




National Science Foundation • Office of Inspector General
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MEMORANDUM

Date: March 31, 2015

To: Mary F. Santonastasso, Director
Director, Division of Institution and Award Support

Karen Tiplady, Director
Director, Division of Grants and Agreements

From: Dr. Brett M. Baker 
Assistant Inspector General for Audit

Subject: Audit Report No. 15-1-012
University of California at Berkeley

This memo transmits the WithumSmith+Brown (WSB) report for the audit of costs totaling \$379 million charged by University of California at Berkeley (UC Berkeley) to its sponsored agreements with NSF during the period January 1, 2010 and ending December 31, 2012. The audit objectives were to: (1) identify and report on instances of unallowable, unallocable, and unreasonable costs; (2) identify and report on instances of noncompliance with regulations, Federal financial assistance requirements, and the provisions of the NSF award agreements related to the transactions selected; and to (3) determine the reasonableness, accuracy and timeliness of the awardee's American Reinvestment and Recovery Act of 2009 (ARRA) quarterly reporting, including reporting the jobs created under ARRA and grant expenditures for the two most recent quarters.

The auditors determined that costs UC Berkeley charged to its NSF sponsored agreements did not always comply with applicable Federal and NSF award requirements. The auditors questioned \$1,863,351 of costs claimed on 97 NSF awards. Specifically, the auditors noted \$1,608,944 in senior personnel salary that exceeded NSF's two-month limit; [REDACTED] in unreasonable equipment charges; [REDACTED] in unallowable transactions; \$15,451 in unallowable meal expenditures; \$9,904 in unreasonable travel; \$6,997 in unsupportable and unallocable immigration fees; and \$3,891 in purchases before the award effective date. These questioned costs resulted in seven areas identified where UC Berkeley's controls could be improved to ensure compliance with laws and regulations.

The auditors also found that UC Berkeley properly accounted for and segregated NSF ARRA funded awards in its accounting system. Additionally, UC Berkeley's ARRA reports were reasonable, accurate, and timely. For the quarters ending September 30, 2012 and December 31, 2012, expenditures and jobs creation were verified without exception. However, the auditors

found that \$220,422 in unallowable costs (of the \$1,863,351 in total questioned costs) were charged to 7 ARRA awards with expenditures related to expenditures in excess of the NSF two-month senior personnel limit.

The auditors recommended that NSF address the findings by requiring UC Berkeley to work with NSF in resolving the questioned costs of \$1,863,351 and strengthen UC Berkeley's administrative and management controls.

UC Berkeley, in its response dated March 2, 2015, agreed with some of the findings and questioned costs. However, UC Berkeley disagreed with the salary overcharges that were due to a lack of effective monitoring caused by an over-reliance on rebudgeting authority, and, does not believe NSF policies and subsequent guidance from NSF are clear concerning the charging of senior salary. UC Berkeley acknowledged they should maintain strong processes and controls, provide training, and develop additional guidance to verify all costs charged to sponsored awards are appropriate, supportable, and allocable. UC Berkeley's response is described after the findings and recommendations and is included in its entirety in Appendix A.

Appendix C contains a detailed summary of the unallowable items that were questioned. Additional information concerning the questioned items was provided separately by OIG to the Division of Institution and Award Support, Cost Analysis and Audit Resolution Branch. Please coordinate with our office during the six month resolution period, as specified by OMB Circular A-50, to develop a mutually agreeable resolution of the audit findings. Also, the findings should not be closed until NSF determines that all recommendations have been adequately addressed and the proposed corrective actions have been satisfactorily implemented.

OIG Oversight of Audit

To fulfill our responsibilities under generally accepted government auditing standards, the Office of Inspector General:

- Reviewed WSB's approach and planning of the audit;
- Evaluated the qualifications and independence of the auditors;
- Monitored the progress of the audit at key points;
- Coordinated periodic meetings with WSB and NSF officials, as necessary, to discuss audit progress, findings, and recommendations;
- Reviewed the audit report, prepared by WSB to ensure compliance with generally accepted government auditing standards; and
- Coordinated issuance of the audit report.

WSB is responsible for the attached auditor's report on UC Berkeley and the conclusions expressed in the report. We do not express any opinion on the conclusions presented in WSB's audit report.

We thank your staff for the assistance that was extended to our auditors during this audit. If you have any questions regarding this report, please contact Billy McCain at 703-292-4989.

Attachment

cc: Alex Wynnyk, Branch Chief, CAAR
Rochelle Ray, Team Leader, CAAR
Michael Van Woert, Executive Officer, NSB
Ruth David, Audit & Oversight Committee Chairperson, NSB

University of California, Berkeley
Audit of Incurred Costs for
National Science Foundation Awards
For the Period January 1, 2010 to December 31, 2012

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ACRONYMS

AAG	Award & Administrative Guide
ARRA	American Reinvestment and Recovery Act of 2009
CFR	Code of Federal Regulation
DIAS	Division of Institution and Award Support
F&A	Facilities and Administrative
FAQ	Frequently Asked Questions
FDP	Federal Demonstration Partnership
FFR	Federal Financial Report
GPG	Grant Policy Guide
IPA	Intergovernmental Personnel Act
NSF	National Science Foundation
OIG	Office of Inspector General
OMB	Office of Management and Budget
PI	Principal Investigator
UC Berkeley	University of California, Berkeley



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Independent Auditors' Report

The National Science Foundation (NSF) is an independent federal agency created by the National Science Foundation Act of 1950 (P.L. 810-507). Its mission is "to promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense." The Foundation is also committed to ensuring an adequate supply of the Nation's scientists, engineers, and science educators. NSF funds research and education in science and engineering by awarding grants and contracts to educational and research institutions in all parts of the United States. Through grants, cooperative agreements, and contracts, NSF enters into relationships with non-federal organizations to fund research education initiatives and assist in supporting internal program operations. University of California, Berkeley (UC Berkeley) is an NSF grant recipient.

UC Berkeley, one of ten campuses in the University of California system, is recognized as one of the leading academic institutions. In the 2013 academic ranking of universities, compiled by the Institute of Higher Education at Shanghai Jiao Tong University in China, UC Berkeley was the highest ranking public university and was third in the world after Harvard and Stanford. Each year, the UC Berkeley campus receives well over half a billion dollars in research support from external sources.

In the fiscal year ending June 30, 2014, UC Berkeley attracted \$730.7 million in new research funding. Many of these research awards fund multi-year projects and support expenditures that will be reflected in subsequent years. The federal government provided 66 percent of these sponsored research funds, and California state agencies, industry, and the non-profit sector supplied the rest. Of the research funding provided by the U.S. government, the largest contributors are the National Aeronautics and Space Administration, Department of Health and Human Services and the National Science Foundation. Because UC Berkeley is one of the largest recipients of NSF award dollars, the NSF OIG selected the University for audit.

WithumSmith+Brown, under contract with the NSF OIG, audited the costs claimed by UC Berkeley to NSF for the period beginning January 1, 2010 and ending December 31, 2012. Our audit objectives were to: (1) identify and report on instances of unallowable, unallocable, and unreasonable costs; (2) identify and report on instances of noncompliance with regulations, federal financial assistance requirements, and the provisions of the NSF award agreements related to the transactions selected; and to (3) determine the reasonableness, accuracy and timeliness of the awardee's American Reinvestment and Recovery Act of 2009 (ARRA) quarterly reporting, including reporting the jobs created under ARRA and grant expenditures for the two most recent quarters.

We conducted this performance audit in accordance with generally accepted government auditing standards which require that we plan and perform the audit to obtain sufficient and appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. Our objectives, scope, methodology, and criteria are more fully detailed in Appendix B.

