transfer funds to awardees when the award is made; rather, NCOVR requires that the subawardee submit invoices for work as it is performed. Since most multi-discipline, multi-investigator projects have periods of performance that spill over grant years, this means that NCOVR, at any point in time, has funds obligated to projects which have not yet been expensed. Funds totalling \$1,034,185, representing unexpended amounts within ongoing approved research projects, had been obligated by NCOVR prior to June 30, 2000 but were, as of that date, unliquidated obligations. In addition, NCOVR had approved in April, 2000, \$1,166,377 in new projects which had start dates of July 1, 2000 -- one day after the period considered by the auditors. Therefore, a more complete and accurate statement is that as of June 30, 2000, NCOVR had expended, obligated, or awarded approximately \$9 million, or 74% of the award.

Attachment 1A: NCOVR expenditures and unexpended obligations as of June 30, 2000

NSF/SBE was also aware that NCOVR had scheduled a new round of proposals in August 2000 to consider projects from the Race and Ethnicity and Time and Space RPAs. Approximately \$1,000,000 in new awards were approved at that meeting, but, under direction from NSF/SBE, NCOVR was not permitted to make these awards. The embargo on new awards was not lifted until May, 2001.

Attachment 1B: NCOVR awards originally scheduled for start dates of July 1, 2000

Carnegie Mellon University, October 16, 2001

2

NSF/SBE modified NCOVR's dates of performance in Amendment #6 to the Cooperative Agreement, dated March 14, 2001. NCOVR will expense the full \$12.2 million award by the end of project year 7, April 30, 2003.

Attachment 1C: Letter dated March 14, 2001 from NSF DGA to Carnegie Mellon extending the award expiration date from April 1, 2001 to April 30, 2003.

Statement 2, Page i: *"Counting only awards at CMU with expiration dates after August 1997, NSF has funded a total of 105, representing an investment of \$89 million and \$15 million of associated cost sharing."*

Statement 2 Response:

This statement is not relevant to the review of NCOVR.

Statement 3, Page ii: *"CMU's accounting system does not meet federal requirements for accurate, current and complete disclosure of the financial results of each federally sponsored project."*

Statement 3 Response:

Carnegie Mellon does not agree with this statement. It is important to note the following background. Upon the recommendation of our cognizant agency, the Office of Naval Research, and auditors from the Defense Contract Audit Agency, as well as in response to our own internal concerns involving Y2K compatibility with our old financial systems, Carnegie Mellon acquired a comprehensive financial system from Oracle Corporation and implemented this new system with a go-live date on November 1, 1999. For FY 2000, this meant that the first five months of our financial activities were based on our old financial system; the last seven months were based on the new Oracle financial system. As with any major system implementation, there were numerous conversion issues, training issues, system performance issues and bugs detected in the acquired software. This NSF Office of Inspector General review and audit was conducted during a critical time in our overall implementation. Many individuals in the departments had not yet become fully trained on the new system and fully able to interpret and explain its functions.

Carnegie Mellon developed work-around procedures to deal with the conversion issues noted above. These included the matters presented in writing to our Office of Naval Research Contracting Officer, Mr. Michael Kuc on March 27, 2000. A copy of the letter to Mr. Kuc is attached for your reference. In addition, the audit work performed of our accounting systems (including work around procedures) by our independent accountants, Deloitte & Touche LLC, resulted in clean or unqualified opinions on our financial statements for the year ended June 30, 2000. These opinions pertain not only to our external financial statements, but also to our A-133 audit report for the period ended June 30, 2000. Copies of both of these reports are enclosed for your reference.

Furthermore, our four to five Defense Contract Audit Agency auditors are on site at Carnegie Mellon nearly every business day during the year and our financial systems are

Carnegie Mellon University, October 16, 2001

3

considered adequate or better. OSR staff suggested to the NSF OIG auditors that they consult with the on-site DCAA auditors, but they chose not to do so.

It appears that because the NSF auditors did not speak with Carnegie Mellon's properly trained accounting personnel during the on-site Inspector General review, conclusions in this Draft Report about Carnegie Mellon's accounting system have been based on incomplete evidential matter and a failure to understand the university's significant system implementation and related work-around processes. When later asked, a trained financial systems representative from Carnegie Mellon's Controller Office ultimately reconciled all of the reports and resolved all of the outstanding questions.

