

Performance Audit of Incurred Costs – University of Kansas Center for Research

REPORT PREPARED BY WITHUMSMITH+BROWN, PC

NATIONAL SCIENCE FOUNDATION
OFFICE OF INSPECTOR GENERAL

October 19, 2017
OIG 18-1-001





AT A GLANCE

Performance Audit of Incurred Costs – University of Kansas Center for Research

Report No. OIG 18-1-001

October 19, 2017

AUDIT OBJECTIVE

The National Science Foundation Office of Inspector General engaged WithumSmith+Brown, PC (WSB) to conduct a performance audit of incurred costs at the University of Kansas Center for Research (KUCR) for the period October 1, 2011, to September 30, 2014. The audit encompassed more than \$72 million comprising all costs claimed to NSF. The objective of the audit was to determine if costs claimed by KUCR during this period were allocable, allowable, reasonable, and in conformity with NSF and Federal financial assistance requirements. WSB is responsible for the attached auditor's report and the conclusions expressed in this report. NSF OIG does not express any opinion on the conclusions presented in WSB's audit report.

AUDIT RESULTS

Costs KUCR charged to its NSF-sponsored agreements did not always comply with Federal and NSF award requirements. The auditors questioned \$329,049 of costs claimed by KUCR during the audit period. Specifically, the auditors found \$172,030 in unreasonable equipment expenditures; \$91,484 in unreasonable travel; \$42,054 in inadequate documentation; \$13,047 related to an improper Award Cash Management Service (ACM\$) reimbursement request; \$8,838 in unreasonable transactions; and \$1,596 for purchases prior to the award effective date without NSF approval.

RECOMMENDATIONS

The auditors included six findings in the report with associated recommendations for NSF to resolve the questioned costs and to ensure KUCR strengthens administrative and management controls.

AUDITEE RESPONSE

KUCR agreed with the majority of the findings in the report. KUCR also contends that some of the costs within the findings are allowable and disagreed with the auditors' conclusions. After taking KUCR's comments into consideration, the auditors continue to question the costs and left the findings unchanged. KUCR's response is attached in its entirety to the report as Appendix A.

FOR FURTHER INFORMATION, CONTACT US AT (703) 292-7100 OR OIG@NSF.GOV.



NATIONAL SCIENCE FOUNDATION OFFICE OF INSPECTOR GENERAL

MEMORANDUM

TO: Dale Bell
Director
Division of Institution and Award Support

Jamie French
Director
Division of Grants and Agreements

FROM: Mark Bell 
Assistant Inspector General
Office of Audits

DATE: October 19, 2017

SUBJECT: Audit Report No. 18-1-001, University of Kansas Center for Research

This memo transmits the WithumSmith+Brown, PC (WSB) report for the audit of costs totaling approximately \$72 million charged by the University of Kansas Center for Research (KUCR) to its sponsored agreements with the National Science Foundation (NSF) during the period October 1, 2011, to September 30, 2014. The objective of the audit was to determine if costs claimed by KUCR during this period were allocable, allowable, reasonable, and in conformity with NSF and Federal financial assistance requirements.

Please coordinate with our office during the 6-month resolution period, as specified by Office of Management and Budget 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 monitoring responsibilities, 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, 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.



NATIONAL SCIENCE FOUNDATION OFFICE OF INSPECTOR GENERAL

We thank your staff for the assistance that was extended to the auditors during this audit. If you have any questions regarding this report, please contact Billy McCain at 703-292-7100.

Attachment

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University of Kansas Center for Research

Audit of Incurred Costs

**National Science Foundation
Office of Inspector General**

October 18, 2017

OIG 18-1-001

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Abbreviations

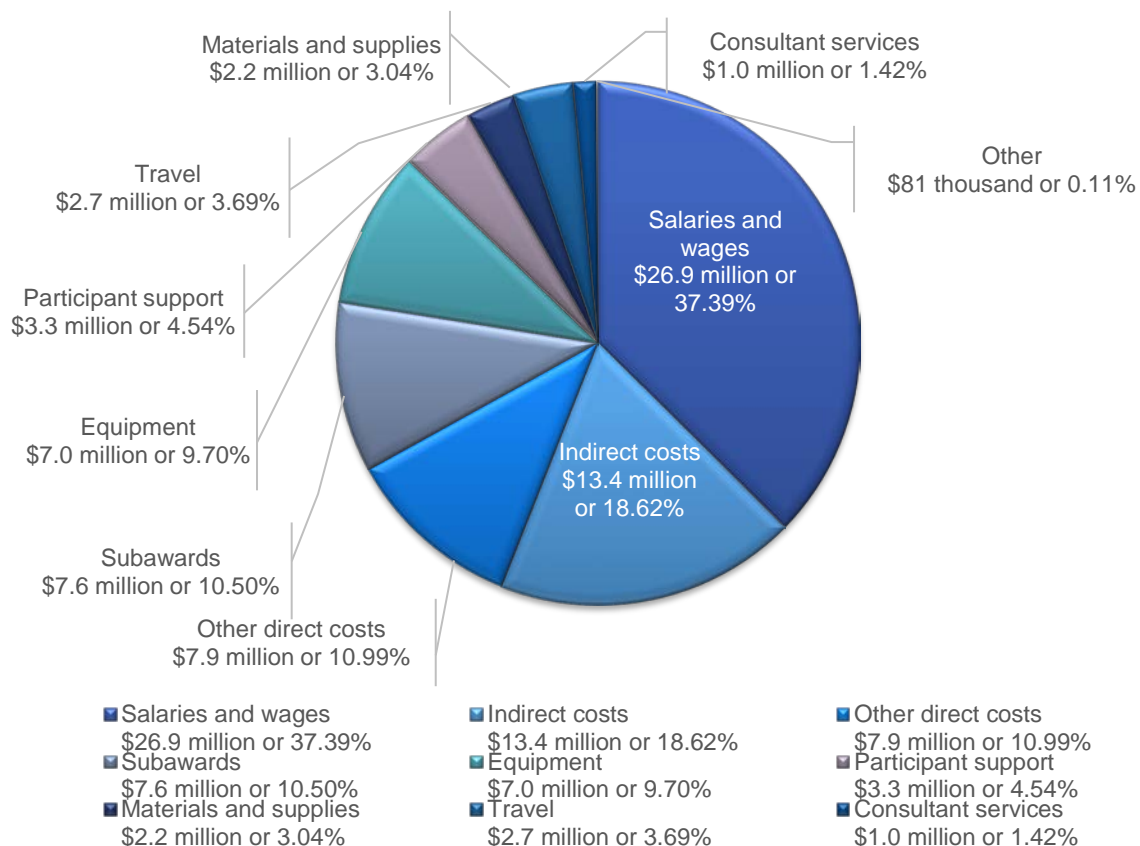
AAG	Award and Administration Guide
ACM\$	Award Cash Management Service
CFR	Code of Federal Regulations
DIAS	Division of Institution and Award Support
F&A	Facilities and Administrative Costs
GPG	NSF Grant Proposal Guide
KUCR	University of Kansas Center for Research
NSF	National Science Foundation
OIG	Office of Inspector General
PI	Principal Investigator

Background

The National Science Foundation (NSF) is an independent Federal agency created “to promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense.” NSF 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.

NSF grantees must follow Federal and NSF grant regulations and guidance in administering NSF awards. The University of Kansas Center for Research (KUCR) is a not-for-profit research foundation that helps research investigators by providing research compliance oversight and managing the financial services. KUCR is an NSF grant recipient that received more than \$192 million of Federal awards in fiscal year 2014. As illustrated in Figure 1, between October 1, 2011, and September 30, 2014, KUCR claimed approximately \$72 million of costs across 289 NSF awards. An analysis of these costs claimed by budget category, based on the accounting data provided by KUCR, is portrayed in Figure 1.

Figure 1: Costs Claimed by NSF Budget Category, October 1, 2011 to September 30, 2014



Source: Auditor summary of accounting data provided by KUCR

Results of Audit

WithumSmith+Brown, under contract with NSF OIG, audited the costs claimed by KUCR on NSF awards for the period beginning October 1, 2011, and ending September 30, 2014. In our testing of 250 judgmentally selected transactions and 3 non-transaction based tests, we identified 33 transactions with a total \$329,049 of questioned costs charged to 19 NSF awards. Six areas where improved oversight is needed to ensure costs claimed are reasonable and necessary in accordance with Federal and NSF award requirements include: 1) \$172,030 in unreasonable equipment expenditures; 2) \$91,484 in unreasonable travel; 3) \$42,054 in inadequate documentation; 4) \$13,047 related to an improper Award Cash Management Service (ACM\$) reimbursement request; 5) \$8,838 in unreasonable transactions; and 6) \$1,596 for purchases prior to the award effective date without NSF approval. A schedule of questioned costs by award is included in Appendix C.

Finding 1: Unreasonable Equipment

We found KUCR made purchases near the end of award periods for items that did not appear reasonable or necessary to the awards charged.

Funding Issues

We questioned \$135,071 charged to one NSF award for 40 percent of the purchase of a microscope.