Results in Brief

To aid in determining reasonableness, allowability, and allocability of costs, we obtained from NSF all awards for which costs were reported to NSF during the period of January 1, 2010, through December 31, 2012. This provided an audit universe of approximately \$379 million, in more than 318,000 transactions, across 1,033 individual NSF awards.

Of the \$379 million in the universe, our audit questioned \$1,863,351 of costs claimed on 97 NSF awards because UC Berkeley did not comply with federal and NSF award requirements. Specifically, we noted: \$1,608,944 in senior personnel salary, fringe benefits, and applicable overhead that exceeded NSF's two-month limit; \$[REDACTED] in unreasonable equipment charges; \$[REDACTED] in unallowable transactions; \$15,451 in unallowable meal expenditures; \$9,904 in unreasonable travel; \$6,997 in unsupported and unallocable immigration fees; and \$3,891 in purchases before the award effective date.

These questioned costs resulted in seven areas identified where UC Berkeley controls could be improved to ensure compliance with laws and regulations.

The universe of NSF ARRA-funded awards included approximately \$27 million of expenditures, in more than 24,000 transactions, across 63 NSF awards. Our review found that UC Berkeley properly accounted for and segregated NSF ARRA-funded awards in the accounting system. Additionally, the ARRA reports were reasonable, accurate, and timely. For the quarters ending September 30, 2012 and December 31, 2012, expenditures and jobs creation were verified without exception. The allowability of costs reported for these awards were tested in conjunction with the other NSF awards. We did question \$220,422 in expenditures for 7 ARRA awards related to charges in excess of the NSF two-month senior personnel limit.

UC Berkeley reviewed and agreed with the facts for \$23,763 in questioned costs: 1) [REDACTED] for unreasonable equipment charges; 2) \$[REDACTED] for unallowable transactions; and 3) \$13,247 for unallowable meal expenditures. The University did not agree with: 1) \$1,608,944 in senior personnel salary that exceeded the NSF limit; 2) \$[REDACTED] in unreasonable equipment charges that were not necessary or reasonable; 3) [REDACTED] in unallowable transactions; 4) \$2,204 in unallowable meal expenditures; 5) \$9,904 in unreasonable travel removed from the budget per NSF request; 6) \$6,997 in immigration fees that were unsupported or unallowable; and 7) \$3,891 in expenditures more than 90 days before the award start date that were not approved by NSF. The findings are outlined in our report and presented by award in Appendix C.

Findings and Recommendations

Finding 1 – Exceeded NSF Limits on Senior Salary

Our review of the accounting and reporting of NSF senior salary costs revealed that UC Berkeley does not adequately track/monitor senior personnel costs relative to the NSF two-month salary limit. Our review identified senior personnel whose salary exceeded the NSF two-month salary limit.

Per NSF grant terms and conditions, grantees are fully responsible for the adherence to NSF policies. One such condition relates to senior personnel. The NSF Award & Administrative Guide (AAG), Chapter V, Allowability of Cost, Section 1, Salaries, Wages, and Fringe Benefits, states “NSF normally limits salary compensation for senior project personnel on awards made by the Foundation, to no more than two months of their regular salary in any one year. This limit includes salary received from all NSF funded grants...any **compensation for such personnel in excess of two months must be disclosed in the proposal budget, justified in the budget justification, and must be specifically approved by NSF in the award notice.**”

From the payroll database provided by UC Berkeley, we extracted salary costs for employees appearing to exceed the two-month NSF senior salary limitation. We provided the list of potential salary overcharges to UC Berkeley for review. UC Berkeley’s Office of Contracts and Grants Accounting identified and excluded employees: 1) exempt from the two-month limit because they were Intergovernmental Personnel Act assignments (IPAs) representing employees detailed to the Foundation and remaining on UC Berkeley’s payroll while assigned to NSF; and 2) not senior personnel per the award documentation. UC Berkeley also reviewed and corrected the salary rates as necessary. After completing their review, UC Berkeley provided a final list of individuals exceeding the two-month limit totaling \$654,785, excluding applicable fringe benefits and overhead. However, UC Berkeley’s analysis improperly excluded research faculty.

Per the Grant Policy Guide (GPG) Exhibit II-7, senior personnel, defined by NSF as Principal Investigators (PIs), Co-PIs, or faculty, are jointly responsible for the direction of the project. These individuals, identified by UC Berkeley on the award budget, are the senior personnel responsible for the project and subject to the two-month salary limit. Therefore, the research faculty exempted by UC Berkeley were included, increasing the total questioned costs to \$940,757, apart from applicable fringe benefits and overhead (see Appendix C for detail by award).

Salary	Fringe Benefit	Overhead	Total Over
\$ 940,757	\$ [REDACTED]	\$ [REDACTED]	\$ 1,608,944

The following schedule shows the breakout of questioned costs by the number of months in excess of the NSF senior salary policy (see Appendix D for detail by instance).

Unallowable Months	Instances Over	Salary	Fringe Benefit	Overhead	Total Over
0 – 0.9	39	\$ 230,164	\$ [REDACTED]	\$ [REDACTED]	\$ 399,750
1 – 1.9	12	\$ 199,004	\$ [REDACTED]	\$ [REDACTED]	\$ 315,894
2 – 2.9	7	\$ 159,370	\$ [REDACTED]	\$ [REDACTED]	\$ 248,576
3 – 3.9	5	\$ 124,952	\$ [REDACTED]	\$ [REDACTED]	\$ 210,748
5 – Over	3	\$ 227,267	\$ [REDACTED]	\$ [REDACTED]	\$ 433,976
	66	\$ 940,757	\$ [REDACTED]	\$ [REDACTED]	\$ 1,608,944

The final list of individuals confirmed by UC Berkeley was examined, and the facts were verified with the award documentation and salary support.

These overcharges were due to a lack of effective monitoring caused by an over-reliance on rebudgeting authority. As a result, \$1,608,944 in salary, fringe benefits and overhead on 79 NSF awards is questioned. Had UC Berkeley effectively monitored their senior personnel salary costs, these overcharges would not have occurred. Without a process in place to ensure that senior personnel do not exceed the NSF two-month limit, there is the increased risk that funds may not be spent in accordance with NSF requirements.

UC Berkeley relied on an informal November 2010 Frequently Asked Questions (FAQ) document on Proposal Preparation and Award Administration which states, "NSF has not changed the terms and conditions or any of our post-award prior approval requirements. Therefore, under the normal rebudgeting authority, an awardee can internally approve an increase of salary after an award is made." However, the FAQ document is non-authoritative and contradicts the NSF requirement per the AAG which was in effect during the audit period. Therefore, we question the \$1,608,944 in overcharges that NSF did not approve.

UC Berkeley's administrative and management controls were not adequately designed to facilitate monitoring of senior personnel salary limits which resulted in unallowable costs.

Recommendation 1:

We recommend that the NSF's Director of the Division of Institution and Award Support (DIAS) address and resolve the following UC Berkeley recommendations:

- a. Work with NSF to resolve the \$1,608,944 of questioned costs; and
- b. Strengthen the administrative and management controls and processes for senior personnel to ensure NSF salary limits are not exceeded.

Awardee Comments:

PIs operating within the established policies of the grantee institution, should feel free to pursue interesting and important leads...or to adopt an alternative approach.... Similar flexibility is provided in the internal rebudget authority which authorizes the transfer of funds from one budget category to another for allowable expenditures. Prior approval is required if the PI will devote substantially less time to the project, but the section does not require consultation if the PI applies more effort or oversight to a project.

UC Berkeley was informed via email by the Head of the Policy Office in NSF's Division of Institution and Award Support that should an awardee wish to charge additional time and compensation to an NSF grant beyond the normal two-month threshold for senior personnel, the awardee may do so through their normal rebudgeting authority. The charges must still meet the Office of Management and Budget (OMB) Circular A-21 criteria for being reasonable, allocable and necessary, but if the A-21 criteria were met "*prior approval from NSF would not be required.*" (Emphasis added.)

