

NATIONAL SCIENCE FOUNDATION
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OFFICE OF
INSPECTOR GENERAL

MEMORANDUM

Date: November 15, 2007

To: Mary F. Santonastasso
Division Director, Division of Institution and Award Support
(BFA/DIAS)

Karen Tiplady
Division Director, Division of Grants and Agreements (BFA/DGA)

From: Joyce N. Werking 
Acting Senior Audit Manager

Subject: OIG Report Number 08-01-002
Audit of University of Utah's Payroll Distribution System

Attached is the final report on our audit of the payroll distribution and effort reporting system used by the University of Utah to support salary and wages charged to NSF grants. The audit was performed by Williams Adley & Company, an independent public accounting firm. The University's comments to the draft report have been summarized after the recommendations for each audit finding and our response have been provided to these comments. The full text of the University's comments is included as an Appendix to the audit report.

The audit found that while the University of Utah's payroll distribution and labor effort reporting system generally supports the salary costs directly charged to NSF grants, the University needs to enhance its written policies and procedures to provide clear and comprehensive guidance for a labor effort reporting system that is fully compliant with federal regulations. Without appropriate and timely University controls for certifying labor effort reports, NSF has less assurance that salary charges reasonably reflect actual work on NSF sponsored agreements.

We consider the University of Utah's internal control procedural weaknesses identified in the audit findings to be significant. Accordingly, we request that your office work with the University and the cognizant audit agency, the Department of Health and

Human Services (DHHS), to develop a written Corrective Action Plan detailing specific actions taken and/or planned to address each audit recommendation. Milestone dates should be provided for corrective actions not yet completed.

To help ensure the recommendations are resolved within six months of issuance of the audit report pursuant to Office of Management and Budget Circular A-50, please coordinate the development of the Corrective Action Plan with our office during the resolution period. Each audit recommendation should not be closed until NSF, in coordination with DHHS, determines that University of Utah has adequately addressed the recommendation and proposed corrective actions have been satisfactorily implemented. Please note that we have sent a copy of the audit report under separate cover to Jon D. Crowder of DHHS-OIG.

We appreciate the cooperation that was extended to us during our review. If you have any questions, please feel free to call me at 703-292-8097 or James M. Berry Schneck at 703-292-8627.

Enclosure

cc: Gilbert Tran, Technical Manager, Office of Management and Budget
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Audit of Payroll Distribution System

**University of Utah
Salt Lake City, Utah**

**National Science Foundation
Office of Inspector General**

**November 15, 2007
OIG 08-01-002**



Audit Performed by:
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EXECUTIVE SUMMARY

This audit report provides the results of our review of the payroll distribution and labor effort reporting system used by the University of Utah (U of U) to validate salaries and wages charged to National Science Foundation (NSF) grants. In fiscal year (FY) 2006, the University had total Federal research and development grant expenditures of \$214 million, of which \$23 million was directly funded by NSF. Of this amount, over \$8.3 million was for labor costs directly charged to NSF grants.

Our review of 30 statistically sampled employees disclosed that the University's Personal Activity Reports (PARs) generally support the FY 2006 salary costs of \$807,416 directly charged to NSF grants for these employees. However, U of U needs to enhance its written PAR policies and procedures to provide clear and comprehensive guidance for a payroll distribution and effort reporting system that is fully compliant with Federal regulations. Without clear guidance, our review disclosed that the University (1) certified late 51 percent of total FY 2006 salary charges tested from 2 to 284 days; (2) re-distributed 25 percent of the salary charges to NSF projects that were improperly allocated because significant changes in estimated labor effort were not appropriately recorded when known; and (3) certified two percent of the salaries without "suitable means of verification" to validate the actual labor effort expended.

Without timely or appropriate University controls for certifying labor effort reports, NSF has less assurance that the salary and wage charges reasonably reflected actual hours worked on NSF sponsored agreements. The systematic nature of these control weaknesses increases the risk that excessive labor costs could potentially be charged to NSF grants as opposed to other Federally-sponsored or University activities.

These weaknesses occurred because U of U has not updated its PAR policies and procedures in recent years to establish clear, concise, and well-documented guidance that ensures its payroll distribution and labor effort reporting system fully complies with Federal requirements. In particular, contrary to Federal standards, the University has not performed an independent internal evaluation to ensure that the PAR system was effective, forfeiting an opportunity to identify and address needed improvements.

To address these weaknesses, we made recommendations to improve U of U's internal control structure for administering and managing its payroll distribution and labor effort reporting system. Specifically, the University should (1) establish formal procedures and processes to promote timely PAR certification, (2) define what constitutes "significant changes" in estimated labor effort distributed to sponsored projects, (3) establish acceptable "tolerance" limits for certifying such estimated labor effort, (4) define what is acceptable as "suitable mean of verification" to support labor charges to sponsored projects, and (5) perform a comprehensive evaluation of the PAR system as well as establish formal policy for such required evaluations in the future.

A draft audit report requesting comments on the findings and recommendations was issued to U of U. Generally, the University concurred with the audit findings and

recommendations and agreed to strengthen its PAR guidelines, definitions, procedures, training, and evaluations. However, it believed that the OMB Circular A-133 audit was sufficient to meet the Federal requirement for an independent internal evaluation of its payroll distribution and effort reporting system. In addition, the University felt its current process for imputing effort for donated time by Principal Investigators satisfied Federal guidelines. Nevertheless, the University did agree to make changes to its policies and procedures to address all recommendations.

U of U's proposed actions, once implemented, should address our audit recommendations. NSF should work with the cognizant audit agency to ensure the University develops an acceptable corrective action plan to resolve each audit recommendation. We have summarized the University's responses and provided our comments after each recommendation in the report. Also, U of U's comments to the draft report in its entirety are included as an appendix to this report.