Attachment 3A: March 27, 2000 letter from
to Michael Kuc of the Office of Naval Research

Carnegie Mellon

Attachment 3B: Carnegie Mellon Financial Statements for the Years Ended June 30, 2000 and 1999, and Supplemental Schedule of Expenditures of Federal Awards for the Year Ended June 30, 2000; Independent Auditors' Reports and Related Independent Auditors' Reports on Internal Controls and Compliance for Federally Funded Programs for the Year Ended June 30, 2000

Attachment 3C: Carnegie Mellon Annual Report Fiscal Year 1999-2000

Statement 4, Page ii: *"CMU/NCOVR provided us four different sets of accounting records to support costs it claimed under its NSF award, none of which agreed with any of the others. In addition, the summary reports of cost sharing expenditures did not agree with detailed supporting records. Also, the NSF and cost sharing amounts reported in the Fourth Annual Progress Reports to NSF did not match actual expenditures for prior years."*

Statement 4 Response:

As noted above, the Office of Inspector General visitors declined NCOVR's suggestion that they consult with DCAA auditors on site at Carnegie Mellon or with Carnegie Mellon's own properly trained financial management staff. During their visit and after their return to NSF, the OIG reviewers demanded that NCOVR support staff generate a large variety of different financial data sets in different formats covering different time periods. Most of these were different from the data and the formats that had been required in reporting to NSF program staff over the duration of the award. Several of the data sets provided by NCOVR were later lost by the OIG staff and had to be sent multiple times by NCOVR. Nevertheless, all of these data sets were reconciled with each other later, when Carnegie Mellon financial management personnel who were trained on the new Oracle system and knew the required work-arounds were finally consulted.

The format NCOVR follows in its reports to NSF is one that was worked out by NSF SBE and DGA staff during a trip NCOVR staff made to NSF in January, 1997. In each annual progress report, NCOVR reported, for each year, Research Projects and RIF expenditures and unexpended obligations for awards made during that project year. In each subsequent progress report, NCOVR updated the report for each project year to reflect expenditures and

Carnegie Mellon University, October 16, 2001

4

remaining unexpended obligations, at the time of the progress report, for awards made during each project year.

This presentation format for RIF and Research Project expenditures in the Fourth Annual Progress Report may have led to the auditors' confusion and impression that NCOVR under-reported expenses by \$766,897 for the first three project years. To clarify this, we are attaching, as examples, annotated copies of two annual Expense Schedules submitted in the Fourth Annual Progress Report along with the accompanying spreadsheet, RIF and Research Project Summary of Activity. These materials show that NCOVR's expenditures match those reported in the CMU Summary of Expenditures.

The variance between expenditures reported in the Fourth Annual Progress Report and in the CMU Summary of Expenditures is the amount reported each year for RIF and Research Project expenditures. The NCOVR Progress Report included in the annual Expense Schedules *ONLY* RIF and Research Project expenditures for awards made during that year. In the far columns, we reported the unexpended obligations for awards made during that year. By reviewing these two totals, NSF was provided with a summary of NCOVR's financial uses of funds awarded for each project year.

We then reported on the accompanying spreadsheet for each year, RIF and Research Project Summary of Activity, the expenditures on awards made during the previous year(s), and expenditures on awards made during that current year. By adding expenditures on previous years' awards to the Expense Schedule, (as reported on the RIF and Research Project Summary of Activity), we eliminate the variance between the two reports.

For example, the NCOVR Fourth Annual Progress Report states expenditures of \$1,167,764 for year 2. By adding in expenses paid during year 2 on awards made in year 1, which sum to \$371,938, the NCOVR expenditure total for year 2 is \$1,539,702. This number matches the total reported on the CMU Summary of Expenditures.

Attachment 4: Year 2 and Year 3 Expense Schedules along with the accompanying spreadsheets, Year 2 and Year 3 RIF and Research Project Summary of Activity

Statement 5, Page ii: *"As a result of these accounting system inadequacies, CMU did not detect variances between required and actual cost sharing at the times the discrepancies occurred, and had to make many subsequent cost-sharing adjustments."*

Statement 5 Response: Please see the response for Statement 3 above.

Statement 6, Page ii: *"In addition, as of June 30, 2000, the amount of NSF-funded expenditures reported to NSF was overstated by \$48,408."*

Statement 6 Response:

Since its conversion to the new Oracle financial management system, Carnegie Mellon has been working with the company to fix a number of software bugs. In particular, calculations of cost-sharing and overhead on subcontracts could not be made correctly using the system.