In October 2008, when NSF published the 2009 version of the Proposal and Award Policies and Procedures Guide (NSF 09-1), NSF Policy Office representatives stated that "research faculty" (i.e., non-academic research scientists and similar individuals normally supported entirely by sponsored funding) would not be considered to be "Senior Personnel" in the context of the revised salary policy. Therefore, UC Berkeley believes these salaries were appropriately charged to the grants in question because they

were not subject to salary limitations in that they did not meet the definition of PI or Faculty Associate but did not have a better descriptor for a personnel category in part A or B of the Proposal Budget.

In light of this longstanding interpretation of its own AAG and the guidance from the NSF Policy Office, UC Berkeley believes it did not over-rely on any informal document but applied the AAG appropriately in accordance with interpretations that NSF has issued before, during, and after the audit period. These salary charges complied with NSF policy either through proposals requesting increased salary that were approved by NSF at the time of award or through a legitimate exercise of rebudgeting authority after NSF had issued the awards. In no instance did the auditors identify a project whose scope or objective had been changed by increased salary support for senior personnel. Therefore, UC Berkeley respectfully requests that the finding be withdrawn.

Auditor Comments:

UC Berkeley agreed that these individuals' salaries exceeded the NSF approved salary limit, but that excess was allowable per NSF policy. Per the November 2010 FAQ on Proposal Preparation and Award Administration (the applicable FAQ covering our audit period), NSF did not "change the terms and conditions or any of our post-award prior approval requirements. Therefore, under the normal rebudgeting authority, an awardee could internally approve an increase of salary after an award is made." However, the FAQ made no mention of the ability to disregard or violate the NSF AAG by extending rebudget authority to the two-month rule. Furthermore, informal communication in a FAQ does not supersede the official policy per the AAG.

The email comments referenced by the university specifically related to the subject of furloughed employees. The Head of the Policy Office in NSF's Division of Institution and Award Support stated in the email that they "understand that there has been some confusion regarding the previous NSF response regarding the California system-wide *furlough*. We're happy to provide clarification and we also will be informing NSF staff of the official Foundation policy on this issue so that PIs will receive a consistent response from NSF." As a result of this clarification, we did not question salaries exceeding the rule during the time of the furlough. However, because the email was sent to clarify approved actions during the furlough, the exception was not applied to all senior personnel.

Additionally, there is no NSF exception for research personnel. The research individuals questioned through this audit were all PIs, and in that capacity, are responsible for the overall direction of the award. In instances where research faculty (or any senior personnel) were approved by NSF to exceed the two-month limit, the approved number of months was used for the calculation of the allowed amounts. Therefore, the report finding remains as previously stated.

Finding 2 – Unreasonable Equipment Charges

We found that equipment expenses totaling \$ [REDACTED] charged to seven NSF awards were not necessary or reasonable in accordance with 2 Code of Federal Regulations (CFR) 220.

According to 2 CFR 220, Appendix A, Section C, to be allowable for a federal grant, a cost must be allocable to the federal award and be necessary and reasonable for the administration and performance of the award. Furthermore, Sections C.2 and C.3, state that a cost must be reasonable to be allowable and provide that a reasonable cost is one that a "prudent person" would have incurred under similar circumstances.

We questioned the purchase of a laser system costing \$ [REDACTED], because the purchase of this equipment was not included in the original grant application and was not allocable, reasonable or prudent. Specifically, because this purchase represents a significant reduction in the funds necessary to complete the proposed research tasks, we question whether a prudent person would have spent more than 33 percent of the total funding approved for the project on additional equipment.

With such a significant portion of the approved funding allocated to this equipment purchase we question whether UC Berkeley could accomplish the research project approved by NSF, thus potentially changing the scope of the funded research. Several criteria, including 2 CFR 215.25(c)(1); the matrix of prior approval requirements for Federal Demonstration Partnership (FDP) member institutions; and NSF's AAG, Chapter II, Section B.1.a, require prior approval for changes in the scope of a sponsored project. We found no evidence that UC Berkeley assessed the impact the reduction to the approved budget categories had on the scope and requested, or received NSF approval for the potential change in scope of the project.

We questioned \$ [REDACTED] for purchases of services or equipment, purchased near the award expiration, that did not appear to benefit the award or that did not appear necessary for the administration of the award. In many cases, the purchases appeared to be an attempt to use the remaining award funds prior to expiration. In some cases, the purchase appears to be general purpose computers not primarily or exclusively used in the actual conduct of the proposed research.

- \$ [REDACTED] for lab services delivered to the vendor March 14, 2011 (17 days before the award expired), on a five-year award that expired on March 31, 2011. The vendor experienced delays in completing the genome sequencing through April 2011 (30 days after the award expired);
- \$22,317 for the purchase of a [REDACTED] with 30 inch HD display purchased on December 1, 2009 on a five- year award that expired on June 30, 2010. The computer was only available for 12% of the grant life (211 out of 1,825 days);
- \$ [REDACTED] for the purchase of a laser system delivered on December 21, 2012 on an eighteen-month award that expired on December 31, 2012. The laser system was only available for 2% of the grant life (10 out of 548 days);
- \$14,893 for lab equipment purchased July 26, 2011 on an award that expired on August 31, 2011. This was the first and only year of NSF funding on a five-year project. Funding for subsequent years, contingent upon acceptable performance and available funds, was to be provided by the Department of Homeland Security;
- \$7,041 for a [REDACTED] and accessories that did not benefit the award. UC Berkeley agreed that these costs should be removed from the award; and
- \$6,915 for three [REDACTED] purchased on October 24, 2011 on a two-year award that expired January 31, 2012. The [REDACTED] were only available for 14% of the grant life (99 out of 730 days).

Recommendation 2:

We recommend that the NSF's Director of the DIAS address and resolve the following UC Berkeley recommendations:

- a. Work with NSF to resolve the \$ [REDACTED] of questioned costs.

Awardee Comments:

UC Berkeley believes that a majority of the questioned equipment costs were reasonable and necessary for the effective performance of the applicable NSF awards. Each purchase must be evaluated based on the particular facts and circumstances in order to confirm that the expenditures are necessary and reasonable for the administration and performance of the award, per 2 CFR 220, Section C.

UC Berkeley assigns the responsibility for identifying necessary and reasonable award expenditures, and for determining the appropriate allocation across activities to the PI who best understands the intended use of the equipment and allocation of use across sponsored and non-sponsored projects. It is the PI who, based on this specific knowledge, is uniquely positioned to determine how the equipment costs should be allocated.

Auditor Comments:

The university's response that the necessity and reasonableness of these expenditures is the prerogative of the PI does not provide adequate support as to how the purchases of services, computers, or equipment at the end of the awards were primarily or exclusively used in the actual conduct of the scientific research when a large percentage of the award periods had already lapsed. Therefore, the report finding remains as previously stated.

UC Berkeley concurs with the other items of this finding. Once NSF determines that the \$7,041 in questioned costs have been returned, this finding should be closed.

Finding 3 – Unreasonable or Unallowable Transactions

We questioned \$[REDACTED] in unreasonable Facilities and Administrative (F&A) costs, and \$[REDACTED] in unallowable office supplies, hotel stays, and gifts related to two NSF awards in accordance with 2 CFR 220.

According to 2 CFR 200.56, indirect (F&A) cost pools must be distributed to benefitted cost objectives on bases that will produce an equitable result in consideration of relative benefits derived.

Furthermore, according to 2 CFR 220, Appendix A,

- Section F.6.b(3), items such as office supplies, postage, local telephone costs, and memberships shall normally be treated as F&A costs;
- Section J.1.f(3) the cost of gifts is unallowable.