During the NSF report acceptance process for the 2nd Annual Report, the NSF Program Officer went to great lengths to get the report accepted due to the extent of unspent award funds. Per KUCR, the large amount of unspent money would have an adverse effect on NSF backing levels by reducing future total funding. Although it was not the normal policy or procedure at KUCR, it was suggested by the NSF Program Officer that KUCR overspend the equipment budget by making purchases that would exceed the original project budget. Per the documentation provided, the method to complete the purchases was not in place, but KUCR decided it should identify projects lagging in spending and temporarily redistribute funding to the projects that were in need of equipment.

Per the University, the key of this process was to intentionally over-spend, as a strategy to decrease the unspent funds. To accomplish the equipment purchase, the Principal Investigator (PI) moved money between projects.

This individual purchase exceeded the original equipment budget of \$55,000 by more than 145 percent. For a cost to be allowable, it must be reasonable. A major consideration for determining the reasonableness of a cost is whether the individuals concerned acted with due prudence, and the extent to which the actions taken with respect to incurring the cost are consistent with established

institutional policies and practices.¹ Making spending decisions based on the possibility of reduced funding is not reasonable, prudent, or consistent with existing policies. Additionally, KUCR did not provide any documentation to support the allocation methodology² for charging 40 percent of the cost of the microscope to the NSF award, and, therefore, we question the \$135,071 charged to this award for 40 percent of the purchase of this microscope.

Equipment and Materials Purchased at the End of the Award

We identified two transactions, charged to two awards, totaling \$34,017 where the purchase of equipment and materials near the end of the award did not appear to benefit the NSF award charged as described in Table 3.

Table 3. Description of Questioned Transactions Purchased Near Award Expiration

Description	Invoice Amount	F&A	Total Questioned	Days Remaining in Award
Diode Laser Drive and Heads	\$ 29,600	\$ --	\$ 29,600	48
Data Loggers and Software Upgrade	3,067	1,350	4,417	10
Total	\$ 32,667	\$ 1,350	\$ 34,017	

Source: Auditor analysis of questioned transactions

We questioned the \$34,017 on two multi-year awards for various types of electronics purchased near the award expiration. These purchases were not reasonable or necessary considering the limited time remaining on the awards. Additionally, in both cases, the purchases were charged 100 percent to the NSF award, when the award received little, if any, benefit. The late purchase date leads us to believe that the purchases were not necessary, reasonable, or prudent for the administration of the award.³

The two questioned items include:

- \$29,600 for the purchase of a diode laser drive and laser heads received on June 13, 2011, on an award that expired July 31, 2011. The laser was available for 3 percent of the award period (48 out of 1,460 days). Per the no-cost extension, submitted July 29, 2010, most of the goals of the project had already been reached. With the extension, KUCR was working

¹ According to 2 CFR 220, Appendix A, C.3, a cost may be considered reasonable if the nature of the goods or services acquired, and the amount involved therefore, reflect the action that a prudent person would have taken under the circumstances prevailing at the time the decision to incur the cost was made.

² 2 CFR 220, Appendix A, Section A.2.e. 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.”

³ 2 CFR 220, Appendix A, C.2. and C.3 states that costs “must be reasonable; they must be allocable to sponsored agreements.... A cost may be considered reasonable if the nature of the goods or services acquired or applied, and the amount involved therefore, reflect the action that a prudent person would have taken under the circumstances prevailing at the time the decision to incur the cost was made. Major considerations involved in the determination of the reasonableness of a cost are: whether or not the cost is of a type generally recognized as necessary for the operation of the institution or the performance of the sponsored agreement....”

on manuscripts and on the last set of experiments. The funds were to be used to support that effort, including supplies, graduate-student support, and travel to meetings to report results. KUCR acknowledged that there was minimal time remaining on the project, but per the PI, the NSF-sponsored project benefitted from the laser and this fact was used to allocate the cost to the NSF award. However, it is not reasonable that nearly 7 percent of the cumulative award budget was spent on equipment, not included in the budget, with only 3 percent of the award period remaining.

- \$4,417 for the purchase of a software upgrade and 2 data loggers purchased on July 21, 2011, on a 9-year award that expired July 31, 2011. The data loggers and software were available for 0.3 percent of the award period (10 out of 3,272 days). Per the cost principles, the allocation of a cost must be proportionate to the actual benefit received.⁴ KUCR acknowledges that there was minimal time remaining on the project, but per the PI, the NSF-sponsored project and its outcomes benefitted from the software and this fact was used to allocate the cost to the NSF award. KUCR acknowledges that the data loggers and software had a useful life beyond the project end date, but the immediate need and benefit was directly associated with this project, and the charge was allocated according to the relative benefit received. However, it is not reasonable the data loggers were charged to this award with 0.3 percent of the award period remaining.

Materials Not Properly Allocated

We found that KUCR improperly allocated the purchase of an ignition box totaling \$2,942. The purchase of the ignition box was transferred to the NSF award without adequately documenting the benefit to the award.⁵ Per the transfer request, the entry was posted to correct a multi-project expenditure that should have been split when it was originally charged. The transfer request stated that the transaction was posted to correct the recording error when the error was identified, and KUCR will ensure better communication to eliminate similar errors from occurring in the future. However, when providing the documentation for audit, KUCR determined that the cost should not have been allocated to this award and will process a refund to return the funds to NSF.

KUCR personnel did not adequately review the expenditures charged to the NSF awards, which resulted in unreasonable equipment costs. Without a process in place to ensure costs are reasonable and allowable, there is the increased risk that funds may not be used as required to accomplish the necessary project objectives in accordance with Federal and NSF requirements.

⁴ According to 2 CFR 220, Appendix A, C.4, “[a] cost is allocable to a particular cost objective...if the goods or services involved are chargeable or assignable to such cost objective in accordance with relative benefits received or other equitable relationship.”

⁵ 2 CFR 220, Appendix A, Section B.3 defines “allocation” as “the process of assigning a cost, or a group of costs to one or more cost objective, in reasonable and realistic proportion to the benefit provided or other equitable relationship.” Per Section C.4.a, “A cost is allocable to a particular cost objective (i.e., a specific function, project, sponsored agreement, department, or the like) if the goods or services involved are chargeable or assignable to such cost objective in accordance with relative benefits received or other equitable relationship. Subject to the foregoing, 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...”

KUCR indicated that it has performed corrective actions to remove \$2,942 in unreasonable and unallowable costs from the award in question, leaving \$169,088 unresolved. NSF, during the audit resolution process, should ensure that the awards have been credited as appropriate.

Recommendations

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

1. Resolve the \$169,088 of questioned costs and ensure the \$2,942 of questioned costs has been removed from the NSF award.
2. Strengthen the administrative and management controls and processes over expenditures near the end of an award and allocation of equipment.

Summary of Awardee Response

Funding Issues

KUCR does not agree with the questioned costs totaling \$135,071 for the purchase of a microscope. KUCR believes the purchase was reasonable and consistent with a prudent person's actions, and is an allowable and allocable cost. KUCR agreed that overspending on a project is not consistent with KUCR's standard process. However, the purchase was appropriate and reasonable in this case, because it was necessary for the performance of the award. Due to the unique circumstance, KUCR sought guidance from NSF and the purchase of the microscope was then directed by the NSF Program Officer. The award is a state-wide EPSCoR award, and the guidance provided by the Program Officer was specific to the management of this large, multi-project award related to clear underspending on some sub-projects. KUCR stated that 40 percent of the equipment was purchased with NSF-sponsored funds, and the other 60 percent was purchased with institutional commitments (cost share) to support the award and other research programs that used the equipment.

Equipment and Materials Purchased at the End of the Award

KUCR does not concur with the questioned costs totaling \$34,017. KUCR believes the purchases were reasonable due to the project-specific circumstances surrounding the purchases. KUCR does not routinely allow large expenditures at the end of the award; however, in both cases KUCR discussed the expenditures with the PIs and determined the charges were allowable and necessary to achieve project outcomes. KUCR provided justification from the PIs for both purchases indicating the purchases were necessary to achieve and strengthen the final award results.

Materials Not Properly Allocated

KUCR agrees with the conclusion for the \$2,942 of questioned costs. This cost has already been removed from the award and the questioned amount was refunded to NSF in July 2016.

See Appendix A for the complete KUCR response.

Auditors' Additional Comments

Funding Issues

Our conclusion remains unchanged regarding the \$135,071 microscope purchase that KUCR disagrees with. The additional information provided by KUCR did not change our view that making spending decisions based on the possibility of reduced funding is not reasonable, prudent, or consistent with existing policies. KUCR intentionally over-spent as a strategy to decrease the unspent funds. KUCR stated that the purchase was reasonable and prudent because it was necessary for the performance of the award; however, the equipment purchase exceeded the original equipment budget by more than 145 percent, and KUCR did not provide any additional documentation to support the allocation of 40 percent of this purchase cost to the award, as required by Federal financial assistance requirements. Therefore, the report finding and recommendations remain as stated.