These calculations had to be done manually, and adjusted values had to be entered during the following period. The Office of Sponsored Research uses the expenditures as reported in the university financial system as the basis for the monthly NSF letter-of-credit draws, and acknowledges that \$48,408 of cost-shared expenditures were drawn in error. When cost-sharing calculations were manually computed for this award, the \$48,408 was credited to the award, and the letter-of-credit drawdown was adjusted accordingly. Although all NSF funds were used for allowable project expenses, we agree that it would be better to do these calculations automatically or at least in a more timely manner. To avoid such errors in the future, CMU now calculates these values monthly. Oracle promises to have a system-wide software correction ready soon so that the manual work-around will no longer be necessary.

Statement 7, Page ii: *“The accounting discrepancies occurred because CMU accumulated in one account both expenditures funded by NSF and expenditures CMU paid for as cost sharing. This commingling of expenditures occurred until November 1999, when CMU converted to a new accounting system. In addition, accounting records did not identify cost sharing amounts at the time the associated costs were incurred. Thus, at the end of each fiscal year CMU had to review each individual transaction in the combined account, separately identify costs funded by CMU as cost sharing, and make a lump sum adjustment to place these costs in a separate cost sharing account. Even after the conversion to the new accounting system, CMU had to make cost sharing adjustments, because of system transition problems and data corruption in the new software. In making its cost sharing adjustments CMU did not ensure that each change was made to all affected reports, and thus these reports each reported different cost sharing amounts. Because this accounting system affects all of CMU’s awards from NSF, CMU may have inaccurately reported and claimed incurred and cost sharing amounts on other of its total \$89 million in NSF awards expiring after August 1997.”*

Statement 7 Response:

Carnegie Mellon’s implementation of the Oracle financial management system improved our cost sharing documentation and enabled the University to segregate cost shared expenditures in dedicated, unique cost-sharing accounts. Prior to the conversion to the Oracle system, manual adjustments were necessary in every subcontract and every account to maintain cost sharing records in full compliance with Section 23 of OMB Circular A-110. The complexity of the NCOVR award and the number of cost-shared subcontracts have undoubtedly magnified the impact of this problem. Although some manual work-arounds are still required in the current version of Oracle, we are hoping that the planned upgrade to 11.03 will allow a system-wide solution. The university does recognize this problem and has identified and corrected the system conversion and data corruption problems related to these transactions.

Statement 8, Page ii: *“In the review of the NCOVR award we also found that cost sharing certifications in the annual progress reports to NSF were inaccurate, because they included obligated and estimated, as well as expensed amounts, although CMU did not always achieve all of the estimated cost sharing. The effect of certifying to incorrect amounts of cost sharing is that NSF did not have accurate information regarding the amount of actual cost sharing that CMU had provided at any point in time. The fact that the progress*

reports were due before the end of the grant years may have led NCOVR to include obligated and estimated amounts as part of the reported cost sharing.”

Statement 8 Response:

NCOVR followed the instructions given in the Cooperative Agreement, Section C.1.c. which require that: "Actual and estimated expenditures for the entire budget proposed must be included" in the annual progress report. Following these instructions, NCOVR reported, for each year, cost share actuals and cost share forecast for unexpended obligations for that project year. In each subsequent progress report, NCOVR updated the report for each project year to reflect the current actuals and remaining cost share forecast for unexpended obligations, at the time of the progress report.

Since the annual progress report was due approximately six months before the end of the project year, NCOVR was forced to forecast expenses and cost share items for approximately half of the current project year. In fact, to keep actuals from projects, the budget for the in-process year is titled as *Projected Expense Schedule* and *Projected Cost Share Expense Schedule*.

Finally, prior to this audit, no one from NSF objected to a certification on projected expenses. Until the Cooperative Agreement is modified NCOVR will continue to provide the information as requested.

Attachment 8: Reconciliation of Cost Sharing and Years 1-3 Cost Sharing Expense Schedules

Statement 9, Page iii: *“Our review further showed that the Heinz School’s negative assurance with regard to time and effort spend on the NCOVR award did not comply with federal requirements. As a result of the negative assurance process and the ensuing inaccuracies, time and effort being cost shared had to be adjusted even a year after-the-fact. In addition, other inaccuracies in the Heinz School’s labor cost system may go undetected.”*

Statement 9 Response:

Carnegie Mellon’s effort certification system is in accordance with OMB Circular A-21. The pre-Oracle financial system has always been audited by the Defense Contract Audit Agency (DCAA). DCAA Audit Report No. 6701-99G130002 dated March 25, 1999, concerning the Report on Audit of Labor Accounting System and Internal Controls, states “In our opinion, the labor accounting system and related internal control policies and procedures of Carnegie Mellon University are adequate.” With respect to our post-Oracle financial systems, the attached presentation to our Audit Committee of the Board of Trustees dated May 16, 2001, Effort Reporting, discusses our catch up processes and new certification procedures requiring approval of labor distribution. In addition, our revised Labor Distribution Procedural Manual (revised as of June 11, 2001) may be viewed from our website: http://www.as.cmu.edu/~fmp/documentation/FMPDO070_LDM_official.pdf

Carnegie Mellon University, October 16, 2001

7

The changes provide effort reports by employee and allow sufficient time for users to review labor distributions and submit adjustments prior to effort report creation. Additionally, through various mailings, b-board postings, seminars, training sessions and presentations in Carnegie Mellon's Research Administrators Council, we continuously educate our campus faculty and staff on the importance of timely and accurate reporting and costing of effort on sponsored research projects.

Attachment 9: "Effort Reporting," presentation given May 16, 2001 to the Audit Committee of the Carnegie Mellon Board of Trustees

Statement 10, Page iii: *"We also found that the PI spent 25 percent less time on NCOVR research activities in Fiscal Years 1999 and 2000 than was required by the special conditions in the Cooperative Agreement and its amendments. Thus, NSF has less assurance that the intended scope of the project was fulfilled. NCOVR overlooked the stated requirement for minimal time commitments on the part of "key personnel," and did not discover variances in the effort certification process. Nor did the CMU Office of Sponsored Research, which had overall responsibility for the administration of the award, detect the discrepancies."*

Statement 10 Response:

The time of the PI was originally not reflected properly in the financial management system because of an error in communication concerning how cost sharing must be calculated; the error was corrected as soon as it was identified. Nevertheless, on an annual basis, the PI has met the 75% requirement.

The original NCOVR proposal provided an algorithm for cost sharing. One component of that algorithm that involved the PI was the following: "The [Heinz] School will support the entire academic-year salary of the Director at no cost to the Center, and will reduce the Director's normal teaching load to no more than two courses per year; this is half the normal four-course load." Thus, under these procedures, the normal CMU practice is to indicate 50% cost-sharing, reflecting the 50% reduction in teaching load.

Even though CMU's ostensible cost-sharing contribution to NCOVR to account for the PI's time has been 50% (4.5 out of 9 months), that has been a gross under-estimate of the time he spent on NCOVR. Since the beginning of the award, the PI's only research obligation has been to NCOVR. He has, in addition, devoted his entire summers (with never more than two weeks of vacation) to NCOVR, with no charging of that effort to NCOVR or NSF, or accounting for it in cost-sharing. Thus, it is clear that a true accounting of time spent on NCOVR business was well in excess of the 75% called for in the Cooperative Agreement.

Currently the Carnegie Mellon University Office of Sponsored Research (OSR) provides copies of the complete award agreement to the individual Principal Investigator and to the department Business Manager. Additionally, OSR monitors the administrative and financial progress on a monthly basis, and prior to the award close out conducts a comprehensive award evaluation to assure compliance with all award terms and conditions. The new Oracle

financial management system and cost sharing and segregation procedures will provide OSR with additional monitoring tools to assure compliance throughout the award.

Statement 11, Page iii: *“In the area of subrecipient management we found that the processes used to preclude conflicts of interest and to monitor subawards of more than one year duration did not meet the requirements of OMB Circular A-110. NCOVR had no written conflict-of-interest policy to ensure that a reviewer had no personal or professional stake in award evaluation and selection. This deficiency reduced NSF’s confidence that subaward recipients are the result of objective and unbiased selection of the most meritorious candidates. Also, NCOVR relied on oral communication to monitor performance of its subaward recipients. This process, although useful, does not provide a written record comparable to the annual reports NSF requires of its own awardees. The result is that neither NCOVR nor NSF has a written record to use in monitoring programmatic and compliance issues for subawards lasting more than a year.”*

Statement 11 Response:

These statements are incorrect. NCOVR does have written procedures for proposal submission, review, award, and progress reporting. Those procedures have been published on NCOVR's website for the past four years; copies of these procedures have been submitted for review and approval to NSF/SBE. Copies were also given to the auditors on January 8, 2001 and at several other times during their visits to CMU, and are attached.