During our audit, we noted the following unallowable costs:

- \$[REDACTED] for F&A costs. UC Berkeley contributed \$44,000 for the sponsorship of three international conferences and charged NSF F&A costs; these flow-through funds did not benefit from the indirect costs charged and are therefore questioned;
- \$[REDACTED] for toner cartridges. UC Berkeley agreed that these costs should be removed from the award;
- \$[REDACTED] for [REDACTED] gift cards; and

- [REDACTED] charged to one award for a four night hotel stay; this amount was refunded to UC Berkeley, but the charges were not removed from the NSF award. UC Berkeley agreed that these costs should be removed from the award.

Recommendation 3:

We recommend that the NSF's Director of the DIAS address and resolve the following UC Berkeley recommendations:

- a. Work with NSF to resolve the \$[REDACTED] of questioned costs; and
- b. Strengthen the administrative and management controls and processes for reviewing and approving costs charged to NSF awards for donations and gifts.

Awardee Comments:

UC Berkeley's systems of control are designed to be effective and efficient, providing reasonable assurance of compliance. UC Berkeley assigns the responsibility for identifying necessary and reasonable award expenditures, and for determining the appropriate allocation across activities to the PI who best understands the intent of the expenditure and allocation of the use across sponsored and non-sponsored projects. UC Berkeley's "Policy on [REDACTED]" contains examples of what a "prudent person" test would be for determining if a cost is reasonable. This policy document also explains what items are normally treated as F&A costs, such as office supplies, postage, and local telephone calls, and that when "unlike circumstances" apply, these costs may be appropriate as direct charges to federal awards.

In accordance with OMB Circular A-21 and the Cost Principles for Institutions of Higher Education, UC Berkeley has established procedures for distributing F&A costs to projects by applying federally negotiated indirect cost rates to the allowable direct costs charged to projects (excluding those expenditure types not included in the [REDACTED] base). The expenditure type is not specifically excluded from [REDACTED] Costs, per federal regulations, and therefore indirect costs were applied to these charges by UC Berkeley's standard procedures.

We do acknowledge that isolated errors in two different areas for the total amount of \$[REDACTED] occurred and were overlooked by the originator and the reviewer. These errors, identified during the course of this audit, have been removed from the award. The revenue has been returned through the letter of credit and we believe no further financial resolution is required. We also acknowledge that we should maintain strong processes to verify all costs charged to sponsored awards are appropriate and will ensure processes provide for these controls.

Auditor Comments:

Similar to participant support costs, the circumstances surrounding the \$44,000 contribution was flow-through funding. UC Berkeley did not incur significant expense to administer the payment and it is not reasonable to charge F&A costs. The \$[REDACTED] in the report finding remains as previously stated.

For the [REDACTED] gift cards, these "recognition payments" were not supported in the proposal or budget justification. The report remains as previously stated as the cost of gifts is unallowable.

UC Berkeley concurs with the other items of this finding. UC Berkeley acknowledged that they should maintain strong processes and controls to verify all costs are appropriate. Once NSF ensures that the \$ [REDACTED] has been returned, this finding should be closed.

Finding 4: Unallowable or Unreasonable Meal Expenditures

We found that meal and alcohol expenses totaling \$15,451 charged to four NSF awards were not necessary or reasonable in accordance with 2 CFR 220.

According to 2 CFR 220, Appendix A, Section C, to be allowable for a federal grant, a cost must be allocable to the federal award and be necessary and reasonable for the administration and performance of the award. Additionally per Section J.3, the costs of alcoholic beverages are unallowable. Furthermore, Sections C.2 and C.3, state that a reasonable cost is one that a “prudent person would have incurred under similar circumstances.”

NSF AAG, Chapter V, Section C.5, Meetings and Conferences states, “NSF funds are not to be spent for meals or coffee breaks for intramural meetings of an organization or any of its components, including, but not limited to, laboratories, departments and centers...When certain meals are an integral and necessary part of a conference (e.g., working meals where business is transacted), grant funds may be used for such meals.”

During our audit we noted the following unallowable or unreasonable meal charges:

- \$10,418 charged to two awards for various unallowable alcohol related charges. UC Berkeley agreed that these costs should be removed from the awards;
- \$741 charged to one award for meals that were not an integral or necessary part of a conference. UC Berkeley agreed that these costs should be removed from the awards;
- \$2,204 charged to one award for four catered meals that were not included in the budget; and
- \$2,088 charged to one award to host a holiday dinner. UC Berkeley agreed that these costs should be removed from the award.

Recommendation 4:

We recommend that the NSF’s Director of the DIAS address and resolve the following UC Berkeley recommendations:

- a. Work with NSF to resolve the \$15,451 of questioned costs; and
- b. Strengthen the administrative and management controls and processes for reviewing and approving costs charged to NSF awards for meal and alcohol expenditures.

Awardee Comments:

UC Berkeley's systems of control are designed to be effective and efficient, providing reasonable assurance of compliance. UC Berkeley assigns the responsibility for identifying necessary and reasonable award expenditures, and for determining the appropriate allocation across activities to the PI who best understands the intent of the expenditure and allocation of the use across sponsored and non-sponsored projects. It is the PI who, based on this specific knowledge, is uniquely positioned to determine how the expenditure should be allocated.

UC Berkeley concurs that there were circumstances when alcohol and meal charges were inappropriately charged to sponsored awards. We will continue to provide regular training for departmental administrators and central staff to further educate our community on the limited allowability of meal charges and reinforce our processes to only charge allowable meal costs on sponsored projects. The \$2,088 has been removed from the award and returned it through the letter of credit, so, no further financial resolution is required. We will seek guidance from NSF on how to return the remaining \$11,159.

Auditor Comments:

The documentation provided for audit relative to the \$2,204 for catered meals does not support the explanation provided by the PI. The documentation addressed 4 days over a 7 day period, but the explanation stated that the charges were for a two-day conference. The \$2,204 remains as previously stated.

UC Berkeley concurs with the other items of this finding. UC Berkeley will continue to provide regular training to educate the community to ensure only allowable meal costs are charged to sponsored projects. Once NSF ensures that the \$11,159 has been returned, this finding should be closed.

Finding 5 – Unreasonable Travel

We found \$9,904 in unreasonable travel expenses related to two NSF awards. The original NSF award budgets for these two awards included travel; however, the NSF Program Office required budget reductions and the travel was eliminated.

According to 2 CFR 220, Appendix A, Section C, to be allowable for a federal grant, a cost must be allocable to the federal award and be necessary and reasonable for the administration and performance of the award. Furthermore, Appendix A, Sections C.2 and C.3, state that a cost must be reasonable to be allowable and provide that a reasonable cost is one that a “prudent person” would have incurred under similar circumstances.

- \$5,807 included 14 travel transactions that had been excluded from the budget in response to an NSF budget reduction request. UC Berkeley stated that “per the Research Terms and Conditions, NSF has waived the requirement for prior approval for rebudgeting among cost categories.” The PI was aware that the telescopes were located in northern California, but travel had been excluded from the budget by UC Berkeley to address the change in scope as a result of the NSF budget reduction. Therefore, it is unreasonable to charge the travel costs after the fact.
- \$4,097 included 11 travel transactions that had been excluded from the budget. Per the NSF requested budget revision, the PI stated “We have accepted the 28% cut suggested by NSF in recognition of limited funds available to NSF. In view of these cuts we have adjusted our plans for research by reducing the PIs summer salary allocation, removing one graduate student (1 year), trimming the materials and *travel support* requested....” Additionally, per the budget impact statement, the PI stated that, “UC Berkeley would seek outside funds to defray project-associated travel expenses.”

We are not questioning the rebudgeting authority of the University. We are questioning whether it was reasonable or prudent for the awardee to claim charges for items specifically requested and subsequently removed from the budget per NSF's budget reduction request.