Equipment and Materials Purchased at the End of the Award

Our conclusion remains unchanged for the \$34,017 in equipment and materials purchased at the end of the award that KUCR disagrees with. The additional information provided by KUCR did not change our view that these purchases near the various award expiration dates should be questioned. Per Federal financial assistance requirements, the allocation of a cost must be proportionate to the actual benefit received. The laser equipment costing \$29,600, was charged 100 percent to the NSF award when it was only available for 3 percent of the award life. The software upgrade and data loggers were charged 100 percent to the NSF award and they were only available for 10 days prior to the award expiration. Therefore, the report finding and recommendations remain as stated.

Materials Not Properly Allocated

KUCR's comment related to the \$2,942 is responsive to the issue noted in the finding. Once NSF determines that the recommendation has been adequately addressed, and the \$2,942 in questioned costs have been returned, this issue should be closed.

Finding 2: Unreasonable Travel

We identified several travel costs that did not appear reasonable and necessary for the awards charged or were not in compliance with NSF requirements.

Travel Was Not Reasonable and Necessary

Unreasonable Travel Collaboration Expenses

We questioned four transactions totaling \$54,273 charged to two NSF awards for one PI's travel expenses in [REDACTED].

We questioned \$37,735 charged to one NSF award for lodging in [REDACTED] from May 26, 2013, to July 11, 2013 (46 days) and December 16, 2013, to January 20, 2014 (35 days).

The documentation provided was not sufficient to support the allocation of these costs to the NSF award.⁶ Adequate support for how the PI's time in [REDACTED] (81 days) was beneficial and allocable to this award was not provided. The itinerary provided by KUCR broke out the travel by week, not by day, as required by the KUCR internal policy for foreign travel.⁷ Additionally, due to an NSF-requested budget reduction, travel was voluntarily reduced from \$41,790 to \$17,370 (\$10,320 which included foreign travel). Although the PI reduced the travel budget to \$17,000, more than \$25,000 was spent on lodging expenses during two extended trips to [REDACTED]. The PI stated that the travel to [REDACTED] was necessary to collaborate; however, neither the original budget nor the revised NSF approved budget mentioned the need for annual collaboration trips to [REDACTED].

We also questioned \$16,538 for meals and lodging charged to another NSF award while the same PI was in [REDACTED] from May 29, 2011 to August 21, 2011 (84 days). The 3-month trip was completed 10 days prior to the expiration of the 4-year award on August 31, 2011. The need for the 3-month trip to [REDACTED] was not included in the NSF award budget. The NSF award budget contained \$10,800 for foreign travel, for one international trip per year for the PI's collaboration visits in [REDACTED] (approximately \$2,700 per trip). Per the PI, the collaboration with the [REDACTED] group was successful and by the fourth year of the project, new collaborations were identified in [REDACTED]. The PI decided that the trip to [REDACTED], instead of [REDACTED], was more beneficial to the NSF award; however, the 3-month collaboration was not mentioned in the final project report.

Additionally, the documentation to support the allocation methodology of the PI's expenses while in [REDACTED] was not adequate. The dollar amount allocated to the NSF award does not tie to the explanation provided, and the benefit or other equitable relationship of the allocation was not properly addressed.

Late Travel Reimbursement Claim

We questioned six transactions totaling \$11,166 charged to one award for travel expenses for the PI. For each of the six transactions, the travel expense claim was filed on December 14, 2012 — 3-months after the NSF award expiration. KUCR travel policies require travel expense claims be submitted within 30 days after the completion of the trip.⁸ The travel claims in question were submitted anywhere from 263 to 1,329 days after the travel occurred.

Specifically, we question the following travel expenditures that were not submitted for reimbursement timely:

⁶ 2 CFR 220, Appendix A, Section A.2.e. 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.”

⁷ Per KUCR international travel expense policies: “A daily itinerary is required to substantiate the business purpose of the trip. Each travel day shall be identified as either business or personal.”

⁸ Per KUCR travel policies: “Traveler is required to report and substantiate travel expenses within 30 days of the date of travel.”

- \$1,702 for airfare to [REDACTED] for the PI to attend a conference from October 12-14, 2009. The airfare was from [REDACTED] to [REDACTED], on October 3, 2009; [REDACTED], to [REDACTED], on October 10, 2009; and [REDACTED], to [REDACTED], on October 17, 2009. KUCR charged 50 percent of the airfare cost to the NSF award as the [REDACTED] portion did not relate to the NSF award. The travel expense claim was approved 1,154 days after the travel occurred.
- \$1,826 for lodging and meals per diem, from October 10-17, 2009, for the PI to attend a conference in [REDACTED]. The conference was from October 12-14, 2009. The PI charged per diem for the additional days stayed in [REDACTED] before and after the conference. The travel expense claim was approved 1,154 after the travel occurred.
- \$1,317 for conference registration fees for the PI. The conference was in [REDACTED], [REDACTED], from April 19-25, 2009. The PI did not attend the conference in [REDACTED] due to visa issues. The travel expense claim was submitted 1,329 days after the event occurred.
- \$2,920 for airfare to [REDACTED], from January 2-12, 2011, for the PI to attend a conference. The conference in [REDACTED] was from January 4-8, 2011. The travel expense was approved 702 days after the travel occurred.
- \$1,760 for airfare to the [REDACTED], from March 14-18, 2012, for the PI to attend a workshop. The workshop in [REDACTED] was from March 15-16, 2012. The travel expense was approved 271 days after the travel occurred.
- \$1,641 for airfare to [REDACTED], from March 21-26, 2012, for the PI to attend a workshop. The workshop in [REDACTED] was from March 23-24, 2012. The travel expense was approved 263 days after the travel occurred.

PI and Co-PI travel expenses to [REDACTED], [REDACTED], and [REDACTED]

We questioned three transactions totaling \$10,763 (including the applicable F&A and ITTC fee) charged to one NSF award for the PI and Co-PI's travel expenses. The PI and Co-PI traveled from July 4-25, 2012; the primary destination for the trip was a conference in [REDACTED], from July 9-13, 2012. There were stopovers in [REDACTED], [REDACTED]; [REDACTED], [REDACTED]; and [REDACTED], and several personal days taken during the trip. The total cost of the trip was \$13,225 (not including the applicable F&A or ITTC fee), allocated 52 percent to the NSF award and 24 percent each to two other Federal awards.

Based on the following, we conclude that the travel was not necessary, reasonable, or prudent for the administration of the award:⁹

- The conference in [REDACTED], was at the end of the NSF award life. The travel ended on July 25, 2012, and the award expired on August 31, 2012.
- There was no clear benefit or necessity for the stopovers in [REDACTED]; [REDACTED]; or [REDACTED].

⁹ 2 CFR 220, Appendix A, Section C.2. and C.3 costs "must be reasonable; they must be allocable to sponsored agreements.... A cost may be considered reasonable if the nature of the goods or services acquired or applied, and the amount involved therefore, reflect the action that a prudent person would have taken under the circumstances prevailing at the time the decision to incur the cost was made. Major considerations involved in the determination of the reasonableness of a cost are: whether or not the cost is of a type generally recognized as necessary for the operation of the institution or the performance of the sponsored agreement...."

- We did not receive adequate documentation to support the allocation methodology. Per KUCR, the travel costs were allocated to the NSF award and two other Federal awards based on summer payroll. The benefit or other equitable relationship of the allocation was not addressed in the documentation provided.
- There was no foreign travel in the revised NSF award budget. The revised NSF award budget included \$14,000 for domestic travel; this was a reduction in the travel budget by 73 percent from the original NSF award budget.
- Although KUCR travel policies require travel expense claims to be submitted within 30 days after the completion of the trip, the travel expense report was not submitted until September 24, 2012 — 56 days after the travel occurred and 24 days after the award expired.
- The travel was not mentioned in the final project report.

Table 4 describes the timeline for the trip and the total cost of \$13,225. The table also shows the breakout of personal versus business days per the PI and Co-PI; the personal days were not charged to any awards.