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ACRONYMS

NSF	National Science Foundation
OIG	Office of Inspector General
OMB	U. S. Office of Management Budget
PAR	Personal Activity Report
PI	Principal Investigator
OMAA	Office of Management Accounting and Analysis
OSP	Office of Sponsored Projects
U of U	University of Utah

INTRODUCTION

Background

The University of Utah (U of U), located in Salt Lake City, is a major teaching and research university. It is ranked 28th nationwide out of 127 major public research universities according to the Lombardi Program on Measuring University Performance, with a particular distinction in medicine, genetics, and engineering.

U of U has an enrollment of approximately 29,000 students, of which 77 percent are undergraduates. The student body is comprised of individuals from all 50 states and more than a 100 foreign countries. It offers 77 undergraduate majors and 95 major fields of study at the graduate level. During the 2005-2006 academic year, the University had over 550 doctoral graduates; 1,480 master graduates; and almost 5,000 baccalaureate graduates. The University campus is comprised of almost 300 buildings on over 1,500 acres, including a health sciences complex and a Research Park. There are approximately 2,700 faculty members and 13,700 other employees.

According to FY 2006 audited financial reports, U of U's total revenue was over \$2.1 billion, excluding gifts and capital-related revenues. Significant revenue components were patient care of \$822 million (39%); Federal grants and contracts of \$207 million (10%); and private grants of \$74 million (3%). Of the Federal grant and contract revenues, \$23 million (11%) was funded by NSF, of which \$8.3 million (36%) was for salaries and wages.

U of U's management and oversight of its Federal grant programs is shared between the Office of Sponsored Projects (OSP), the Grants and Contracts Accounting office, the Office of Management Accounting and Analysis (OMAA), and the Payroll office. The OSP is responsible for pre-award grant activities including establishing Federal awards in the university's financial system, while the Grants and Contracts Accounting office is tasked with post-award review and management of sponsored projects. In addition, the OMAA is responsible for distributing and tracking PARs to provide for quarterly certification of employee salary costs directly charged to Federal awards. Specifically, OMAA requests the Payroll office to generate the PARs, compiles and distributes the reports to the Academic Departments, and tracks the return of the reports.

Within each Academic Department, the Principal Investigator (PI) is primarily responsible for the administration and oversight of each Federally-sponsored project. However, the PI often assigns the administrative portion of this responsibility to the Department's administrative assistant to monitor compliance with the award budget and to review project expenses. Both the PI and administrative assistant review the monthly financial management reports for each sponsored project to ensure costs are reasonable and allowable.

Objective, Scope, and Methodology

Audit Objectives: Our audit objectives were: (a) to evaluate whether the University's internal controls were adequate to properly manage, account for, and monitor salary and wage charges to NSF grants in accordance with OMB and NSF grant requirements and (b) to determine if salary and wage charges were allowable, allocable, and reasonable in accordance with Federal cost principles and NSF grant terms and conditions.

Scope and Methodology: The audit focused on the University's payroll distribution system and accordingly reviewed internal controls for ensuring that labor costs charged to NSF (i) were actually incurred, (ii) benefited NSF awards, (iii) were accurately and timely recorded and charged to NSF, and (iv) were for allowable and allocable-type activities as required by Federal and NSF requirements. In addition, we evaluated if the level of PI effort pledged in grant proposals and award documents was actually contributed by the faculty member to accomplish award objectives.

To address each of these control objectives, the OIG engaged a statistician to provide expert advice in selecting a statistical sample of employee salary records for testing. The use of statistical tools and methodology will enable projecting our audit results to the entire population of universities to be included in the OIG planned reviews of payroll distribution systems nationwide. However, due to the small statistical sample size of 30 employees tested, we are not able to make any projections to the total U of U population of labor costs charged to NSF grants. Specifically, the FY 2006 salary costs for the 30 sample employees tested amounted to \$807,416 and were supported by 111 Personal Activity Reports (PAR). Our statistical sample was derived from a total population of 684 University employees who charged \$8.3 million in salaries to NSF grants during FY 2006. This population excluded (a) any employee with total salary costs of \$100 or less and (b) all salary charges for undergraduate students. These amounts were excluded because of their small dollar value and the difficulty in locating undergraduate students for personal interviews.

We compared U of U's policy and procedures to Federal and NSF requirements for allocating labor costs to Federal awards and interviewed University personnel to gain an understanding of the controls in place to ensure salary and wages charged to NSF awards were reasonable and allowable. For each statistically selected salary record, we obtained the following documentation to determine whether labor costs charged to NSF awards met the control objectives:

- PARs documenting 100 percent of each employee's compensation allocated to sponsored and non-sponsored projects for each reporting period.
- Fiscal Year Salary Change forms or other documents supporting the approved annual salary for employees.
- Management Reports detailing the actual salary and wages charged to sponsored projects and other activities for each employee during each reporting period.

- Award documents to determine whether the grant had any terms and conditions that would affect the allowability of labor charges to the award.

To ensure that salary and wage costs charged to NSF awards were incurred and benefited the project, we corroborated the PAR information by interviewing the 30 sample employees. We inquired whether (a) the labor charges documented were actually incurred on projects and activities, (b) the approximate percentage of effort actually worked on each sponsored project and/or activity was reasonably consistent with NSF labor charges, and (c) the type of work performed on NSF projects was generally consistent with the scope of the awards. Additionally, we interviewed selected Principal Investigators (PIs) to determine the number of projects and personnel they were responsible for and their processes for verifying employee work activity prior to approving and signing the PARs.