Recommendation 5:

We recommend that the NSF's Director of the DIAS address and resolve the following UC Berkeley recommendations:

- a. Work with NSF to resolve the \$9,904 of questioned costs; and
- b. Strengthen the administrative and management controls and processes for reviewing and approving costs charged to NSF awards when the NSF Program Office requires budget reductions.

Awardee Comments:

We believe that UC Berkeley has adequate administrative and management controls and processes for reviewing and approving costs charged to NSF awards, including those circumstances where the originally proposed budget is reduced due to a lack of available funding. UC Berkeley contends that reducing a budget from that originally proposed to respond to NSF funding levels does not constitute an agreement between UC Berkeley and NSF that certain costs removed from the original budget will not be incurred during the course of the project. In those cases referenced during the review, the costs were not removed from the budget because they were deemed to be unreasonable, but in order to reduce the overall funding awarded due to limited NSF funding. UC Berkeley believes it is within our rebudgeting authority to determine if and when it is necessary to incur costs originally removed to respond to a budget reduction request.

Auditor Comments:

Removing or reducing a line item from the budget during pre-award is an acknowledgement that the change in scope eliminated the amount of travel necessary to successfully complete the project as proposed, and therefore; spending \$9,904 for travel was not prudent. The report finding remains as previously stated.

Finding 6 – Unsupportable and Unallocable Immigration Fees

We found \$6,997 charged to six NSF awards for unsupportable or unallocable immigration fees.

2 CFR 220, Appendix A, Section C.4 states a "...cost is allocable to a sponsored agreement if it is incurred solely to advance the work under the sponsored agreement; it benefits both the sponsored agreement and other work of the institution, in proportions that can be approximated through use of reasonable methods.... The recipient institution is responsible for ensuring that costs charged to a sponsored agreement are allowable, allocable, and reasonable under these cost principles." Section A states that "the accounting practices of individual colleges and universities must support the accumulation of costs as required by the principles, and must provide for adequate documentation to support costs charged to sponsored agreements."

During our audit we noted the following unsupportable or unallocable immigration fees:

- \$4,000 charged to three awards for immigration fees for visiting scholars at UC Berkeley that did not receive a salary or stipend. The University could not provide documentation that the visiting scholars' worked 100 percent on the NSF awards and that these costs should have been charged 100 percent to these awards accordingly; and
- \$2,997 charged to three awards for immigration fees that were not appropriately allocated based on employee effort reporting.

Recommendation 6:

We recommend that the NSF's Director of the DIAS address and resolve the following UC Berkeley recommendations:

- a. Work with NSF to resolve the \$6,997 of questioned costs; and
- b. Strengthen the administrative and management controls and processes for reviewing and approving immigration fees charged to NSF awards.

Awardee Comments:

We believe that UC Berkeley has adequate administrative and management controls and processes for reviewing and approving immigration fees charged to NSF awards and that costs can be allocable to awards based on certified effort reports or other means of verification. We will strengthen training efforts of PIs to emphasize that immigration fees must be allocated to awards in accordance with relative benefit received. We acknowledge that in some cases the immigration fees charged were not aligned with certified effort percentages and will adjust the charges to NSF awards accordingly. The immigration fees for the visiting scholars that did not receive compensation can also be allocated to the award if the individuals' work effort did indeed benefit that project, even if the individual did not receive salary (and therefore has not certified effort report). UC Berkeley will enhance our documentation requirements to ensure the appropriate allocation for immigration fees associated with individuals who do not receive a salary.

Auditor Comments:

We questioned fees charged to awards that were not appropriately allocated. Per UC Berkeley, "in some cases the immigration fees charged were not aligned with certified effort percentages" and will be adjusted accordingly. For the remaining fees, adequate documentation supporting the allocated charges was not provided for audit, and therefore, all costs remain questioned.

Finding 7 – Purchases Before Award Effective Date

We found \$3,891 related to one NSF award for the purchase of materials more than 90 days prior to the award effective date without NSF approval.

Per NSF AAG, Chapter V, Section 2.b, Pre-Award Costs, "(i) Grantees may incur allowable pre-award costs within the 90 day period immediately preceding the effective date of the grant providing: (a) the approval of pre-award spending is made and documented in accordance with the grantee's procedures; and (b) the advanced funding is necessary for the effective and economical conduct of the project. (ii)

Pre-award expenditures are made at the grantee's risk. Grantee authority to approve pre-award costs does not impose an obligation on NSF: (1) in the absence of appropriations; (2) if an award is not subsequently made; or (3) if an award is made for a lesser amount than the grantee anticipated. (iii) Requests for pre-award costs for periods exceeding 90 days must be submitted electronically via use of the Notification and Request module in FastLane. Pre-award expenditures prior to funding of an increment within a continuing grant are not subject to this limitation or approval requirement, but are subject to paragraph (ii) above."

During our audit we noted \$3,891 in helium recharges for May and April 2010 on an award that did not begin until October 2010. NSF approval had not been received; and therefore, the costs are questioned.

Recommendation 7:

We recommend that the NSF's Director of the DIAS address and resolve the following UC Berkeley recommendations:

- a. Work with NSF to resolve the \$3,891 of questioned costs; and
- b. Strengthen the administrative and management controls and processes for reviewing and approving costs charged to NSF awards that occurred more than 90 days before the award effective date.

Awardee Comments:

At UC Berkeley, research administrators review costs charged to federal awards on a monthly basis to ensure that costs are not incurred before the award effective date or more than ninety days before the award effective date if allowed under the terms and conditions of the award. This was an isolated administrative error due to confusion over the start of the performance period and UC Berkeley has submitted a request to NSF for pre-award spending authorization to allow the charges that were incurred before the 90-day pre-award spending period to the award.

Auditor Comments:

Per NSF guidance, purchases exceeding 90 days must be submitted electronically for NSF approval. No approval was received when the expenditure was incurred in June 2010, and therefore, costs remained questioned.

William Smith + Brown, PC

March 31, 2015

APPENDICES

AWARDEE RESPONSE

UNIVERSITY OF CALIFORNIA, BERKELEY

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March 2, 2015

Via E-mail and U.S. Mail

WithumSmith+Brown
8403 Colesville Road, Suite 340
Silver Spring, MD 20910

Re: Audit of National Science Foundation Awards – Awardee Response

Dear Sir or Madam:

This response is submitted on behalf of The Regents of the University of California for its Berkeley campus (UC Berkeley). Specifically, we are responding to the National Science Foundation Office of Inspector General (NSF-OIG) draft audit report entitled “University of California, Berkeley, Audit of Incurred Costs for National Science Foundation Awards for the Period January 1, 2010 to December 31, 2012.” Of the approximately \$379 million in NSF award expenditures reviewed, the auditors have questioned \$1,863,351 in costs. UC Berkeley, as described below and as supported by prior submissions to your firm, believes that all but \$23,673 is reasonable and allowable under NSF policies and the terms and conditions of the grants issued. To facilitate your review, we have provided a response to each finding.

Finding 1 – Exceeded NSF Limits on Senior Salary

The NSF-OIG has questioned \$1,608,944 in senior personnel salary costs, which it claims exceeded the two-month NSF senior salary limitation. In support of its position, NSF-OIG references section V.1 of the Award & Administrative Guide (AAG). That section describes NSF’s policy of requiring grantees who are requesting more than two months of salary for senior project personnel *at the time of the proposal* to include the request in the proposal budget, justify it in the budget justification, and obtain specific approval by NSF in the award notice. The NSF-OIG acknowledges in passing that NSF allows grantees to rebudget *after an award is made* and erroneously claims that “overcharges” by UC Berkeley were due to a lack of effective monitoring caused by “an over-reliance” on rebudgeting authority.