Table 4. Description of Questioned PI and Co-PI Travel by Date and Location

Date	Location	Personal Days	Description of Travel Cost	Travel Cost
July 4, 2012	Depart [REDACTED] [REDACTED], for [REDACTED] [REDACTED],	No	Two roundtrip airline tickets from [REDACTED] to [REDACTED].	\$ 816
July 4, 2012	[REDACTED]	No	Lodging	\$ 343
July 5, 2012	[REDACTED]	Yes		
<p><i>The PI and Co-PI purchased round-trip tickets from [REDACTED] to [REDACTED], [REDACTED]; departing on July 4 and returning July 25. They stayed two nights in [REDACTED] (July 4-5). The hotel room was shared by the PI and Co-PI [REDACTED]. The cost of the room was \$343 per night. The lodging per diem in [REDACTED], [REDACTED], in July 2012, was \$169 per night. They charged one night to the NSF award and considered the other day a personal day. The PI and Co-PI stated that the nights stayed in [REDACTED] were for “travel recovery and to accommodate layovers for the flights.”</i></p>				
July 6, 2012	Depart [REDACTED] [REDACTED], for [REDACTED] [REDACTED]	No	Two roundtrip airline tickets from [REDACTED] to [REDACTED] to [REDACTED] to [REDACTED]; departing [REDACTED] on July 6 and returning July 22.	\$ 4,709
July 6, 2012	[REDACTED]	No		\$ 261
<p><i>The PI and Co-PI stayed in [REDACTED] for one night. The cost of the room was \$261 per night. The lodging per diem in [REDACTED], in July 2012, was \$177 per night.</i></p>				

Date	Location	Personal Days	Description of Travel Cost	Travel Cost
July 7, 2012	Depart [REDACTED] for [REDACTED]	No		
July 8, 2012	[REDACTED]	No	Lodging while at conference	\$ 233
July 9, 2012	[REDACTED]	No	Lodging	\$ 233
July 10, 2012	[REDACTED]	No	Lodging	\$ 233
July 11, 2012	[REDACTED]	No	Lodging	\$ 233
July 12, 2012	[REDACTED]	No	Lodging	\$ 233
July 13, 2012	[REDACTED]	No	Lodging	\$ 233

The PI and Co-PI attended the [REDACTED] (July 9 through July 13, 2012) at the [REDACTED]. The conference registration and dinner for the PI and Co-PI totaled \$1,720. They also presented a paper for the [REDACTED] in [REDACTED] at the [REDACTED] Workshop on July 9, 2012. The Co-PI did not register for the conference in [REDACTED] until July 10, 2012, after the conference had already begun.

July 14, 2012	Depart [REDACTED] for [REDACTED]	No		
July 14, 2012	[REDACTED]	No	Lodging in [REDACTED]	\$ 379

The PI and Co-PI flew to [REDACTED], on July 14 and stayed until the evening of July 15. The cost of the room was \$276; the lodging per diem in [REDACTED] in July 2012 was \$214. They also charged \$103 for 5 extra hours in the hotel before their flight departed [REDACTED] the evening of July 15. They stated that the stopover in [REDACTED] was to meet with a colleague. However, the documentation provided for audit did not support that this meeting was necessary or had any benefit to the award.

July 15, 2012	Depart [REDACTED], for [REDACTED]	No		
July 16, 2012	[REDACTED]	Yes		
July 17, 2012	[REDACTED]	No	Meeting with Dean [REDACTED] at the University [REDACTED]	\$ 261
July 18, 2012	[REDACTED]	No	Meeting with Dean [REDACTED] at the University [REDACTED]	
July 19, 2012	[REDACTED]	Yes		
July 20, 2012	[REDACTED]	Yes		
July 21, 2012	[REDACTED]	Yes		

Date	Location	Personal Days	Description of Travel Cost	Travel Cost
<p><i>The PI and Co-PI Stayed in [REDACTED], from July 15-22, 2012. Per the handwritten documentation provided by the PI, the stopover in [REDACTED] was to meet with the Dean [REDACTED] at the University [REDACTED]. Based on the original itinerary provided, the PI and Co-PI met with the Dean [REDACTED] on July 17 and 18. The remaining time in [REDACTED] was considered personal days. No documentation was provided to support the benefit to the award for the meetings with the Dean [REDACTED] nor were the meetings mentioned in the final report. The cost of the room was \$261 per night; the lodging per diem in [REDACTED], in July 2012 was \$177 per night. They only claimed 1 night for travel reimbursement.</i></p>				
July 22, 2012	Depart [REDACTED] for [REDACTED]	No		
July 23, 2012	[REDACTED],	Yes	Lodging	\$ 394
July 24, 2012	[REDACTED]	Yes		
July 25, 2012	Depart [REDACTED] for [REDACTED]	No		

The PI and Co-PI returned to [REDACTED], on July 22, 2012. The documentation provided shows they stayed at a [REDACTED], hotel for three nights, July 23-26. They charged one night lodging to the award and considered the other 2 days personal days. They said that the night charged to the NSF award was for travel recovery. The roundtrip airline ticket purchased from [REDACTED] to [REDACTED], was to depart [REDACTED] on July 25. However, based on the receipts provided, the PI and Co-PI checked out of the hotel in [REDACTED] on July 26.

Additional Charges				
Conference registration	Registration cost for PI and Co-PI and conference dinner			\$ 1,720
Per Diem	PI and Co-PI each charged 15 breakfast, 12 lunch, and 14 dinners to the awards (conference meals were deducted).			\$ 2,342
Taxi				\$ 532
Telephone				\$ 70
Total Charges				\$ 13,225

Source: Auditor analysis of questioned transactions

Unreasonable Travel

We questioned five transactions totaling \$8,108 charged to five awards for unreasonable travel expenses:

- \$4,729 charged to one award for a 44 night stay at a rental property in [REDACTED]. No support was provided to show why the 44 night stay in [REDACTED] was necessary or how it benefitted the award. Based on the response provided by KUCR, the airfare for this trip was charged to a Department of [REDACTED] award, and the hotel, meals, and other expenses were split between another Federal award and this NSF award. The methodology for the allocation of costs to the three awards was not adequately explained and/or supported. Additionally, the travel to [REDACTED] was not mentioned in the final project report.
- \$1,530 charged to one award for travel expenses for the PI to travel to [REDACTED]. No travel costs were included in the approved budget; the entire award budget included only participant support. Per NSF regulations, costs for employees are not to be paid out of participant support and funds provided for participant support may not be used for other categories of expense without specific NSF written approval.¹⁰ NSF did not provide specific written approval for the rebudgeting of participant support funds on this award. Additionally, the airline ticket charged to the NSF award included two legs; the first stop was in [REDACTED] for 3 days and then [REDACTED] for 19 days. [REDACTED] was the PI's sabbatical focal point. Charging the [REDACTED] portion is also not reasonable as that portion of the travel was not related to the NSF award.
- \$821 charged to one NSF award for meals from August 26-29, 2013, while the PI was staying in [REDACTED]. The documentation provided shows that \$855 was charged for 10 meals. Based on the per diem calculator provided by KUCR, the per diem for international travel is \$92 per day (\$18 for breakfast, \$28 for lunch, and \$46 for dinner). The 10 meals noted in the documentation, the 3 breakfast, 4 lunch, and 3 dinner, result in an allowable per diem of \$304. We questioned the difference between the actual charged and the allowable per diem plus the applicable F&A.
- \$822 charged to one award for the cost of airfare from [REDACTED], to [REDACTED], [REDACTED], from June 14-17, 2011. The PI had to cancel the trip due to [REDACTED]. The canceled trip provided no benefit to the NSF award. KUCR agreed that the costs should be removed from the award.
- \$206 for hotel cancellation fees charged to one award. KUCR discovered the error when providing the audit documentation and has taken corrective action to remove the charges.

Travel Near or After Award Expiration

We questioned four transactions totaling \$7,174 charged to three NSF awards for travel occurring at or near the award expiration.

- \$3,321 for airfare for the PI. The airfare was to [REDACTED], departing May 19, 2012, and returning July 27, 2012, however, the NSF award expired on June 30, 2012; the return flight occurred after the NSF award expiration. The travel expense claim was dated September 28, 2012, 63 days after the travel ended and 90 days after the award expiration.

¹⁰ NSF GPG (effective Jan. 18, 2011) Chapter V, (B.8.a) Participant Support Costs states, "Participant support costs are direct costs for items such as stipends or subsistence allowances, travel allowances and registration fees paid to or on behalf of participants or trainees (but not employees) in connection with meetings, conferences, symposia or training projects...Funds provided for participant support may not be used for other categories of expense without the specific prior written approval of the NSF cognizant Program Officer."

Additionally, a note on the travel expense claim stated, “Traveler claiming \$2,274.45 of the \$2,492.60 of airfare to close out project grant.”

- \$2,596 charged to one award for airfare to [REDACTED], from May 22, 2012, to June 6, 2012, for the PI to visit project collaborators at two universities in [REDACTED]. The NSF award expired on May 31, 2012; the return leg of the airfare was after the award expiration. Documentation provided notes that the PI took personal time from June 1-5, 2012. We did not receive adequate documentation to support how meeting with collaborators 7 days before award expiration was necessary for the award. There was no foreign travel in the NSF award budget and no mention of the travel or collaborations in the final report.
- \$1,257 charged to one award for airfare for the PI from [REDACTED] to [REDACTED] on June 27, 2012, and [REDACTED] to [REDACTED] on July 15, 2012. The NSF award expired on June 30, 2012. The PI was invited to collaborate at two different universities in the month of July. However, these collaborations occurred after award expiration, and, therefore, could not benefit the award.

KUCR personnel did not adequately review the expenditures charged to the NSF awards, which resulted in unreasonable travel costs. Without a process in place to ensure costs are reasonable and allowable, there is the increased risk that funds may not be used as required to accomplish the necessary project objectives in accordance with Federal and NSF requirements.

KUCR indicated that it has performed corrective actions to remove \$1,028 in unreasonable and unallowable costs from the awards in question, leaving \$90,456 unresolved. NSF, during the audit resolution process, should ensure that the awards have been credited as appropriate.