To confirm that faculty effort pledged in grant proposals was actually contributed to accomplish grant objectives, we reviewed processes for reporting and tracking PI effort and whether the associated salary costs were properly included in the organized research base for computation of the U of U's indirect cost rate. We reviewed award documents for all Federal grants that a faculty member worked on during FY 2006 to determine the effort pledged on each project and compared this proposed effort to the approximate percentage of actual effort worked on the project. In addition, we determined whether and how the University tracked and documented PI effort on sponsored projects when no faculty salary support was requested or reimbursed by the Federal Government.

To determine whether labor costs were accurately recorded and charged to NSF, we compared the amounts in Fiscal Year Salary Change Forms or other documentation supporting salaries and wages paid to the amounts recorded in the PARs for each individual in our selected sample. We recalculated salary and wage costs charged to NSF projects by using the salary shown on supporting documentation and apportioning it by the period of time represented on the PARs. We also reviewed labor transactions to determine whether the University followed Federal, NSF, and campus requirements in charging labor costs to NSF projects.

We evaluated whether U of U officials approved and signed effort reports in a timely manner by comparing the date the PARs were certified and returned to the due dates established by the University. The University typically established the due date at 30 days from Departmental receipt of the reports for each quarterly reporting period.

Further, we reviewed all internal audit and accountability reports with findings regarding the payroll distribution/effort reporting system or salary and wage costs, issued within the last three years by U of U's Internal Audit Office. For each audit report reviewed, we obtained and reviewed the 6-month follow-up report to determine if corrective actions implemented were satisfactory to address the audit recommendations. In addition, we interviewed the Assistant Vice President of Auditing and Risk Services and/or the Associate Vice President of the Division of Human Resources, as applicable, to determine corrective actions taken for review recommendations less than six months old. This information was

summarized and assessed for additional areas of risk where increased audit effort could be warranted.

We obtained and reviewed the University's OMB Circular A-133 audit reports for fiscal years 2003, 2004, and 2005 (2006 has not been completed) performed by the State Auditors. For the FY 2005 audit, the audit workpapers were reviewed and the cognizant audit director and staff were interviewed to ascertain the audit scope, the audit procedures performed, and the results obtained. The State Auditors did not report any deficiencies or internal control weaknesses in the FY 2005 A-133 audit report or management letter.

Onsite audit work at U of U's campus was performed for 2-week periods during January and April 2007. The remaining audit work was completed through phone interviews, emails, and documentation requests through June 2007. Our audit was conducted in accordance with the Comptroller General's *Government Auditing Standards* and accordingly included such tests of accounting records and other auditing procedures, as we considered necessary, to fully address the audit objectives.

FINDINGS AND RECOMMENDATIONS

1. Improvements Needed for Effort Reporting System to Effectively Comply with Federal Requirements and University Policy

Federal regulations provide that labor costs charged to sponsored projects should be reasonable in relation to the actual work performed. In particular, payroll distribution reports must be signed by an employee or an official with a “suitable means of verification” that the work was performed and any “significant changes” to estimated labor effort must be identified and entered into the payroll distribution system. Although Federal and NSF requirements do not specify when a payroll distribution report should be completed, university officials should provide the after-the-fact confirmation as close to the end of the reporting period as possible to ensure its reliability.

Our review of 30 statistically sampled employees disclosed that U of U’s Personal Activity Reports (PAR) generally support the FY 2006 salary costs of \$807,416 directly charged to NSF grants. However, improvements are needed to ensure the PAR system is fully compliant with Federal regulations. Review of 111 PARs for the 30 statistically sampled employees found the following control weaknesses:

- Thirty four PARs or 51 percent of labor charges tested were submitted after University-established deadlines by a range of 2 to 284 days.
- Twelve PARs or 25 percent of labor charges tested were improperly allocated to NSF projects when officials knew in advance of significant changes in total estimated labor effort to such sponsored agreements.
- Four of the 30 employees verbally reported 5 to 13 percent less actual labor effort worked on NSF projects than the effort shown certified on the PARs.
- Three PARs or 2 percent of salary charges tested were inappropriately certified by officials without “suitable means of verification” documenting the reasonableness of the actual level of work performed.

As a result of these control weaknesses, there is less assurance that the labor certifications are reliable because U of U is unable to ensure that salary and wage costs charged to NSF awards are reasonable in relation to the actual work performed. This increases the risk of labor costs being inappropriately charged to NSF awards as opposed to other sponsored projects and/or University activities.

These weaknesses occurred because U of U has not established clear, concise, and well-documented policies and procedures to ensure its payroll distribution and labor effort reporting system fully complies with Federal requirements. Contrary to Federal standards, the University has not performed an independent internal evaluation to ensure that the PAR system was effective, forfeiting an opportunity to identify and address needed improvements. In addition, U of U needs to (1) establish formal processes to promote timely PARs certification, (2) define what constitutes “significant changes” in estimated labor effort

distributed to sponsored projects and establish acceptable “tolerance” limits for certifying such estimated labor effort, and (4) define what is acceptable as “suitable mean of verification” to support labor charges to sponsored projects.

OMB Requirements

OMB Circular A-21, *Cost Principles for Educational Institutions*, require certification of labor effort/activity contributed by employees on Federal grants. Specifically, paragraph J10.b. states that a payroll distribution system is required that will “. . . reasonably reflect the activity for which the employee is compensated by the institution; and encompass both sponsored and all other activities on an integrated basis...” Such a system must provide for after-the-fact confirmation of employee activity by a responsible person with “suitable means of verification that the work was performed.”