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Rebudgeting Authority

NSF recognizes that, *after an award is made* and in the course performing a research project, certain aspects of the project may change. Section II.B.1.b of the NSF AAG notes that a Principal Investigator/Project Director (PI/PD), operating within the established policies of the grantee institution, “should feel free to pursue interesting and important leads that may arise during the conduct of a research (or other grant-supported) project or to adopt an alternative approach which appears to be a more promising means of achieving the objectives of the project.” Of course, significant changes in methods or procedures are to be reported to the cognizant NSF Program Officer.

Similar flexibility is provided in the internal re-budgeting authority provided under AAG, section II.C.2.a:

If required in furtherance of the project, the grantee is authorized to transfer funds from one budget category to another for allowable expenditures. AAG Exhibit II-1, however, highlights certain budget changes that may require prior NSF approval.

AAG Exhibit II-1 requires NSF approval for a change in person-months devoted to the project and references AAG section II.B.2.e. That section states that “if the PI will devote *substantially less time to the project* than anticipated in the proposal” he or she should consult with the NSF Program Officer (emphasis added). The section does not require consultation if the PI applies *more* effort or oversight to a project.

The AAG has been further interpreted in NSF’s “Frequently Asked Questions (FAQs) On Proposal Preparation and Award Administration” (Updated January 14, 2013):

Must awardees request prior NSF approval if making a change post-award to the amount originally budgeted for senior personnel salary?

NSF has not changed the terms and conditions or any of our post-award prior approval requirements. See AAG Exhibit II-1. Therefore, under the normal rebudgeting authority, an awardee can internally approve an increase in person months devoted to the project after an award is made, *even if doing so results in salary support for senior personnel exceeding the 2 month salary rule. No prior approval from NSF is necessary.* The caveat is if the change would cause the objective or scope of the project to change, then the awardee would have to submit an approval request via FastLane. Since salary can amount to a large part of the budget, there may very well be a scope change with the addition of salary, especially if, for example, the PI decided not to hire a grad student in order to have enough money to cover the salary increase.

(Emphasis added.)

This is not a new interpretation of NSF Policy. On September 17, 2009, Jean Feldman, the Head of the Policy Office in NSF’s Division of Institution and Award Support, wrote to several directors of Contract and Grant offices in the University of California system. In response to a question about paying senior personnel salary in excess of the standard two months, Ms. Feldman stated “should an awardee wish to charge additional time and compensation to an NSF grant, beyond the normal two month threshold for senior personnel, the awardee may

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do so through their normal rebudgeting authorities.” She noted that the charges must still meet the OMB Circular A-21 criteria for being reasonable, allocable and necessary. But she also noted that, if the A-21 criteria were met, “*prior approval from NSF would not be required.*” (Emphasis added.)

Ms. Feldman also observed that the cognizant NSF Program Officer could be consulted about questions concerning additional senior personnel time. However, she concluded that “[t]he Foundation anticipates that in most cases the changes will fall under the awardee’s normal rebudgeting authority and therefore, prior approval from NSF will not be necessary.” We understand from prior communications from your firm that the OIG has asserted that the 2009 guidance somehow applied only to the unique circumstances of the State of California furloughs in effect at that time. The position is contradicted, however, by Ms. Feldman’s statements that the increases in salary could occur under the grantee’s *normal rebudgeting authority*. Moreover, NSF has restated these principles concerning grantee rebudgeting authority even though it had ample opportunity to change its policy position. In fact, as recently as the Grant Proposal Guide 15-1, published on December 26, 2014, in section II.C.2.g.(i)(a), NSF stated that prior approval for an increase in person months is not required where the objective or scope of the project has not changed.

In light of this longstanding interpretation of its own AAG and the guidance from the NSF Policy Office, Berkeley believes it did not over-rely on any informal document but applied the AAG appropriately in accordance with interpretations that NSF has issued before, during, and after the audit period.

Approved Senior Personnel Salaries

In 60 cases, UC Berkeley proposed more than two months of salary in the project budget and the projects and the associated budgets were approved by NSF. UC Berkeley does not believe that NSF issues awards that do not follow the policy requirements of its own AAG. Therefore, UC Berkeley believes that, where it has proposed such salaries and justified the expenses in the budget justification, it is entitled to rely on the judgment of the NSF in making the award. The NSF notice of award is the specific approval by the NSF of the salary request and such charges were made in compliance with the NSF AAG.

Definition of Senior Personnel

NSF has, for some time, addressed the characterization of non-faculty research scientists who are supported entirely from award funds. Such individuals include employees in the Professional Research series whose title might be “Research Physicist” or something similar and whose roles do not fit squarely within any of the definitions of categories of personnel described by NSF in Exhibit II-7 of the Grant Proposal Guide (GPG).

The GPG’s definition of “Senior Personnel” covers only Principal Investigators (PIs), co-PIs, and Faculty Associates. PIs and co-PIs are responsible for the scientific or technical direction of the project and Faculty Associates are defined as either faculty members from the performing institution or individuals who hold a faculty appointment at another institution. The Faculty Associates participate in the project being supported but do not qualify as PIs or co-PIs because they are not responsible for the scientific or technical direction of the project. GPG Exhibit II-7 defines “Other Personnel” to be Postdoctoral Scholars, Other Professional (such as physicians, veterinarians, and computer programmers), Graduate Students, Undergraduate Students, and other persons working on the project in a non-research capacity.

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In October 2008, when NSF published the 2009 version of the Proposal and Award Policies and Procedures Guide (NSF 09-1), NSF Policy Office representatives stated that “research faculty” (i.e., non-academic research scientists and similar individuals normally supported entirely by sponsored funding) would not be considered to be “Senior Personnel” in the context of the revised salary policy. They further noted that “research faculty” salaries regularly exceed the two-month period and are charged over the entire calendar (12-month) or academic (9-month) year.

In the case of 48 instances of salaries charged for greater than two months, these salaries were proposed for research scientists and were approved by NSF. Therefore, UC Berkeley believes these salaries were appropriately charged to the grants in question because they were approved by NSF through the notice of award. In the alternative, they were appropriately charged because they were not subject to salary limitations in that they did not meet the definition of PI or Faculty Associate but did not have a better descriptor for a personnel category in part A or B of the Proposal Budget.

Berkeley strongly disputes the conclusion that overcharges were due to a lack of effective monitoring caused by an over-reliance on rebudgeting authority. In over 1,000 instances reviewed by the auditors, Berkeley did not even charge more than two months of salary to the project. In 66 instances identified by the auditor, more than two months of salary were charged but these actions were taken in accordance with NSF policy. These salary charges complied with NSF policy either through proposals requesting increased salary that were approved by NSF at time of award or through a legitimate exercise of rebudgeting authority after NSF had issued the awards. In no instance did the auditors identify a project whose scope or objective had been changed by increased salary support for senior personnel. Therefore, UC Berkeley respectfully requests that the finding be withdrawn.

Finding 2 – Unreasonable Equipment Charges

The NSF-OIG questioned equipment expenses totaling \$ [REDACTED] charged to five NSF awards which it claimed were not necessary or reasonable.

Recommendation 2:

Work with NSF to resolve the \$ [REDACTED] of questioned costs.

Awardee Response:

UC Berkeley believes that a majority of the questioned equipment costs were reasonable and necessary for the effective performance of the applicable NSF awards. We understand that the audit sample comprised primarily equipment purchases that occurred toward the end of the award period. While identifying and reviewing these transactions is a widely-accepted audit technique, there are often valid programmatic needs for equipment purchases late in an award period. Each purchase must be evaluated based on the particular facts and circumstances in order to confirm that the expenditures are necessary and reasonable for the administration and performance of the award, per 2 CFR 220, Section C.