Recommendations

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

1. Resolve the \$90,456 of questioned costs and ensure the \$1,028 of questioned costs has been removed from the NSF awards.
2. Strengthen the administrative and management controls and processes over travel costs.

Summary of Awardee Response

Unreasonable Travel Collaboration Expenses

KUCR believes the travel expenses are allowable and reasonable and were shown to benefit the projects to which they were charged. KUCR stated that the travel allowed intense and non-interrupted work between the PI and [REDACTED] experts in [REDACTED] theory, and was thus deemed beneficial and reasonable by KUCR. KUCR reviewed the itineraries and determined that they were sufficient, since the PI was in the same location and performed similar collaborative activities for the week-long period detailed in the itinerary. The PI’s understanding of the purpose of the final technical report was to report the outcomes of the research, not how they arrived at those outcomes, thus the trips that allowed the research to be completed were not explicitly listed in the reports.

The cost allocation for the travel was determined by the PI based on the amount of time he spent focusing on the NSF versus the [REDACTED] projects and the proportional contribution of the [REDACTED] collaboration work to papers, presentations, talks and other outcomes for both projects. The PI has the in-depth understanding of the technical work and the benefit of the trip across different projects, and has stated that the proportional benefit of the trip to the NSF award can reasonably be estimated at 30 percent. KUCR believes that the expertise of the PI and their determination of benefit is a reasonable way of allocating costs.

Late Travel Reimbursement Claim

KUCR accepts the findings made with respect to the late travel reimbursement claims. The University of Kansas has recently changed its policy and adopted the IRS's 60-day travel reimbursement requirement.

PI and Co-PI travel expenses to [REDACTED], [REDACTED], and [REDACTED]

KUCR believes the travel questioned totaling \$10,763 was necessary and reasonable for the award. The presentation of research findings at conferences, such as the one in [REDACTED], is deemed beneficial to the project and is seen as part of the dissemination and sharing of research results with colleagues. KUCR stated that the documentation was provided during the audit to demonstrate that the purpose of the [REDACTED] stay was for the PI to collaborate with a colleague at the University [REDACTED]. Such an outreach program is also part of the broader impact for the NSF award, and this demonstrates that the collaboration travel expense is reasonable, because it supported the furtherance and aims of the NSF award. KUCR stated that the stays in [REDACTED] were taken as personal days between travel days and hotels were only paid on travel days, which is a reasonable expense related to the NSF award. KUCR contends that the effort allocation is a reasonable way to determine proportional benefit.

Unreasonable Travel

KUCR accepts the finding totaling \$8,108 in unreasonable travel charges. KUCR has already removed the costs for the airfare to [REDACTED] and the hotel cancellation fee. KUCR will work with NSF to resolve the other costs questioned in this area and is strengthening controls and improving processes around travel.

Travel Near or After the Award Expiration

KUCR accepts some of the findings for the travel near or after the award expiration; \$3,321 and \$1,257 for airfare for PIs. KUCR will work with NSF to address the costs associated with these findings and is working to improve controls and processes. KUCR believes the \$2,596 for the PI travel in [REDACTED] was reasonable, even though the travel was at the end of the project. Per the PI, the travel benefited the project by furthering the dissemination of research at an international conference. KUCR believes the travel expenses were directly related to the dissemination of research results produced by this award and that the travel expenses should therefore be allowable. The trip was taken from May 22, 2012 through June 6, 2012; personal time that was not charged

to the award was taken from June 1, 2012 through June 5, 2012 since the award expired on May 31, 2012.

See Appendix A for the complete KUCR response.

Auditors' Additional Comments

Unreasonable Travel Collaboration Expenses

Our conclusions remain unchanged for the questioned \$54,273 in unreasonable travel collaboration expenses. The additional information provided by KUCR did not change our view that the documentation provided was not sufficient to support the allocation of these costs to the NSF awards. Charging \$37,735 for 81 days lodging for the PI in [REDACTED] to one NSF award, and \$16,538 for 84 days of meals and lodging for the PI in [REDACTED] to another NSF award was unreasonable and unnecessary. Neither of the NSF awards mentioned the need for annual collaboration trips to [REDACTED] and these extended trips to [REDACTED] were not included in the award budgets. KUCR could not provide daily itineraries for the extended trips to [REDACTED] to support the collaboration and work that was being completed. For the \$16,538 for meals and lodging, the additional explanation provided by KUCR does not address why the dollar amount allocated to the NSF award does not agree to the explanation provided, and KUCR did not provide additional documentation to support the allocation of 30 percent of the cost to the award, as required by Federal financial assistance requirements. Therefore, the report finding and recommendations remain as stated.

Late Travel Reimbursement Claim

Our conclusion remains unchanged for the questioned \$11,166 for late travel reimbursement claims charged to the NSF award. The travel expense claims were filed 3-months after the NSF award expiration and submitted anywhere from 263 to 1,329 days after the travel occurred, which is not reasonable. KUCR did state they have changed their policy in regards to late travel reimbursement. However, the report finding and recommendations remain as stated.

PI and Co-PI travel expenses to [REDACTED], [REDACTED], and [REDACTED]

Our conclusion remains unchanged for the \$10,763 charged to the NSF award for the PI and Co-PI's travel expenses. The additional information provided by KUCR did not change our view that the travel was not necessary, reasonable, or prudent for the administration of the award and should be questioned. The documentation provided during the audit did not support the benefit to the award for the meetings with the Dean [REDACTED] in [REDACTED]. KUCR did not provide any additional documentation to support the allocation of the charges between the NSF award and the two other Federal awards. Therefore, the report findings and recommendations remain as stated.

Unreasonable Travel

KUCR's comments related to the \$822 airfare to [REDACTED] and \$206 hotel cancellation fee are responsive to the issues noted in the finding. Once NSF determines that the recommendation has

been adequately addressed, and the \$1,028 in questioned costs has been returned, this issue should be closed.

Our conclusion remains unchanged for the remaining \$7,080 of unreasonable travel expenses. KUCR has stated they will work with NSF to resolve the remaining \$7,080 of other questioned costs in this finding.

Travel Near or After the Award Expiration

KUCR's comment related to the \$4,578 in travel charges is responsive to the issue noted in the finding. Once NSF determines that the recommendation has been adequately addressed, and the \$4,578 in questioned costs has been returned, this issue should be closed.

Our conclusion remains unchanged for the \$2,596 in travel charges that KUCR disagrees with. The additional information provided by KUCR did not change our view that the international travel charges for the PI to collaborate at two universities in [REDACTED], 7 days prior to award expiration, was not necessary for the award. KUCR did not provide any additional documentation to support the need or benefit to the award for the meetings with the collaborators. Therefore, the report findings and recommendations remain as stated.

Finding 3: Inadequate Documentation and Unallowable Participant Support

We identified \$42,054 of participant support costs charged to one award that were not adequately supported or were not in compliance with NSF requirements.

For one transaction selected, KUCR was unable to provide the documentation necessary to support the expenditures, resulting in \$14,055 of questioned costs. This documentation is required to be maintained and available per Federal and NSF regulations and KUCR policies. Per KUCR, the invoices could not be recovered from the archival storage as they were stored by check number and they do not have a crosswalk to retrieve this information.

Per KUCR policies, one of the most important underlying principles for determining the allowability and appropriateness of charges is ensuring that transactions are adequately documented. Adequate documentation includes an invoice or receipt that identifies what was purchased, where it was purchased, and who purchased it.¹¹ According to Federal requirements, financial records, supporting documents, statistical records, and all other records pertinent to an award shall be retained for a period of 3 years from the date of submission of the final expenditure report. One exception is if an audit is started before the expiration of the 3-year period, then the records shall be retained until all claims or audit findings involving the records have been resolved

¹¹ According to General Rules for the Use of Funds Deposited or Held in KUCR Accounts, "One of the most important underlying principles for determining the allowability and appropriateness of charges is ensuring that transactions are adequately documented. Adequate documentation includes an invoice or receipt that identifies WHAT was purchased, WHERE it was purchased, and WHO purchased it. In addition, WHEN it was purchased may also be a deciding factor on allowability."

and final action taken.¹² Because KUCR was notified of the audit on October 6, 2014, we question the following transaction charged to one NSF award due to the lack of adequate documentation.

Table 5. Description of Questioned Transaction Due to Inadequate Documentation

Description	Total Questioned*	Award Final Expenditure Date	Typical Retention Period End Date	Date KUCR was Notified of Audit	New Retention Period End Date
Journal Entry Moving Participant Travel Transactions and a Server Hosting Charge	\$14,055	03/23/2013	03/23/2016	10/06/2014	Once the audit findings have been resolved and final action has been taken.
Total	\$ 14,055				

Source: Auditor analysis of questioned transactions

*Total questioned includes the applicable F&A

We also questioned \$9,499 charged to participant support for travel costs for KUCR employees and \$18,500 for payments to an independent contractor for a server reconfiguration. In the NSF approved budget, participant support funds were requested to support the participation in a symposium and for trips for an expert in biology, not travel for KUCR employees or work by an independent contractor. Per NSF regulations, costs for employees are not to be paid out of participant support and funds provided for participant support may not be used for other categories of expense without specific NSF written approval.¹³ NSF did not provide specific written approval for the rebudgeting of participant support funds on this award.