In addition, since its initiation, NCOVR has required a written report on all its funded projects and has required interim annual reports on multi-year projects. Copies of award letters for both single year and multi-year projects are attached. Copies of the final and progress reports are included in the jacket of each funded project. The NSF OIG auditors declined NCOVR's suggestion that they look at the project files to review the award letters and the reports.

While NCOVR does not have a written conflict-of-interest policy, we have followed NSF's standard conflict-of-interest procedures. In particular, any member of the Steering Committee involved in any way with a proposal under consideration was asked to absent herself/himself during the discussion to assure a fair and open review. In addition, we assigned a primary reviewer who submitted both a written and oral review and asked each member of the Steering and Advisory committees to complete an evaluation form prior to the review meeting. Full written records of these meetings, including notes on all discussions and copies of correspondence with proposers, are maintained by NCOVR for every proposal round. In addition, NSF staff received copies of all proposals before the proposal review meeting. They were also present at all subrecipient proposal review meetings and participated in the discussion of the proposals under review.

The full record of the review process, with the names of reviewers attached, was available to the auditors. Again, the auditors declined NCOVR's suggestion that they look into these files in preparing their evaluation of NCOVR's procedures.

Although we feel we have followed NSF's standard procedures, we will put the procedures in writing if and when NSF reinstates funds for NCOVR to award research proposals.

Attachment 11A: NCOVR Proposal Process as posted on the NCOVR web site (this document has been posted and available since Year 1 of the award)

Attachment 11B: Review Form for NCOVR Research Project Proposals

Attachment 11C: Two examples of NCOVR research proposal award letters

Recommendations

Statement 12, Page iii: *"We recommend that the Directors of NSF's Divisions of Grants and Agreements (DGA) and Contracts, Policy and Oversight (CPO) ensure CMU's accounting system segregates NSF and cost sharing expenses. We also recommend that NSF adjust the amount of unbilled award costs to NSF by \$48,408 to correct the overcharges."*

Statement 12 Response:

We do not agree that overcharges have been made or that any further correction is necessary. Please refer to the response to Statement 6 above, which has already addressed this issue.

Statement 13, Page iv: *"Regarding the inaccurate cost sharing certifications, we recommend that the Directors of NSF's DGA and CPO require CMU to report and certify to actual cost sharing amounts, as stated in the CMU accounting records, rather than to estimated and obligated amounts."*

Statement 13 Response:

We will comply with this change in reporting when NSF modifies the Cooperative Agreement.

Statement 14, Page iv: *"We recommend that NSF require that CMU ensure that any of its Schools that have business management functions involving federal funds develop an affirmative time and effort certification process."*

Statement 14 Response:

This issue was addressed in the response to Statement 9 above. Carnegie Mellon has a satisfactory process in place.

Statement 15, Page iv: *"We recommend that NSF require CMU's Office of Sponsored Research to ensure better oversight of award special conditions, such as those requiring key personnel spend a required minimum of time and effort on the award project."*

Statement 15 Response:

This issue was addressed in the response to Statement 10 above. The Office of Sponsored Research has sufficient oversight of award special conditions.

Statement 16, Page iv: *“Regarding subrecipient management, we recommend that NSF require that NCOVR adopt written conflict-of-interest procedures and annual written progress reports for subrecipient awards lasting more than a year.”*

Statement 16 Response:

NSF has eliminated funding for NCOVR to make research awards. However, NCOVR has followed NSF’s standard conflict-of-interest procedures in the past, with the concurrence of NSF staff. If funding for new awards is provided in future, NCOVR will put these procedures in writing. As stated in the response to Statement 11 above, NCOVR already requires annual written progress reports for subrecipient awards lasting more than a year. In fact, NCOVR requires written final reports for all awards.

Other Matters

Statement 17, Page iv: *“Regarding spending on research on violence in public housing, we found that as of June 30, 2000, of the \$2 million HUD funds provided for research on violence in public housing, NCOVR had obligated 23 percent and spent 11 percent on awards using “public housing” in the title, award, or abstract. Using NCOVR’s own more expansive criteria, which included all awards related to public housing and neighborhood effects, the consortium had obligated 37 percent and spent 20 percent of the \$2 million. The result was that with only ten months remaining before the intended expiration of the award on April, 30, 2001, NCOVR was unlikely to obligate or spend the large amounts necessary to utilize the remainder of the \$2 million provided for HUD to support research on violence in public housing.*

“There were three main reasons why NCOVR had not obligated or spent more of the \$2 million on this research. First, it did not understand that the \$2 million of HUD money was to be used solely to fund research on violence in public housing. Second, NCOVR did not want to obligate money on awards lacking in merit, just to use the funds. Third, NCOVR has been trying for years to get access to data for a pending initial \$400,000 award in this research area, and the negotiation process has been slow.”