UC Berkeley assigns the responsibility for identifying necessary and reasonable award expenditures, and for determining the appropriate allocation across activities to the Principal Investigator (PI) who best understands the intended use of the equipment and allocation of use across sponsored and non-sponsored projects. It is the

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PI who, based on this specific knowledge, is uniquely positioned to determine how the equipment costs should be allocated.

It is the PI who is responsible for identifying when changes in the award spending plan represent a change in scope. If and when a change of scope may result from a change in the spending plan, UC Berkeley will work with our PIs to obtain the necessary prior approvals from sponsoring agencies. UC Berkeley has written guidance on when it is necessary to submit a revised statement of work to the sponsor and how that revised statement of work should be submitted.

Further, UC Berkeley has procedures in place to review large equipment purchases made at the end of the award period. The procedures require that the award document be included with the requisition of all equipment acquisitions and an internal verification is performed of the award end date, type of award, and that there is no general purpose equipment is being requested, unless approved by the sponsoring agency. Departmental research administrators supporting the PIs review requests for equipment purchases late in the award period to ensure appropriateness and late equipment charges are also reviewed by central office personnel during award close-out.

In conclusion, we believe that UC Berkeley has the appropriate controls to verify large expenditures made at the end of an award are in compliance with federal requirements and that the charges questioned within this section were assessed by the PIs and research administrators to be a reasonable and necessary purchase and not to represent a change in scope (therefore not requiring NSF prior approval.) To specifically support this conclusion, UC Berkeley requested that each investigator and his/her support staff provide the detailed justification for why those costs questioned by this audit did indeed benefit the referenced project and why these costs were necessary for the performance of the award. Summary justifications for the late equipment purchases and charging allocations were provided directly to the auditors and we believe this supplemental detail supports the reasonableness and allowability of those charges.

Finding 3 - Unreasonable or Unallowable Transactions

The NSF-OIG questioned \$[REDACTED] in F&A costs and \$[REDACTED] in office supplies, hotel stays, and gifts related to two NSF awards in which it considered unreasonable or unallowable.

Recommendation 3:

- a. Work with NSF to resolve the \$[REDACTED] of questioned costs; and
- b. Strengthen the administrative and management controls and processes for reviewing and approving costs charged to NSF awards for donations.

Awardee Response:

UC Berkeley's systems of control are designed to be effective and efficient, providing reasonable assurance of compliance. UC Berkeley assigns the responsibility for identifying necessary and reasonable award expenditures, and for determining the appropriate allocation across activities to the PI who best understands the intent of the expenditure and allocation of the use across sponsored and non-sponsored projects. It is the PI who, based on this specific knowledge, is uniquely positioned to determine how costs should be allocated. UC Berkeley's "Policy on Cost Principles for Sponsored Agreements" contains examples of what a "prudent

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person” test would be for determining if a cost is reasonable. This policy document also explains what items are normally treated as F&A, such as office supplies, postage, and local telephone calls, and that when “unlike circumstances” apply, these costs may be appropriate as direct charges to federal awards.

In accordance with OMB Circular A-21 and the Cost Principles for Institutions of Higher Education, UC Berkeley has established procedures for distributing F&A costs to projects by applying federally negotiated indirect cost rates to the allowable direct costs charged to projects (excluding those expenditure types not included in the [REDACTED] base). The sponsorships and participation incentives (gift cards) questioned within this section are not in line with the definition of gifts as referenced in 2 CFR 220 as they were “incidental recognition payments” related to an annual conference or incentive payments/awards encouraging participating in grant-specific activities. Further, these expenditures types are not specifically excluded from [REDACTED] Costs, per federal regulations, and therefore indirect costs were applied to these charges by UC Berkeley’s standard procedures.

We do acknowledge that isolated errors in two different areas for the total amount of \$3,475 occurred and were overlooked by the originator and the reviewer. These errors, identified during the course of this audit, have been removed from the award. The revenue has been returned through the letter of credit and we believe no further financial resolution is required. We also acknowledge that we should maintain strong processes to verify all costs charged to sponsored awards are appropriate and will ensure processes provide for these controls.

In general, we believe UC Berkeley has the appropriate controls for identifying reviewing and approving costs charged to NSF awards to ensure allowability, including those that *may appear* to represent donations and gifts. In these cases, the expenditures do not represent donations and gifts as defined by OMB Circular A-21 and were incurred in accordance with our standard, compliant processes and procedures. Summary justifications for the transactions were provided directly to the auditors and we believe this supplemental detail supports the allowability of those charges.

Finding 4 – Unallowable or Unreasonable Meal Expenditures

The NSF-OIG questioned \$15,451 in meal and alcohol expenses charged to four NSF awards that it considered not necessary or reasonable.

Recommendation 4:

- a. Work with NSF to resolve the \$15,451 of questioned costs; and
- b. Strengthen the administrative and management controls and processes for reviewing and approving costs charged to NSF awards for meals and alcohol expenses.

Awardee Response:

UC Berkeley’s systems of control are designed to be effective and efficient, providing reasonable assurance of compliance. UC Berkeley assigns the responsibility for identifying necessary and reasonable award expenditures, and for determining the appropriate allocation across activities to the PI who best understands the intent of the expenditure and allocation of the use across sponsored and non-sponsored projects. It is the PI

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who, based on this specific knowledge, is uniquely positioned to determine how the expenditure should be allocated.

Regarding the charges for four catered meals, \$10,000 per year in funding was clearly requested in the budget to host cross-disciplinary events to allow students to interact with people in closely related disciplines, while providing professional development opportunities. These requested funds were approved by NSF and a portion utilized to provide meals during a conference aligned with the purpose of the project.

UC Berkeley concurs that there were circumstances when alcohol and meal charges were inappropriately charged to sponsored awards. We will continue to provide regular training for departmental administrators and central staff to further educate our community on the limited allowability of meal charges and reinforce our processes to only charge allowable meal costs on sponsored projects. The \$2,088 has been removed from the award and returned it through the letter of credit, so, no further financial resolution is required. We will seek guidance from NSF on how to return the remaining \$11,159.

Summary justification for the transaction in which UC Berkeley did not concur was provided directly to the auditors and we believe this supplemental detail supports the allowability of those charges.

Finding 5 – Unreasonable Travel

The NSF-OIG questioned \$9,904 in travel expenses related to two NSF awards in which it considered unreasonable.

Recommendation 5:

- a. Work with NSF to resolve the \$9,904 of questioned costs;
- b. Strengthen the administrative and management controls and processes for reviewing and approving costs charged to NSF awards when the NSF Program Office required budget reductions.

Awardee Response:

We believe that UC Berkeley has adequate administrative and management controls and processes for reviewing and approving costs charged to NSF awards, including those circumstances where the originally proposed budget is reduced due to a lack of available funding. UC Berkeley contends that reducing a budget from that originally proposed to respond to NSF funding levels does not constitute an agreement between UC Berkeley and NSF that certain costs removed from the original budget will not be incurred during the course of the project. In those cases referenced during the review, the costs were not removed from the budget because they were deemed to be unreasonable, but in order to reduce the overall funding awarded due to limited NSF funding. UC Berkeley believes it is within our rebudgeting authority to determine if and when it is necessary to incur costs originally removed to respond to a budget reduction request.

UC Berkeley assigns the responsibility for identifying necessary and reasonable award expenditures to the PI who best understands the scope of the project and activities necessary to ensure the work is successfully completed.

In the two instances identified by the auditors, the PIs determined that the travel was necessary and prudent to accomplish the program goals and were acting within their rebudgeting authority when incurring those costs.

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Summary justifications for the transactions in which UC Berkeley did not concur were provided to the auditors and we believe that this supplemental detail supports the allowability of those charges.