KUCR did not sufficiently plan for the retrieval of archived documentation, and did not adequately review the expenditures reallocated to participant support which resulted in unreasonable and unallowable costs. Without a process in place to ensure that documentation is available and accessible and the reallocation of expenses are in accordance with Federal and NSF requirements,

¹² According to 2 CFR 215.53(b), "Financial records, supporting documents, statistical records, and all other records pertinent to an award shall be retained for a period of three years from the date of submission of the final expenditure report or, for awards that are renewed quarterly or annually, from the date of the submission of the quarterly or annual financial report, as authorized by the Federal awarding agency." There are limited exceptions to this rule, one of which is "if any litigation, claim, or audit is started before the expiration of the 3-year period, the records shall be retained until all litigation, claims or audit findings involving the records have been resolved and final action taken."

¹³ NSF GPG (effective Jan. 18, 2011) Chapter V, (B.8.a) Participant Support Costs states, "Participant support costs are direct costs for items such as stipends or subsistence allowances, travel allowances and registration fees paid to or on behalf of participants or trainees (but not employees) in connection with meetings, conferences, symposia or training projects....Funds provided for participant support may not be used by grantees for other categories of expense without the specific prior written approval of the cognizant NSF Program Officer."

there is the increased risk that funds may not be used as required to accomplish the necessary project objectives.

Recommendations

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

1. Resolve the \$42,054 of questioned costs.
2. Strengthen the administrative and management controls and processes related to document retention and review of expenditures charged to participant support.

Summary of Awardee Response

KUCR concurs with this recommendation and has already taken steps to start a review of the current retention and storage process to ensure all necessary documentation is stored in a manner that is accessible for the required length of time. KUCR was able to provide some documentation to support the transactions, but they were not able to provide all original vouchers. Improved processes for reviewing rebudgeting of participant support costs have already been implemented. KUCR has provided additional training for staff members on the use of participant support funds.

See Appendix A for the complete KUCR response.

Auditors' Additional Comments

Although KUCR concurred with the recommendations, it did not specifically address the questioned costs totaling \$42,054, therefore our conclusion remains unchanged. KUCR could not provide documentation to support \$14,055 in costs charged to the NSF award; and the \$27,999 charged to the award for employee travel and server reconfiguration which are unallowable participant support charges per NSF regulations. Therefore, the report finding and recommendations remain as stated.

Finding 4: Improper ACM\$ Request

Due to a transposition error, a funding adjustment request totaling \$13,047 on July 10, 2015, was drawn in error on an award that expired July 31, 2014. Advances or reimbursements made in error must be refunded promptly.¹⁴ KUCR agrees that a refund in the amount of \$13,047 is due and will return the funds to NSF. To address this error, KUCR completed a review of retroactive funding adjustments in June 2016. As a result of the review, KUCR implemented system and process changes to allow for better tracking and management of the funding adjustments. Because of this improper ACM\$ funding request, we question \$13,047 for the refund due to NSF.

¹⁴ NSF AAG, (effective January 4, 2010) Chapter III, D.2, "Advances or reimbursements made in error must be refunded to the National Science Foundation...Excess funds should be promptly refunded electronically or by check."

Recommendations

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

1. Ensure the \$13,047 of questioned costs has been removed from the NSF award.
2. Strengthen the administrative and management controls and processes to ensure that funding requests are properly prepared and executed.

Summary of Awardee Response

KUCR agrees that there was a data entry error in the ACM\$ draw. To address this error, a refund in the amount of \$13,047 was returned to NSF, and KUCR completed a review of retroactive funding adjustments to determine possible process improvements. As a result of the review in June 2016, KUCR strengthened administrative and management controls by implementing a process to allow for better tracking and management of funding adjustments.

See Appendix A for the complete KUCR response.

Auditors' Additional Comments

KUCR's comment related to the \$13,047 is responsive to the issue noted in the finding. Once NSF determines that the recommendation has been adequately addressed, and the \$13,047 in questioned costs has been returned, this issue should be closed.

Finding 5: Unreasonable or Unallowable Transactions

We identified four transactions totaling \$8,838 charged to two NSF awards that did not appear reasonable, necessary, or prudent for the awards charged.

Unreasonable Cost Transfers

We questioned two transactions totaling \$6,988 charged to one NSF award. 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.¹⁵ We identified a cost transfer posted 1 year after the award expired that was not reasonable, necessary, or prudent. Therefore, we question \$6,988 for the cost of contractual services and a computer that were transferred from one NSF award to another NSF award, significantly after the original purchases and after the original award expired.

Specifically, we question \$3,721 for contractual services transferred over 20 months after the services were performed and 1 year after the award expired. At the time of the original recording, the PI certified that the work was performed for the award that expired September 30, 2012. We

¹⁵ According to 2 CFR 220, Appendix A, Sections C.2. and C.3, costs "must be reasonable; they must be allocable to sponsored agreements.... Major considerations involved in the determination of the reasonableness of a cost are: whether or not the cost is of a type generally recognized as necessary for the operation of the institution or the performance of the sponsored agreement...."

also question \$3,267 for a computer transferred 19 months after the computer was purchased and 1 year after the award expired. The authorized receipt provided for audit noted that the computer was also to be recorded to the expired award, not the award it was transferred to.

On September 19, 2013, 1 year after the award expired, a journal entry was made to move the charges from award [REDACTED] (expired September 30, 2012) to award [REDACTED] (expired June 30, 2016). Per the description provided, the transfer was made to move the expenses to correct the over expenditure and to close out the project. Federal regulations prohibit the shifting of costs due to cost overruns or other funding considerations.¹⁶ Additionally, per KUCR policy, an explanation is necessary if the transfer occurs more than 90 days after the expense was originally posted. An adequate explanation for the late transfer was not provided.

Table 6. Description of Questioned Unreasonable Cost Transfers

Description	Total Questioned*	Date Purchased	Date Transferred	Days After Original Entry
Consulting Services	\$ 3,721	December 12, 2011	September 19, 2013	647
Apple Mac Mini Computer	3,267	February 24, 2012	September 19, 2013	573
Total	\$ 6,988			

Source: Auditor analysis of questioned transactions

*Total questioned includes the applicable F&A

Promotional Purchases and Advertising Were Not Reasonable or Necessary

We questioned two transactions totaling \$1,850 charged to one NSF award that were unallowable promotional and advertising costs. The purchase of the promotional items and memorabilia, including models, gifts, and souvenirs were not specific purchases necessary to meet the requirement of the agreement. The only allowable advertising costs are those that are solely for specific purposes identified in applicable regulations and for other specific purposes necessary to meet the requirements of the sponsored agreement.¹⁷ These promotional items and advertising costs for one NSF award are therefore unallowable, and will be questioned.

We question \$1,377 for the purchase of polo shirts. Per KUCR, the shirts were purchased for the [REDACTED] Research Team while participating in fieldwork on the project. KUCR stated that the purchase meets the “other specific purpose” criteria; however, the shirts were not necessary to meet the requirements of the sponsored

¹⁶ 2 CFR 220, Appendix A, Section C.4.b states, “Any costs allocable to a particular sponsored agreement under the standards provided in this Appendix may not be shifted to other sponsored agreements in order to meet deficiencies caused by overruns or other fund considerations, to avoid restrictions imposed by law or by terms of the sponsored agreement, or for other reasons of convenience.”

¹⁷ According to 2 CFR 220, Appendix A, Section J.1.f(3) and J.1.c(4), “Unallowable advertising and public relations costs include....costs of promotional items and memorabilia, including models, gifts, and souvenirs.” The only allowable “advertising costs are those that are solely for[three specific purposes and for] other specific purposes necessary to meet the requirement of the sponsored agreement.”

agreement. As such, we contend that this charge is unallowable and was not reasonable, or necessary for the performance of this NSF sponsored project.¹⁸

We also question \$473 for Facebook advertising fees charged to this award. Per KUCR, the entire cost has been subsequently removed from the project. The original charge was inadvertently posted to this award due to a data entry error.

Table 7. Description of Questioned Promotional and Advertising Costs

Description	Invoice Amount	F&A	Total Questioned	KUCR Agreed
Polo Shirts	\$ 940	\$ 437	\$ 1,377	No
Facebook Advertisements	324	149	473	Yes
Total	\$ 1,264	\$ 586	\$ 1,850	

Source: Auditor analysis of questioned transactions

KUCR personnel did not adequately review the expenditures charged to the NSF awards, which resulted in unreasonable and unallowable costs. Without a process in place to ensure costs are reasonable and allowable, there is the increased risk that funds may not be used as required to accomplish the necessary project objectives in accordance with Federal and NSF requirements.