The Circular recognizes that labor charges may be made initially to sponsored agreements on the basis of estimates made before services are performed. But when “significant changes in the work activity” occur, such changes in the payroll distribution must be identified and entered into the system. Further, Circular A-21 recognizes that a precise allocation of labor effort is not always feasible and states that reliance can be placed on “estimates in which a degree of tolerance is appropriate.” Furthermore, OMB Circular A-110, *Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organization*,¹ requires a recipient’s financial management system to provide for “accurate, current and complete disclosure of the financial results of each Federally-sponsored project or program. . . [and] written procedures for determining the reasonableness, allocability and allowability of costs in accordance with the provisions of the applicable cost principles.” Therefore, a university should have written procedures defining (1) what constitutes “significant changes in work activity” that are required to be entered into the payroll distribution system and (2) what level of precision is acceptable between actual effort and certified effort that is considered to be tolerable and does not have to be adjusted in the payroll distribution system.

Pursuant to the OMB Circular A-21 requirements, U of U has established the PAR system to provide for quarterly reporting and certification of salaries directly charged on each Federally-sponsored project on which an employee works. University officials stated that it typically takes about a month after each reporting quarter ends to compile and distribute the PARs to the certifying officials in each of the Academic Departments. The certifying officials are required to review the PARs for accuracy, make any necessary corrections, and return the certified reports to their Department representatives. To ensure timely review and approval, U of U has established due dates for returning the reports in its *Personal Activity Report Instructions* issued with the distribution of the quarterly PARs. Typically, the due dates established were 30 days after the reports were received by Department officials.

¹ Paragraph .21(b)(1) and .21(b)(6) of Financial and Program Management section of OMB Circular A-110

Timeliness of PARs Reports

Our review found that the University certifying officials did not always approve and return the PARs within the 30-day timeframe. Specifically, 34 of the 111 PARs tested, representing \$414,897 or 51 percent of total labor costs sampled, were submitted after the 30-day turnaround period. In 10 cases, representing 45 percent of the total late salaries, it took over six months for certifying officials to review, approve, and return the PARs. In particular, four of the reports were late by more than nine months and represented 20 percent of the total late salaries. The chart below summarizes how much time beyond the 30-day time period officials took to approve and submit the 34 late reports.

Effort Reports Certified Late

Days Late	# PARs	% of Late PARs	Total Labor Costs	% Late-Labor Costs
0-30 days	8	24%	\$ 62,247	15 %
31-60 days	5	15%	33,081	8 %
61-90 days	4	12%	39,568	10 %
91-120 days	3	9%	69,092	17 %
121-150 days	4	12%	21,721	5 %
151-180 days	0	0%	0	0%
181-270 days	6	18%	106,036	25%
271-284 days	4	12%	83,152	20%
Total	34		\$414,897	

Timely approval of PARs is essential to ensure labor charges to NSF grants are reliable because certifying officials are generally relying on their memory when approving reported work activity for themselves and the individuals that work for them. It is difficult for officials to remember as far back as five months² to confirm employee activity at the end of each reporting period given the significant workload of many of the individuals. Specifically, many PIs have multiple awards and many employees for whom they are responsible, which increases the risk that the individual's memory of the amount and type of activities performed will be less reliable as time increases past the established time limitations. For example, we noted that one PI had six awards that involved approximately 20 graduate students and post-doctorate scholars working in his laboratory. Thus, by limiting the review and approval of PARs to the shortest amount of time possible ensures a more reliable certification of salary costs associated with such activity on Federal awards.

² The amount of time certifying officials have to recall work activities is five months because the report covers three months; compilation and distribution takes about one month, and return is one month.

Significant After-The-Fact Changes in Labor Effort Reporting

Contrary to Federal requirements, U of U used the PAR system to routinely re-allocate substantial labor costs between NSF sponsored projects during the after-the-fact confirmation process because “significant changes” in estimated labor effort were not appropriately entered into the payroll distribution system when initially known in advance. Specifically, our review of 30 sampled employees disclosed that at the time of after-the fact certification, three individuals (10 percent) used the PARs to transfer 50 to 70 percent of their salary costs, initially allocated to one or two NSF projects, to five or six other NSF awards. The redistributions were made on 12 of the 111 PARs reviewed and equated to \$203,239 or 25 percent of the total salaries tested.

While it is appropriate to make such corrections when actual effort worked is significantly different from the estimated payroll distribution, OMB Circular A-21 provisions also require prospective revisions be concurrently made in the estimated labor allocations for the affected sponsored projects in the payroll distribution system. However, U of U did not make such prospective revisions to ensure future quarterly PARs reasonably reflected the labor effort to be expended on NSF projects.

Furthermore, our interviews of the 30 sampled employees found that the actual FY 2006 labor effort of four employees on NSF sponsored projects was less than what was reported and certified on the PARs; with deviations ranging from 5 to 13 percent and representing \$23,668 or about 3 percent of total salaries tested. However, it is difficult to know with certainty whether the effort reported during the interviews was correct because the employees were relying on their memory for work performed in prior months.

Nevertheless, U of U had not defined an acceptable level of tolerance permissible between certified labor effort allocated to sponsored projects and the actual effort worked, to be used during the after-the-fact certification process. As a result, certifying officials did not have an established University standard for determining if the reported differences of 5 to 13 percent between actual and certified labor effort were reasonable or if adjustments to NSF salary charges were required. At some universities, the acceptable variance has been established at five percent.³ Clearly, U of U needs to define its own acceptable level of tolerance along with implementing guidance.

Certifying Official Had Insufficient Means of Verification

University officials approved the PARs for 3 of the 30 sampled employees tested without “suitable means of verification” to validate the reasonableness of the NSF salary charges. Specifically, a PI and a Department Chair certified 3 of the 111 PARs reviewed, representing \$16,475 (two percent) of the salaries tested, by relying on incomplete

³ A March 2007 report entitled “Policies and Practices: Compensation, Effort Commitments, and Certification,” issued by the Council on Governmental Relations, stated that the 5-percent standard used by some universities was based on a 1979 interpretation by the prior Department of Health, Education, and Welfare stating “As a general rule of thumb, a change applicable to a given project or activity of 5% or more of an employee’s total effort would warrant an adjustment by the employee or the official.”

information and/or not obtaining any documentation evidencing if the NSF charges were for actual work performed on the sponsored projects.