Finding 6 – Unsupportable and Unallocable Immigration Fees

The NSF-OIG questioned \$6,997 in immigration fees charged to six NSF awards that it considered unsupportable or unallocable.

Recommendation 6:

- a. Work with NSF to resolve the \$6,997 of questioned costs;
- b. Strengthen the administrative and management controls and processes for reviewing and approving immigration fees charged to NSF awards.

Awardee Response:

UC Berkeley's systems of controls are designed to be effective and efficient, providing reasonable assurance of compliance. UC Berkeley assigns the responsibility for identifying necessary and reasonable award expenditures to the PI who best understands the scope of the project and activities necessary to ensure the work is completed. It is the PI who, based on this specific knowledge, is uniquely positioned to determine how the awarded funds should be allocated. UC Berkeley's "Policy on Cost Principles for Sponsored Agreements" contains examples of what a "prudent person" test would be for determining if a cost is reasonable.

We believe that UC Berkeley has adequate administrative and management controls and processes for reviewing and approving immigration fees charged to NSF awards and that costs can be allocable to awards based on certified effort reports or other means of verification. We will strengthen training efforts of PIs to emphasize that immigration fees must be allocated to awards in accordance with relative benefit received. We acknowledge that in some cases the immigration fees charged were not aligned with certified effort percentages and will adjust the charges to NSF awards accordingly. The immigration fees for the visiting scholars that did not receive compensation can also be allocated to the award if the individuals' work effort did indeed benefit that project, even if the individual did not receive salary (and therefore has not certified effort report). UCB will enhance our documentation requirements to ensure the appropriate allocation for immigration fees associated with individuals who do not receive a salary.

UC Berkeley will develop additional guidance and provide training for PIs, departmental administrators, and central staff under the revised 2 CFR 200 and current NSF policy to ensure that all immigration fees are supportable and allocable.

Finding 7 – Purchases Before Award Start Date

The NSF-OIG questioned \$3,891 related to one award for the purchase of materials more than 90 days prior to the effective date without NSF approval.

Recommendation 7:

- a. Work with NSF to resolve the \$3,891 of questioned costs; and

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- b. Strengthen the administrative and management controls and processes for reviewing and approving costs charged to NSF awards that occurred more than 90 days before the award effective date.

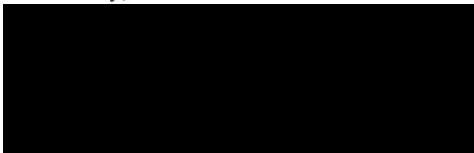
Awardee Response:

UC Berkeley's systems of controls are designed to be effective and efficient, providing reasonable assurance of compliance. We believe that UC Berkeley has adequate administrative and management controls and processes for reviewing and approving costs charged to NSF awards that occurred more than ninety days before the award effective date as only one out of more than 318,000 transactions reviewed was identified as being in non-compliance with this federal requirement.

At UC Berkeley, research administrators review costs charged to federal awards on a monthly basis to ensure that costs are not incurred before the award effective date or more than ninety days before the award effective date if allowed under the terms and conditions of the award. This was an isolated administrative error due to confusion over the start of the performance period and UCB has submitted a request to NSF for pre-award spending authorization to allow the charges that were incurred before the 90-day pre-award spending period to the award.

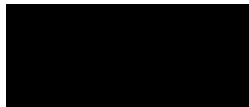
Thank you for your consideration of the information provided above.

Sincerely,



Assistant Vice Chancellor
Research Administration and Compliance

cc:



OBJECTIVES, SCOPE, AND METHODOLOGY

Our audit included assessing the allowability, allocability and reasonableness of costs claimed by UC Berkeley on the quarterly Federal Financial Reports (FFR) for the three-year period beginning January 1, 2010 through December 31, 2012. We also reviewed the accuracy, reasonableness, and timeliness of UC Berkeley's ARRA reporting.

The audit was performed in accordance with *Government Auditing Standards* for performance audits. The audit objectives were to:

1. Identify and report on instances of unallowable, unallocable, and unreasonable costs from the transactions tested;
2. Identify and report on instances of noncompliance with regulations, federal financial assistance requirements (e.g. Office of Management and Budget Circulars), and the provisions of the NSF award agreements as relates to the transactions tested; and
3. Determine the reasonableness, accuracy, and timeliness of the awardee's ARRA quarterly reporting, including reporting of jobs created under ARRA and grant expenditures for the two most recent quarters.

To accomplish our objectives, we reviewed UC Berkeley's policies, procedures, and systems, and interviewed appropriate UC Berkeley personnel responsible for establishing and implementing control policies, procedures, and systems. We assessed the reasonableness, accuracy, and timeliness of the awardee's ARRA quarterly reporting, including reporting of jobs created under ARRA and grant expenditures for the two most recent quarters, by (1) recomputing the number of jobs created or retained in compliance with OMB Memorandum M-10-08, *Updated Guidance on the American Recovery and Reinvestment Act – Data Quality, Non-Reporting Recipients, and Reporting of Job Estimates*; (2) reconciled expenditures per the general ledger to the ARRA expenditures; and (3) reviewed the ARRA reporting submission dates.

To aid in determining reasonableness, allowability, and allocability of costs, we obtained from NSF all awards for which costs were reported to NSF during the period of January 1, 2010, through December 31, 2012. This provided an audit universe of approximately \$379 million, in more than 318,000 transactions, across 1,033 individual NSF awards and an NSF ARRA universe of approximately \$27 million, in more than 24,000 transactions, across 63 NSF awards.

Our work required reliance on computer-processed data obtained from UC Berkeley and NSF. At our request, UC Berkeley provided detailed transaction data for all costs charged to NSF awards during our audit period. We also obtained award data directly from NSF which was collected by directly accessing NSF's various data systems. To select transactions for further review, we designed and performed automated tests of UC Berkeley and NSF data to identify areas of risk and conducted detailed reviews of transactions in those areas.

We assessed the reliability of the data provided by UC Berkeley by: (1) comparing costs charged to NSF award accounts within UC Berkeley's accounting records to reported net expenditures, as reflected in UC Berkeley's quarterly financial reports submitted to NSF for the corresponding periods; (2) performing general ledger to sub-ledger reconciliations of accounting data; and (3) reviewing and testing the parameters UC Berkeley used to extract transaction data from its accounting records and systems.

OBJECTIVES, SCOPE, AND METHODOLOGY

Based on our testing, we found UC Berkeley computer-processed data sufficiently reliable for the purposes of this audit. We did not review or test whether the data contained in, or controls over, NSF's databases were accurate or reliable; however the independent auditors' report on NSF's financial statements for fiscal years 2010 and 2011 found no reportable instances in which NSF's financial management systems did not substantially comply with applicable requirements.

In assessing the allowability of costs reported to NSF by UC Berkeley, we also gained an understanding of the internal controls applicable to the scope of this audit through interviews with UC Berkeley staff, review of policies and procedures, and conducting walkthroughs as applicable and reviews.

We assessed UC Berkeley's compliance with the University's internal policies and procedures, as well as the following:

- Government Auditing Standards (2011 version);
- Public Law 111-5, *American Recovery and Reinvestment Act of 2009*;
- Office of Management and Budget (OMB) Circular A-21, *Cost Principles for Educational Institutions* (2 C.F.R., Part 220);
- OMB Circular A-110, *Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations* (2 C.F.R., Part 215);
- OMB Memorandum M-10-08, *Updated Guidance on the American Recovery and Reinvestment Act – Data Quality, Non-Reporting Recipients, and Reporting of Job Estimates*;
- NSF Proposal and Award Policies and Procedures Guide, Part II: Award and Administration Guide;
- NSF Award Specific Terms and Conditions; and
- NSF Federal Demonstration Partnership Terms and Conditions.

The remaining attachments contain non-public material and are not posted.