Statement 17 Response:

At its initiation, NCOVR was informed by NSF that HUD had contributed \$2 million to supplement NSF and NIJ funds. HUD, through NSF, asked that NCOVR pay special attention to public housing communities in our research. In accord with the interest of HUD, NCOVR has been active in developing research programs on the effects of neighborhood characteristics on violence. In particular, we funded four research projects and one RIF that are specifically focused on violence in public housing compared to other similar neighborhoods. In addition, we funded twelve projects that are focused on urban neighborhood effects. Over the past year, we successfully negotiated with HUD to evaluate the violence consequences of the MTO (Moving-to-Opportunity) experiment being conducted in five cities. At the August 2000 proposal evaluation meeting, we approved a project to take on that effort, contingent on an appropriate arrangement which have

Carnegie Mellon University, October 16, 2001

11

subsequently been made with HUD to get access to the appropriate data from the experiment itself.

As the draft audit report states, as of June 30, 2000, we had awarded \$746,103 to projects looking at public housing and neighborhood effects. In addition, until interrupted by NSF, we were planning to begin work analyzing the Moving-to-Opportunity program, and anticipated awarding approximately \$400,000 to work in this area during project years 5 and 6. At this time, we have made awards for MTO work in the amount of \$363,407. The total adjusted awards for public housing and related issues is, therefore, \$1,065,361.

Since half of NCOVR expenditures were proposed to fund research projects, NCOVR has achieved that portion in this research area. The other half of the HUD funds supported and continue to support all of the other NCOVR activities -- education, outreach, Data Center, summer workshop, working group expenses, administration -- which complement the NCOVR research initiatives.

Attachment 17: NCOVR Awards for Public Housing and Related Issues

Statement 18, Page v: *"The actual outlays for administration and research did not agree with the original budgeted amounts. As of June 30, 2000, NCOVR had spent 23 percent on administrative expenses in comparison to the budgeted amount of 11 percent, and it had spent 35 percent on subrecipient research although it had budgeted 52 percent. As a result, more NSF funds were spent on administration at the CMU campus and less were used for research at other institutions than NSF had anticipated."*

Statement 18 Response:

These statements are incorrect. We have a number of concerns with the issue as articulated by the auditors regarding NCOVR's allocation of funds to expenditure categories. They include:

The question itself is misleading as it treats NCOVR expenses as falling into only two categories, Research and Administration. NCOVR has at least nine expenditure categories. By labeling all expenses other than RIFs and Research Projects as Administration, the analysis is misleading since expenses the auditors label as Administration include, in addition to actual administrative costs, NCOVR's education program, communications program, all research support, the Data Center, member interactions and equipment. We suggest that the reviewers consider the budget categories in the original proposal as a more accurate categorization of NCOVR activities.

The report also implies that the NCOVR staff ("small management team," *emphasis added*) is too large. We have added one position to the staff described in the original proposal. That proposal, written in 1995, specified three positions: an Executive Director, an Administrative Assistant, and a Communications Director. The current staff includes four positions. The staff in June 2000 included an Executive Director, a Secretary (Administrative Assistant), a Manager of Member Relations (Communications Director),

Carnegie Mellon University, October 16, 2001

12

and a Financial Administrator. Given the number of subcontracts and awards granted by NCOVR, there is a clear need for a full-time, experienced financial staff member.

Of note: The Executive Director's role has been greatly expanded to include design and management of the Data Center, participation in the design and evaluation of the research program, and a key role in obtaining outside funding. Dr. Edgar is the Principal Investigator on a \$526,000 award from the National Institute of Justice and a \$50,000 award from the Alcoa Foundation.

Finally, the calculation on the allocation of NCOVR funds is based on expenditures only. As explained above, NCOVR does not transfer funds to research award grantees when the award is made. We require that the subawardee submit invoices for work as it is performed. Since most multi-discipline, multi-investigator projects have periods of performance that spill over grant years, NCOVR, at any point in time, has funds obligated to projects which have not yet been expensed.

When unexpended obligations are added to the spreadsheet, 44.9% of funds are **directly** attributable to RIFs and Research Projects. In additions new items have been added which support the Research Program. They include RPA and Working Group meetings, conference calls, and consulting fees to leaders; support to expand the Data Center to meet members' requests for a central repository for collaborative work, and support to make expertise available to members on the Area-Coded National Crime Victimization Surveys. As a result, 13.8% of total funds were allocated to support the Research Program (see categories Research Support and Data Center). Our use of funds clearly meets the allocations proposed in the original budget.