- A PI approved a PAR for a graduate student who devoted 28 percent on [REDACTED] effort to the NSF project for which the certifying PI was responsible and 72 percent effort to another sponsored project for a different PI. While the certifying PI did obtain a copy of the project deliverable for the other award, the certifying PI did not speak with the graduate student or the other PI to validate the reasonableness of the 72 percent labor effort charged to the other sponsored project for which he had no direct knowledge of the work performed.
- An [REDACTED] approved the PARs for two professors by trusting that their NSF salary charges were correct based on a general understanding that the work was being performed by the employees rather than obtaining any tangible and/or verifiable documentation to support the reasonableness of the actual labor costs incurred on the projects. In [REDACTED] position as a [REDACTED], the individual had no direct knowledge of the actual level of labor effort devoted by the two professors on their NSF grants in relationship to other Federally-sponsored and University activities during the PAR's reporting period.

Potential Excess Labor Charges

Without timely or appropriate U of U controls for certifying labor effort reports, NSF has less assurance that a significant amount of the salary and wage charges reasonably reflected actual hours worked on NSF sponsored agreements. Control weaknesses resulted in the University (1) certifying late 51 percent of total salaries tested, (2) re-distributing 25 percent of salary charges to other NSF projects that were improperly allocated because significant changes in estimated labor effort were not appropriately recorded when known, and (3) certifying two percent of salaries tested with insufficient "suitable means of verification" to document actual work performed. The systematic nature of these control weaknesses increases the risk that excessive labor costs could be potentially charged to NSF grants as opposed to University activities. Similarly, such weaknesses raise concern about the reasonableness of the labor charges on the University's other \$191 million of Federal awards.

Factors Contributing to Effort Reporting Weaknesses

U of U has not established clear and comprehensive written policies and procedures for a payroll distribution and effort reporting system that is fully compliant with Federal and campus requirements. In particular, it has not performed the required independent evaluation of the system to ensure its effectiveness for properly allocating and validating employee labor charges to Federally-sponsored agreements.

Specific Procedures and Accountability Needed. While U of U has basic payroll distribution and effort reporting policies and procedures, it has not updated such guidance in recent years. OMB Circular A-21 establishes certain basic requirements for a payroll

distribution system, but there are many areas where the Circular does not prescribe specific and quantifiable standards. Accordingly, it is important for an institution to establish its own standards in these areas based on its unique organizational and financial structure. To date, the University has not established its own standards in the following areas:

- *Formal PAR Timeliness Standards* -While U of U has established and communicated deadlines for certifying and returning PARs in its quarterly distribution instructions, the University has not established clear and comprehensive written policies for PAR's distribution, review and approval, and follow-up. The University informed us that the Office of Management Accounting and Analysis (OMAA) tracks the return of certified PARs, but it typically issues only one reminder letter each quarter notifying the Academic Departments/Deans of delinquent reports. However, periodic reminders at more frequent intervals, using an increasingly graduated scale to higher level management officials, would be a methodology that the University could use to establish better accountability over the PAR process to promote timelier certification.

Further, without formal timeliness standards, there were no immediate consequences for not meeting the 30-day informal deadline for PAR approval. Specifically, U of U did not impose penalties until a PAR was overdue by a year, at which time the Office of Sponsoring Projects could withhold new grant proposal submissions by the delinquent PI.⁴ Also, the University did not include timely PAR submission as a rating factor on annual PI job evaluations nor held senior management officials, such as Department Chairs, accountable for the timely approval and return of such reports. Such actions would likely promote more timely reporting because senior management officials have more leverage than administrative assistants in ensuring that PIs complete PAR certifications within established University timeframes.

- *Significant Changes and Level of Precision* – U of U has not established clear quantifiable standards for certifying the reasonableness of employee work activity on Federally-sponsored projects. Specifically, the University's PAR system allows for initiating prospective changes to labor estimates due to "significant changes" in expected effort. However, it has not quantitatively defined what constitutes "significant changes in work activity" that must be identified and entered into the payroll distribution system, as required by OMB Circular A-21. Similarly, U of U has not addressed or defined what level of precision is expected between actual labor effort and certified effort when reviewing and approving the PARs. Specifically, the University has not determined how much an employee's *actual* effort can differ from their *certified* effort before a change is required to be entered into the PAR system to transfer costs associated with the applicable sponsored awards.

⁴ None of the 111 PARs in our sample were over one year late.

As such, while U of U instructs employees to make after-the-fact PAR adjustments for changes in work activity, employees are not required to initiate any prospective adjustments of payroll distribution to ensure labor charges to the affected sponsored projects in the future are reasonable. University officials stated that such prospective adjustments would be too labor intensive because the estimated labor effort would have to be manually recalculated for all affected projects. However, the current process of making retroactive adjustments is similarly labor intensive. In addition, such a large volume of after-the-fact revisions in PARs suggests a lack of proper management controls over the effort reporting process because significant amounts of costs are being transferred between various Federally-sponsored projects.

- *Suitable means of verification* – U of U’s policy and procedures do not specify or explain the types of documentation considered acceptable to provide “suitable means of verification” for a “responsible official” to certify the reasonableness of labor charges to sponsored projects. Without such guidance, some University certifying officials improperly believed that general knowledge of a sponsored project or the study results was sufficient first-hand knowledge of the reported labor effort. These officials were not aware that certifying officials are required to have verifiable knowledge of the employee’s regular duties and responsibilities and the actual time devoted to those various activities during the effort reporting period.
- *Effort Reporting Training* - Although U of U has established an effort reporting training course, it does not require mandatory attendance by those involved in the process, forfeiting an opportunity to enhance compliance with both Federal and University requirements. None of the 30 sampled employees had attended the effort reporting training class. Employee participation in such institutional education and training programs and other knowledge sharing practices are an integral internal control component for successfully integrating established policies and procedures into an effective University payroll distribution and effort reporting system.