KUCR indicated that it has performed corrective actions to remove \$473 in unreasonable and unallowable costs from the award in question, leaving \$8,365 unresolved. NSF, during the audit resolution process, should ensure that the awards have been credited as appropriate.

Recommendations

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

1. Resolve the \$8,365 of questioned costs and ensure the \$473 of questioned costs has been removed from the NSF awards.
2. Strengthen the administrative and management controls and processes for reviewing costs to ensure that unallowable promotional items and advertising costs are not charged to NSF awards.

Summary of Awardee Response

KUCR accepts some of the findings related to the “Unreasonable Cost Transfers”, and is working to implement stronger administrative and management controls and processes related to reviewing costs to ensure allowability of cost transfers on sponsored projects. In regards to the “Promotional Purchases and Advertising Were Not Reasonable or Necessary” finding, KUCR agrees that the advertising costs were not allowable and has moved this cost off the NSF award. However, KUCR

¹⁸ 2 CFR 220, Appendix A, Section C.2. and C.3 states costs “must be reasonable; they must be allocable to sponsored agreements.... Major considerations involved in the determination of the reasonableness of a cost are: whether or not the cost is of a type generally recognized as necessary for the operation of the institution or the performance of the sponsored agreement.”

believes that the shirt costs were necessary as they helped interviewers to identify themselves to subjects and allowed for successful completion of the fieldwork funded on the project. KUCR stated they provided documentation from the award proposal that described the fieldwork of the research team that would justify this type of purchase on the award. KUCR believes this charge is reasonable and allowable on this project.

See Appendix A for the complete KUCR response.

Auditors' Additional Comments

KUCR did not specifically address the questioned \$6,988 charged to the NSF award for unreasonable cost transfers, therefore our conclusion remains unchanged. Although KUCR indicated it accepts these findings and has working to make improvements in this area, their response did not change our view that the cost transfers were not reasonable, necessary, or prudent and therefore, the report finding and recommendations remain as stated.

KUCR's comment related to the \$473 in advertisements is responsive to the issue noted in the finding. Once NSF determines that the recommendation has been adequately addressed, and the \$473 in questioned costs has been returned, this issue should be closed.

Our conclusion remains unchanged for the \$1,377 for the purchase of polo shirts that KUCR disagrees with. The additional information provided by KUCR did not change our view that the polo shirts were not necessary to meet the requirements of the sponsored agreement, and therefore, were not reasonable or necessary for the award. The report finding and recommendations remain as stated.

Finding 6: Purchases before Award Effective Date

We questioned \$1,596 charged to one NSF award for purchases more than 90 days prior to the award effective date without NSF approval.

Grantees may incur pre-award costs within the 90-day period preceding the effective date of the grant as long as the costs are properly documented and necessary; however, requests for pre-award costs for periods exceeding 90 days must be submitted electronically in FastLane.¹⁹

KUCR charged subawardee data collection and entry charges incurred on April 17, 2012, and May 24, 2012, on an award with an effective date of October 1, 2012. KUCR did not obtain NSF approval for these pre-award charges more than 90 days prior to the award effective date.

¹⁹ NSF AAG, Chapter V, Section A. 2.b(i),(iii) Pre-Award Costs "Grantees may incur allowable pre-award costs within the 90 day period immediately preceding the effective date of the grant providing [that the costs are documented in accordance with the grantee's procedures and necessary for the effective and economical conduct of the project, but][r]equests for pre-award costs for periods exceeding 90 days must be submitted electronically via use of the Notification and Request module in FastLane."

KUCR has agreed that \$150 took place before the 90-day period; however, it stated that because the subaward start date was August 19, 2012, the allowed 90-day spending period began May 21, 2012, and therefore, the remaining costs of \$865 were allowable.

However, because the NSF's guidance relates to the NSF award effective date, and not the subaward effective date, we continue to question \$1,596 for the April 17 and May 24, 2012 transactions as noted in Table 8:

Table 8. Description of Questioned Purchases before the Award Effective Date

Service Date	Days Before Award Effective Date	Invoice Amount	ITTC Fee	F&A	Total Questioned
April 17, 2012	167	\$ 150	\$ 10	\$ 75	\$ 235
May 24, 2012	130	865	61	435	1,361
Total		\$ 1,015	\$ 71	\$ 510	\$ 1,596

Source: Auditor analysis of questioned transactions

The established KUCR internal controls were not adequate to prevent the pre-award costs from being charged to the awards, to ensure a clear understanding of the rule by KUCR employees, to identify the errors before the final report, or to guarantee the requests to exceed the 90-day period prior to the effective date of the award were submitted to NSF. As a result of inadequate internal controls, pre-award costs were charged to the NSF awards in violation of NSF's policies. Without adequate controls to ensure costs charged more than 90 days prior to the award expiration have been approved by NSF, there is the increased risk that funds may not be used as required to accomplish the necessary project objectives in accordance with Federal and NSF requirements.

Recommendations

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

1. Resolve the \$1,596 of questioned costs.
2. Strengthen the administrative and management controls and processes to guarantee that employees understand the guidance and to ensure charges occurring more than 90 days prior to the award effective date are not charged to an award without NSF approval.

Summary of Awardee Response

KUCR concurs with this recommendation. KUCR will work to strengthen the controls and processes to ensure charges occurring more than 90 days prior to the award effective date are not charged to an award without NSF approval. The University of Kansas is implementing a new financials system that has functionality to clearly track pre-award spending. KUCR will create a business process that utilizes this system functionality and ensure that sponsor approval for pre-award spending greater than 90 days is obtained and documented.

See Appendix A for the complete KUCR response.

Auditors' Additional Comments

KUCR concurred with the recommendations in the finding, but did not specifically address the \$1,596 in questioned costs. KUCR's comments are responsive to the recommendation to strengthen controls on pre-award spending and once NSF determines that this recommendation has been adequately addressed, the issue should be closed. Our conclusion remains unchanged for the questioned \$1,596 charged to the NSF award for purchases more than 90 days prior to the award effective date without NSF approval.

Other Matter:

Effort Reporting Not Completed Timely and Completely

During our audit, we reviewed 14 payroll transactions and the related effort reports. Six of the effort reports reviewed were dated in July 2016; several years after the actual payroll charges were incurred and after the effort reports were requested for this audit.

Federal Regulations require, at least annually, a statement be signed by the employee, PI, or responsible official(s) using suitable means of verification that the work was performed.²⁰ Additionally, per KUCR's effort report policy, certification of effort reports is required at least once every 6 months for non-student employees.²¹

KUCR explained that in late 2014, it conducted an internal review of its existing effort reporting practices and identified several opportunities to strengthen internal controls and improve compliance. According to KUCR, it had conducted an in-depth review and inventory of all effort reports for certification periods from 2010-2015. This initiative involved identifying and following up on all required effort reports for this period. As of July 2016, KUCR stated it had obtained 98 percent compliance for this certification period and was still working with the research community to achieve 100 percent compliance. KUCR recognizes that in some cases, including some transactions included in this audit, effort may have been certified significantly after the certification period and associated payroll period, and it has worked closely with its PIs and research community to ensure posted payroll accurately reflects the work performed in the associated time period.

Additionally, in 2015, KUCR's research administration team embarked on an initiative to develop more robust policies and processes for effort certification, review, and monitoring. These updated policies and practices have since been widely communicated to the University of Kansas research community and are part of a broader educational effort to ensure that PIs understand their role and responsibilities within the process.

²⁰ 2 CFR 220, Appendix A, Section J.10.c(1)(e) "At least annually a statement will be signed by the employee, principal investigator, or responsible official(s) using suitable means of verification that the work was performed, stating that salaries and wages charged to sponsored agreements as direct charges, and to residual, F&A cost or other categories are reasonable in relation to work performed."

²¹ Per KUCR's effort reporting and certification policy, "The effort reporting system will periodically require the certification by the appropriate individual or responsible official to validate the percentage of effort committed to all university activities during the reporting period... Certification will be required at least once every six months for non-student employees."

Finally, KUCR completed the implementation of an electronic effort certification system. In July 2016, KUCR deployed the new system to certify the effort period of December 2015 through June 2016. According to KUCR, the system facilitates recertification of effort due to payroll cost transfers; ensures certification of payroll appointments that were processed late; enables effort report retention and reporting on certifications; and provides increased transparency and controls over the process.

KUCR's system changes were outside the scope of our audit; therefore, we have not performed any procedures to determine the effectiveness of this system.

Although KUCR's effort reporting system did not appear to be compliant with Federal regulations during our audit period, we did not question any associated costs because the errors we identified were corrected during our audit.

Recommendation

We recommend that the NSF's Director of the DIAS address and resolve the following KUCR recommendation:

1. Determine if the changes in the effort reporting system and related policies and procedures are effective in ensuring that KUCR's current effort reporting activities are in compliance with Federal regulations.

Summary of Awardee Response

KUCR has made changes to its effort reporting system, policies, and procedures in recent years. In July 2016, KUCR implemented electronic effort certification. Starting in 2015, a complete revision of the processes and policies for effort certification at the University of Kansas was implemented in conjunction with the implementation of electronic certification. These updated policies and practices have been widely communicated to the University of Kansas research community to ensure PIs and campus personnel understand their role and responsibilities within the process. The controls the electronic certification system provides, in conjunction with the improved processes and education for certifiers, reasonable assurance that KUCR is compliant with Federal regulations.