To support this calculation, we have attached a spreadsheet that includes the unexpended obligations in place on June 30, 2000, and which details new spending items in each of the nine categories used in the original proposal.

Attachment 18A: Original NCOVR budget proposing that 11.4% of total be spent in the Administration category and 50.2% in the Subcontract (Research Project) category over five years

Attachment 18B: NCOVR expenditures and unexpended obligations as of June 30, 2000 (same as Attachment 1A)

Attachment 18C: Research project award list which includes April 2000 awards with start dates of July 1, 2000, as well as projects awarded in August 2000 which were delayed by NSF while the audit was ongoing. These awards have start dates ranging from May 1, 2001 through November 1, 2001.

Statement 19, Page v: *"NCOVR provided funds to researchers at CMU and 35 other institutions. As for ethnic, cultural, and gender diversity, we found that as of June 30, 2000, out of a total of 58 individuals who had received research funds, 83 percent were white and 83 percent were male."*

Statement 19 Response:

We realized in the beginning that increasing minority participation in violence research would be an ongoing challenge. We invited minority scholars to membership and offered them leadership roles in the organization, but NCOVR is one of many organizations competing for the attention of this small pool of researchers. While we have had moderate success in engaging and retaining the interest and attention of these established scholars, we focused on capturing the interest of young minority scholars through a variety of innovative education and training programs.

NCOVR has granted 37 fellowships over the past five years: nineteen pre-doctoral, ten post-doctoral, and eight career development. NCOVR's Career Development Program is targeted at young minority faculty. Fifteen of NCOVR's fellows are minority scholars; sixteen are women.

Beyond our regular education program, NCOVR has supported special events to encourage minority students and faculty to engage in violence research. In June 2000, NCOVR arranged with New York University to sponsor one of eight concurrent weeklong seminars at NYU's fifteenth annual Faculty Resource Network Program. This program is intended to increase the research and teaching skills as well as the networking reach of faculty members at Historically Black Colleges and Universities (HBCUs).

NCOVR also supported an Undergraduate Week at Carnegie Mellon in June 1999. NCOVR hosted 12 promising undergraduates from selected minority-serving institutions who were introduced to violence research as a career opportunity and to recruiters from a number of outstanding graduate schools. The students stayed to attend our Summer Workshop.

an African-American professor at the University of Missouri-St. Louis, and an NCOVR Career Development fellow, led the program.

Under NSF's Collaborative Integration of Research and Education award (CIRE) grant, NCOVR members lectured monthly during academic years 1999, 2000, and 2001 at Morehouse College. In addition, three Morehouse faculty and 12 Morehouse and Spelman undergraduates participated in our Summer Workshop 2000. Three of these fellows spent the summer as research assistants on NCOVR-sponsored project, two at Carnegie Mellon and one at Rand.

Attachment 19: Complete list of NCOVR Research Projects (RP) and Research Initiation Funds (RIF) indicating gender, race and ethnicity of each PI

Review Results

Statement 20, Page 4: *"Further, during the course of the audit, we received many revisions of both NSF costs and of cost sharing adjustments to reconcile variances among CMU and NCOVR accounting records. In fact, we were provided with four revisions of the CMU Transaction Detail of Expenditures, 10 revisions of the NCOVR Summary of*

Expenditures, and nine spreadsheets and one subsequent modification showing prior period cost sharing adjustments to be done in FY 2001.”

Statement 20 Response:

As noted in the response to Statement 4 above, the many revisions, modifications and multiple versions of spreadsheets were specifically requested by the OIG auditors so that they could display data from NCOVR in a variety of formats and covering different, often overlapping, time periods. Rather than consulting with properly trained financial management personnel at Carnegie Mellon or with the university’s on-site DCAA auditors, the OIG auditors chose to make these requests of NCOVR program staff who had not yet been trained on the new Oracle system. Given the complexity of the NCOVR award and its subcontracts, it is not surprising that support staff not trained in financial management would have difficulty generating the variety of reports that were demanded by the auditors. Nevertheless, when properly trained financial managers at Carnegie Mellon were later asked to reconcile the various data sets, they did so and the confusion was eliminated.