Independent Internal Evaluations Not Performed. U of U did not conduct an independent evaluation of its payroll distribution system, as required by OMB Circular A-21 standards. Such evaluations would have likely disclosed the need to establish clear and comprehensive written policies and procedures to improve management and administration of its labor effort reporting system. While University officials were aware of the A-21 evaluation requirement, they believed that the annual OMB Circular A-133 audit included such an evaluation and satisfied the requirement. However, we determined that the A-133 audit did not evaluate the payroll distribution system in sufficient detail to fulfill the Federal evaluation standard.

Similarly, we concluded that a review of the payroll distribution system performed by OMAA also did not fulfill the Federal evaluation requirement. Specifically, (1) OMAA could not be considered “independent” because it is directly involved in the PAR process and

(2) the scope of the OMAA review was not sufficiently comprehensive to ensure that the payroll distribution system met all OMB Circular A-21 requirements. For example, we found that the evaluation did not test whether direct and indirect cost activities were confirmed by responsible persons with “suitable means of verification” that the work was performed and did not verify that the certified effort allocations reasonably represented the actual work performed.

Recommendations

We recommend that the NSF Director of the Division of Grants and Agreements and the Director of the Division of Institution and Award Support coordinate with the cognizant audit agency, as needed, to implement the following recommendations:

- 1.1 Work with U of U to improve its internal control structure to provide for a payroll distribution system that reasonably reflects the actual effort/activity devoted by employees on sponsored agreements. At a minimum, the University should develop clear guidance and procedures to:
 - a. Enhance the PAR submission guidelines to improve timeliness as follows:
 - Formally establish the 30-day PAR submission deadline into U of U policies and procedures and issue a formal University notification to all cognizant officials on the importance of timely PAR submissions.
 - Establish clear duties for the various University officials and/or offices responsible for ensuring timely PAR submissions and establish consequences for late PAR submissions.
 - Establish a process for periodic reminder notices to follow-up on late PARs using an increasingly graduated scale to the Department Chair, the Dean, and the Vice President.

University Response

U of U agrees that timelier reporting is important and will establish a faculty and administrative committee to enhance PAR submission guidelines to improve timeliness. Appropriate revisions to the guidelines will be made to assist in achieving this goal.

OIG Comments

Once implemented, the University’s proposed actions should address our audit recommendation.

- b. Define what percentage difference constitutes a "*significant change*" in work activity that is required to be entered into the payroll distribution system on a prospective basis. Specify the steps to identify and record such prospective changes in the system to ensure that the estimated labor distribution reasonably reflects the planned effort to be expended on sponsored projects.

University Response

U of U generally concurs and states that the newly established faculty and administrative committee will define "significant change" and develop recommendations to address when prospective changes are appropriate and feasible. However, the University expects PARS to be reviewed closely; therefore, it expects that reallocations will continue to be necessary.

OIG Comments

It is appropriate that labor reallocations are sometimes necessary. However, it is important to ensure estimated labor effort allocated to Federal awards is as accurate as possible to minimize these reallocations. Therefore, we ask that the faculty and administrative committee keep these factors in mind when developing its policy for making prospective changes.

- c. Establish a "tolerance" or "precision" range of accuracy to be used for certifying the reasonableness of labor effort allocated to each Federal award on the PARs.

University Response

U of U concurs and states that the faculty and administrative committee will establish an appropriate "tolerance" or "precision" range of accuracy.

OIG Comments

Once implemented, the University's actions should address our audit recommendation.

- d. Define "suitable means of verification" and provide specific guidance and examples on what is considered to be sufficient and verifiable knowledge of the actual work performed by employees. Particular emphasis should be directed to certifying individuals that are designated as "responsible officials" per the A-21 standards.

University Response

U of U concurs and states that the faculty and administrative committee will define "suitable means of verification" with guidance and examples.

OIG Comments

Once implemented, the University's actions should address our audit recommendation.

- e. Establish mandatory effort report training for all employees involved in the PAR process.

University Response

U of U agrees to implement mandatory training for all employees involved in the PAR process after the enhanced University guidelines have been approved.

OIG Comments

Once implemented, the University's actions should address our audit recommendation.

- f. Establish a formal requirement and conduct an independent evaluation of the payroll distribution system to ensure its effectiveness and full compliance with Federal, NSF, and University requirements. Such a requirement should include procedures to ensure an effective and systematic review that will identify reasons for any deficiencies and make appropriate recommendations, identify the specific office responsible for performing the evaluation, and how often such an evaluation should be conducted.

University Response

U of U believes that its OMB Circular A-133 audit meets the requirement of an independent evaluation and that the payroll information system is evaluated in sufficient detail to fulfill the Federal evaluation requirement. However, the University agrees to enhance its PAR system by establishing an additional independent review in accordance with the recommendation.

OIG Comments

The OMB Circular A-133 audit does assess several aspects of the University's PAR system, and as such can be a valuable part of its independent evaluation. However, the A-133 audit methodology is not detailed enough to completely satisfy the Federal evaluation requirement. For example, there was no assessment of timely submission of PARs or an assessment of whether PAR certifications were supported with "suitable means of verification." Therefore, we believe that the University's proposed additional independent review is necessary and, if implemented, should address our audit recommendation.

2. The Imputed Rate For Sponsored Projects with Uncompensated PI Labor Effort Lacks Support

OMB Circular A-21 requires a payroll distribution system that will “reasonably reflect the activity for which individuals are compensated by the institution.” The system must encompass the time and effort expended by employees on both sponsored projects and all other activities on an integrated basis. Further, a January 2001 OMB Clarification Memorandum⁵ provides additional guidance for verification requirements for PI effort on sponsored projects. The Memorandum makes clear that the payroll distribution system will include both PI salaries charged directly to sponsored projects as well as salary-related cost sharing contributed. In addition, the Memorandum states that when sponsored projects do not include any faculty (or senior researcher) effort, paid or unpaid, an estimated amount must be computed and included in the University’s organized research base used for computing its negotiated Federal indirect cost rate.

Consistent with the OMB Clarification Memorandum, we found that U of U had developed a five-percent imputed rate to estimate the amount of PI salaries to include in the organized research base when PIs had no reported labor effort devoted to sponsored projects. University officials stated that U of U developed the five-percent rate by identifying all Federal projects with no reported PI salary charges and contacting the researchers to ascertain their estimated level of effort actually devoted. According to officials, most PIs estimated their level of effort was five percent or less. However, the University did not maintain any documentation to support the process it used to derive the imputed rate. Without such documentation, we were unable to independently verify the reasonableness of the five-percent rate or to evaluate the methodology for how it was derived. In addition, the process for applying the five-percent rate to estimate applicable PI salaries to include in the organized research base was not documented in U of U’s written policies and procedures.

Specifically, a review of the 30 statistically selected employees disclosed 2 of 4 PIs reviewed had worked on sponsored projects for which no labor effort was reported. Our review of the applicable PARs showed that these sponsored projects were not listed as a part of the PIs’ total reported labor effort for the quarter, including any cost-shared effort on the subject NSF grants. According to U of U officials, it would impute five percent of both PIs annual salaries to include in the organized research base used for computing the institution’s indirect cost rate. This imputed amount would be calculated and included in the organized research base during the year when the University actually negotiated its multi-year Federal indirect cost rate agreement with its cognizant audit agency.⁶

⁵ OMB Memorandum M-01-06, dated January 5, 2001, *Clarification of OMB A-21 Treatment of Voluntary Uncommitted Cost Sharing and Tuition Remission.*

⁶ The Department of Health and Human Services (DHHS) is the cognizant Federal audit agency for the University of Utah. During FY 2006, the University did not calculate the imputed five-percent PI salary amount because this was not a year when the indirect cost rate agreement was negotiated with HHS.

Of the University's 684 NSF project participants in FY 2006, 180 (26 percent) were PIs that may have similarly donated time to sponsored projects. Thus, the total estimated amount of PI donated labor effort imputed and included in the organized research base could have been significant. Thus, if the associated salary costs for such donated faculty effort were underestimated, the indirect cost rate would be higher and result in the Federal Government paying greater indirect costs on all its sponsored projects.

According to U of U officials, such donated PI effort on sponsored projects is considered a part of a faculty member's overall University research responsibilities and included in the individual's annual compensation rate; therefore, there is no separate tracking and reporting of such donated time and effort. While we agree that the OMB Clarification Memorandum does not require tracking of such donated faculty effort, the University is required to maintain documentation to support the reasonableness of the imputed five-percent rate. Specifically, Federal regulations⁷ require a recipient's financial management system to "provide for written procedures for determining the reasonableness, allocability and allowability of costs in accordance with the provisions of the applicable Federal cost principles..."

Recommendations

We recommend that the NSF Director of the Division of Grants and Agreements and the Director of the Division of Institution and Award Support coordinate with the cognizant audit agency, as needed, to ensure U of U implements the following recommendation:

- 2.1 Maintain documentation to support the methodology used for imputing the salary costs for donated PI (or senior researcher) effort for sponsored projects included in the organized research base used for computing the University's negotiated indirect cost rate with the Federal Government.

University Response

U of U believes its process for imputing salary costs for donated PI effort meets the OMB requirements for treatment of voluntary uncommitted cost sharing and the Department of Health and Human Services (DHHS) requirements for preparing its Federal indirect cost rate proposal. Further, it claims the prescribed information is contained within the proposal and its supporting documentation. Nonetheless, the University concurs with the recommendation and agrees to maintain appropriate documentation with its indirect cost rate proposal.

OIG Comments

Once implemented, the University's actions should address our audit recommendation.

⁷ Paragraphs .21(b)(6) of OMB Circular A-110, *Uniform Administrative Requirements for Grants and Agreements With Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations*.

- 2.2 Document the requirement for estimating and including such PI salary costs in the organized research base in formal written University procedures.

University Response

Although U of U followed the OMB Clarification Memorandum requirements while preparing its federal indirect cost rate proposal, it agrees to maintain appropriate documentation in its permanent files.

OIG Comments

The University's comments do not clearly agree to formally document its current procedure of imputing PI salary and including the amount in its organized research base. Without documenting the process in the U of U's formal procedures, future treatment of such costs may not continue to meet OMB and DHHS requirements. While maintaining supporting documentation is important, such actions are not sufficient to fully satisfy the recommendation. Therefore, we reiterate our recommendation that the University formally document its process to ensure continued compliance with Federal requirements.



November 13, 2007

James J. Noeth
Senior Audit Manager
Office of the Inspector General
National Science Foundation
4201 Wilson Boulevard Suite 1135
Arlington, VA 22230

Dear Mr. Noeth,

Subject: Audit of Payroll Distribution System

The University of Utah found this a very positive audit evaluating the payroll distribution system. Thank you for the suggestions for improvements to the guidelines, evaluations and documentation for the current system. We valued working with Jerel B. Silver, Mark Y. Kim and James M. Barry Schneck of the National Science Foundation as well as [redacted] and [redacted] of Williams, Adley & Company LLP.