Statement 21, Page 4: *“During the audit, NCOVR did not explain the discrepancy of \$231,801 between NCOVR’s original and final report of expenditures, and subsequently stated that the variance reflects the omission of overhead charges for May and June 2000. However, we were not able to verify these overhead expenses. The adjustments to the CMU accounts resulted from overhead changes necessitated by a flaw in the new Oracle software and/or cost sharing removed from (added to) one account but not from another.”*

Statement 21 Response:

We concur. A typographical error led to an incorrect cell in one of the spreadsheets requested by the OIG auditors. The error was subsequently explained and corrected for the auditor.

Statement 22, Page 4: *“In addition to these discrepancies our review disclosed, as shown in Table II, that as of April 30, 1999, reported expenditures for grant years one, two, and three in the Fourth Annual Progress Report understated actual expenditure amounts by \$766,897. One reason for this discrepancy is that NCOVR did not update expenditures for years one, two, and three in its Fourth Annual Progress Report, submitted in December 1999.”*

Statement 22 Response:

As noted in the response to Statement 4 above, the format NSF requires NCOVR to follow in its reports to NSF, which was worked out by NSF SBE and DGA staff in January, 1997, may have led to some of the auditors’ confusion. In each annual progress report, NCOVR reported, for each year, Research Projects and RIF expenditures and unliquidated obligations for awards made during that project year. In each subsequent progress report, NCOVR updated the report for each project year to reflect expenditures and remaining unliquidated obligations, at the time of the progress report, for awards made during each project year.

A review of the response to Statement 4 and the accompanying attachments should remove the confusion.

Statement 23, Page 5: *“As a result of the accounting deficiencies, CMU could not be sure it was accurately reporting the financial status of its NSF award or its cost sharing obligation. Only through a rigorous, complicated, and time consuming analysis was the university ultimately able to reconcile most of the differences between its accounting reports and supporting records. This analysis indicated that CMU had overcharged NSF in the amount of \$48,408. Although this amount is not material, the significant effort required to make this determination suggests CMU had major control weaknesses in its accounting process. These internal control weaknesses could have resulted in higher overcharge amounts on the NCOVR award, and, more importantly, could have resulted in overcharges on other awards in the nearly \$89 million of total NSF awards to CMU with expiration dates after August 1997. In addition, the control weaknesses increase the risk that CMU may not be properly accounting for the required \$15 million of cost sharing on these NSF awards.”*

Statement 23 Response:

Carnegie Mellon objects to the suggestion that the university may have major internal control weaknesses and that the \$48,408 represents an overcharge. The responses to Statements 3 and 6 above address these points.

Statement 24, Page 5: *“We believe that there are two primary causes of the variances in the CMU and NCOVR accounting records. The first cause of the discrepancies is that for three and a half years of the award, CMU accounting records did not segregate expenses funded by NSF from those cost shared by CMU. In addition, records did not identify costs funded by the university as cost sharing at the time the associated expenses were incurred. As a result, in preparing the annual financial status reports to NSF, CMU had to review each individual transaction in the combined account, separately identify those costs funded by CMU as cost sharing, and make a lump sum adjustment to remove those costs to a separate cost sharing account.”*

Statement 24 Response:

The complexity of the NCOVR award and the number of cost-shared subcontracts have undoubtedly magnified the impact of this problem. Although some manual work-arounds are still required in the current version of Oracle, we are working with Oracle, and other Universities utilizing Oracle software, to develop and implement a solution. The university does recognize this problem and has identified and corrected the system conversion and data corruption problems related to these transactions.

Statement 25, Page 5: *“The second cause of the discrepancies among accounts is that CMU experienced transition difficulties when it changed from the in-house accounting system to the Oracle system in November 1999. The accounting records were partially on the old system, which did not segregate NSF and cost sharing costs, and partially on the new system, which did segregate these costs. Reconciliation was cumbersome and difficult. Further, the new Oracle system did not correctly compute subrecipient overhead costs that were to be cost shared, and manual adjustments to the accounting records were necessary to correct errors resulting from this software flaw. The complexities associated with*

Carnegie Mellon University, October 16, 2001

16

reconstructing the cost sharing account balance after-the-fact, required the numerous revisions to the year-end adjustments. In addition, CMU did not consistently ensure that the revisions were made to all of the affected reports. Therefore, each report reflected a different amount depending on whether it contained the most recent revision.”

Statement 25 Response:

Responses to Statements 3, 4 and 7 above describe how Carnegie Mellon has resolved the problems that were caused by the one-time conversion to the new Oracle financial management system.

Other statements and recommendations made in the Review Results section repeat those made in the Executive Summary and have been addressed above.