Attached is the document containing the University of Utah's written comments for each of the audit findings contained in the Draft Report of the Audit of Payroll Distribution System including agreement or disagreement with each recommendation.

Sincerely,

[redacted signature]

Enclosure:

cc: [redacted]

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University of Utah

November 13, 2007

Response to Draft NSF Audit of Payroll Distribution System

Findings

1. Improvements Needed for Effort Reporting System to Effectively Comply with Federal Requirements and University Policy

The University is pleased that NSF concluded “...the University of Utah’s Personal Activity Reports (PARs) generally support the FY 2006 salary costs...charged to NSF grants.”

The University of Utah believes that its PARs are in compliance with OMB Circular A-21 effort reporting requirements. The OMB Circular A-133 Audit provides an annual independent evaluation. The University’s Auditors state:

“As part of the Utah State Auditor’s Office A-133 audit of the University of Utah’s Research & Development Cluster, the auditors select a random sample of approximately 30 personnel to test the internal controls over the University’s payroll system and to test for compliance with both Circular A-21 and specific grant requirements. During this review, the auditors look at PARs for University employees, as applicable, and compare the activity on an employee’s PAR to the distribution of his or her time on the University’s payroll system and general ledger.”

The University agrees to further strengthen guidelines, definitions, procedures, training and evaluations.

Recommendations

We recommend that the NSF Director of the Division of Grants and Agreements and the Director of the Division of Institution and Award Support coordinate with the cognizant audit agency, as needed, to implement the following recommendations:

1.1 Work with the University of Utah to improve their internal control structure to provide for a payroll distribution system that reasonably reflects the actual effort/activity devoted by employees on sponsored agreements. At a minimum, the University should develop clear guidance and procedures to:

g. Enhance the PAR submission guidelines to improve timeliness as follows:

- *Formally establish the 30-day PAR submission deadline into University policies and procedures and issue a formal University notification to all cognizant officials on the importance of timely PAR submissions.*
- *Establish clear duties for the various University officials and/or offices responsible for ensuring timely PAR submissions and establish consequences for late PAR submissions.*
- *Establish a process for periodic reminder notices to follow-up on late PARs using an increasingly graduated scale to the Department Chair, the Dean, and the Provost.*

The University of Utah concurs that timelier reporting is important. The University will establish a faculty and administrative committee to enhance PAR submission guidelines to improve timeliness in reporting. Appropriate revisions to the guidelines will be made to assist in achieving this goal. We believe that the whole institution benefits from the ideas and support of its faculty and administration.

- h. Define what percentage difference constitutes a "significant change" in work activity that is required to be entered into the payroll distribution system on a prospective basis. Specify the steps to identify and record such prospective changes in the system to ensure that the estimated labor distribution reasonably reflects the planned effort to be expended on sponsored projects.*

The University of Utah generally concurs. The University expects PARS to be reviewed closely; therefore, we expect that reallocations will be necessary. The faculty and administrative committee referred to above will define a "significant change" and develop recommendations when prospective changes are appropriate and feasible.

- i. Establish a "tolerance" or "precision" range of accuracy to be used for certifying the reasonableness of labor effort allocated to each federal award on the PARs.*

The University of Utah concurs. An appropriate "tolerance" or "precision" range of accuracy will be established by the faculty and administrative committee.

- j. Define "suitable means of verification" and provide specific guidance and examples on what is considered to be sufficient and verifiable knowledge of the actual work performed by employees. Particular emphasis should be directed to certifying individuals that are designated as "responsible officials" per the A-21 standards.*

The University of Utah concurs. The faculty and administrative committee will define "suitable means of verification" with guidance and examples.

- k. *Establish mandatory effort report training for all employees involved in the PAR process.*

The University of Utah concurs. The University agrees to implement mandatory training, after the enhanced guidelines have been approved, for all employees involved in the PAR process.

- l. *Establish a formal requirement and conduct an independent evaluation of the payroll distribution system to ensure its effectiveness and full compliance with federal, NSF, and University requirements. Such a requirement should include procedures to ensure an effective and systematic review that will identify reasons for any deficiencies and make appropriate recommendations, identify the specific office responsible for performing the evaluation, and how often such an evaluation should be conducted.*

The University of Utah feels that the A-133 audit of the University meets the requirement of an independent evaluation and that the payroll information system is evaluated in sufficient detail to fulfill the federal evaluation requirement. However, the University of Utah will enhance the system by establishing an additional independent review in accordance with the recommendation.

2. The Imputed Rate For Sponsored Projects with Uncompensated PI Labor Effort Lacks Support

The University believes it has not only met the technical requirements but the intent of OMB Memorandum M-01-06, dated January 5, 2001, Clarification of OMB A-21 Treatment of Voluntary Uncommitted Cost Sharing and Tuition Remission, OMB Circular A-21 and the DHHS DCA Best Practices Manual for Reviewing College and University Long-Form Facilities & Administrative (F&A) Cost Rate Proposals when preparing the F&A proposal.

Recommendations

We recommend that the NSF Director of the Division of Grants and Agreements and the Director of the Division of Institution and Award Support coordinate with the cognizant audit agency, as needed, to ensure the University of Utah implements the following recommendation:

- 2.3 *Maintain documentation to support the methodology used for imputing the salary costs for donated PI (or senior researcher) effort for sponsored projects included in the organized research base used for computing the University's negotiated indirect cost rate with the Federal Government.*

The prescribed information is contained within the proposal and its supporting documentation. The University of Utah concurs and will maintain appropriate documentation for the next F&A proposal.

- 2.4 *Document the requirement for estimating and including such PI salary costs in the organized research base in formal written University procedures.*

Although the University followed the OMB Memo while preparing its F&A proposal, the University concurs it will maintain appropriate documentation in the permanent F&A file.