See Appendix A for the complete KUCR response.

Auditors' Additional Comments

KUCR's comments related to the effort reporting not completed timely or completely is responsive to the issues noted in the finding. Once NSF determines that the recommendation has been adequately addressed, the issue should be closed.


October 18, 2017

Appendix A: Awardee Response



September 25, 2017

WithumSmith+Brown
Two Logan Square, Suite 2001
Eighteenth & Arch Streets
Philadelphia, PA 19103-2726

Dear Mr. [REDACTED] and Ms. [REDACTED],

Thank you for the opportunity to comment on the audit report for the NSF OIG audit of incurred costs at the University of Kansas Center for Research (KUCR). We are responding to the revised draft submitted by email from [REDACTED] of your staff on September 19, 2017.

KUCR believes that this report demonstrates the strength of a majority of the management and administrative controls and processes supporting sponsored projects at the University of Kansas and our stewardship of NSF funds. We appreciate Withum's partnership during this audit, including their clear communications and their efforts to ensure this report is representative of KUCR's overall sponsored project administration processes. This report provides us the opportunity to further improve our management and oversight of NSF sponsored projects.

In our responses, we are citing 2 CFR 200 (OMB Uniform Guidance) to be in line with the regulations that were cited in the audit, but would like to note that each of these questioned awards was administered under 2 CFR 220 and 2 CFR 215 (OMB Circular A-21 and OMB Circular A-110) due to their award dates, which started prior to the required implementation of 2 CFR 200.

Below, please find our responses to the audit recommendations.

Awardee Response Finding #1

KUCR believes the questioned microscope purchase under "Funding Issues" is reasonable and consistent with a prudent person's action and is an allowable and allocable cost. While KUCR will agree that the questioned overspending on a project is not consistent with KUCR's standard process, it was deemed appropriate and reasonable in this case, because it was necessary for the performance of the award and because KUCR sought guidance from NSF regarding the unique circumstance and the purchase was then directed by the NSF Program Officer. The award is a state-wide EPSCoR award, and the guidance provided by the Program Officer was specific to the management of this large, multi-project award related to clear underspending on some of the sub-projects. OMB Uniform Guidance §200.404 Reasonable costs states that "[a] cost is reasonable if, in its nature and amount, it does not exceed that which would be incurred by a prudent person under the circumstances prevailing at the time the decision was made to incur the cost. ... In determining reasonableness of a given cost, consideration must be given to: (a) [w]hether the cost is of a type generally recognized as ordinary and necessary for

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the operation of the non-Federal entity or the proper and efficient performance of the Federal award.” We contend that the purchase of the microscope was reasonable and prudent since it was necessary for the performance of the award and the purchase was directed by the Program Officer. The purchased equipment was used for 3 years and 4 months of the project, and other researchers have directly used the system for NSF research, resulting in more than 50 joint publications. In respect to the allocation of the spending, although only 40% of the equipment was purchased with NSF-sponsored funds, the other 60% was purchased with institutional commitments (cost share) to support the award and other research programs that used the equipment.

We believe the purchases questioned under the “Equipment and Materials Purchased at the End of the Award” section were also reasonable, due to the project-specific circumstances surrounding the purchases. While it is the practice of KUCR to not routinely allow large expenditures at the end of the award, our process of careful review and monitoring of this type of expenditure allows us to discuss any expenditure of this type with the principal investigator and leverage their knowledge of what is necessary to achieve their project outcomes in the determination of allowability. KUCR provided justifications from the PIs relating to both of the questioned costs that indicate the purchases were necessary to achieving and strengthening the final award results and detail the reasoning of the timing of the purchase. Our PIs certified the diode laser drive and diode laser heads were necessary so they could simultaneously measure fluorescence lifetimes as well as intensities to confirm their research findings and that the purchase of the datalogger (and the software upgrade to run it) was essential to further the reactive barrier research as several dataloggers in operation at once was necessary to achieve the project’s outcomes. We believe this action is in-line with 2 CFR 220 (OMB Circular A-21 “Cost Principles for Educational Institutions”), Appendix A, Part C.3. Reasonable costs, which indicates that a factor in determining the reasonableness of a cost is “the extent to which the actions taken with respect to the incurrence of the cost are consistent with established institutional policies and practices applicable to the work of the institution generally, including sponsored agreements.”

KUCR agrees with the auditor’s position on the item questioned in “Materials Not Properly Allocated.” This cost has already been removed from the award, and the question amount refunded to NSF in July 2016.

KUCR has detailed administrative processes and management controls around the review and approval of expenditures charged to NSF awards, the process of reviewing expenditures near the end of awards, and the allocation of costs to awards. During the course of the audit we provided support, including a copy of KUCR’s Cost Accounting Policy and our closeout processes to demonstrate that there are processes in place to ensure costs are reasonable, allowable, and appropriately monitored throughout the life of the award, including the period of time directly before project end. As detailed in these documents, it is KUCR practice to carefully review, monitor, and thoroughly discuss with principal investigators any large expenditures and/or equipment purchases at the end of an award. Staff will continue to work to improve the review and approval processes to ensure investigators can complete their sponsored work.

Awardee Response Finding #2

KUCR believes that the travel expenses questioned under “Unreasonable Travel Collaboration Expenses,” are allowable and reasonable as they were shown to benefit the projects on which they were charged. The travel allowed intense and non-interrupted work between the PI and recognized [REDACTED] experts in [REDACTED] theory (a focus of the NSF projects) and was thus deemed beneficial and

reasonable by KUCR. It is standard practice of KUCR to question unbudgeted international travel, but if the PI justifies the travel as scientifically necessary to the aims of the project, then it is determined to be reasonable and allowed. 2 CFR 220 (OMB Circular A-21 “Cost Principles for Educational Institutions”), Appendix A, Part C.3. Reasonable costs, indicates that a factor in determining the reasonableness of a cost is “the extent to which the actions taken with respect to the incurrence of the cost are consistent with established institutional policies and practices applicable to the work of the institution generally, including sponsored agreements.” The allowance of this travel is consistent with KUCR policy. Additionally KUCR reviewed the itineraries and determined they were sufficient, since the PI was in the same location and performed similar collaborative activities for the week-long period durations detailed in the itinerary. In the Research Terms and Conditions applicable to these awards (http://www.nsf.gov/bfa/dias/policy/fedrtc/priorapproval_oct08.pdf), NSF waived the requirement for prior approval for foreign travel and rebudgeting between cost categories, so there was no need to request permission to rebudget. The PI understood that the purpose of the final technical report was to report the outcomes of the research, not how they arrived at those outcomes, thus the trips that allowed the research to be completed were not explicitly listed in the reports. Even though the trip was not mentioned directly, it was implied in the reference to the collaboration with the [REDACTED] mentioned in the “Activities and Findings” section of the final report for one of the awards; additionally the resulting articles published after the end of the projects referenced the NSF awards as a funding source.

As previously noted, the cost allocation for the travel was determined by the PI based on the amount of time he spent focusing on the NSF vs. [REDACTED] projects and the proportional contribution of the [REDACTED] collaboration work to papers, presentations, talks, etc. that resulted for both projects. The PI has the in-depth understanding of the technical work and benefit of the trip across different projects and has stated that the proportional benefit of the trip to the NSF award can reasonably be estimated at 30%. The remaining 70% was determined, by the PI, to be allocable to the [REDACTED] award and therefore transferred to that benefitting account, bringing the amount charged to this NSF project in line with the proportional benefit. We believe the expertise of the PI and their determination of benefit is a reasonable way of allocating costs in line with §200.405 Allocable costs that “[i]f a cost benefits two or more projects or activities in proportions that can be determined without undue effort or cost, the cost should be allocated to the projects based on the proportional benefit.”

The University accepts the findings made with respect to specific cost items related to late travel reimbursement claims. The University of Kansas has recently changed its policy and adopted the IRS’s 60-day travel reimbursement requirement; travel reimbursements requested 60 or more days after travel are reviewed on an ad hoc basis for approval, and if approved, the reimbursement is a taxable benefit to the traveler.

KUCR believes the travel questioned under “PI and Co-PI travel expenses to [REDACTED] and [REDACTED]” are allowable and were necessary and reasonable for the award. The NSF PAPPG, Chapter XI, section 4, Dissemination and Sharing of Research Results, states that investigators are expected to share with other researchers the primary data gathered during the course of work under NSF grants and that grantees are expected to encourage and facilitate such sharing. The presentation of research findings at conferences, such as the one in [REDACTED] is deemed beneficial to the project and is seen as part of the dissemination and sharing of research results with the PI/Co-PI’s colleagues. Documentation was provided during the audit to demonstrate that the purpose of the [REDACTED] stop was for the PI to collaborate with a colleague at the University [REDACTED] who works in the field of [REDACTED] theory which was the primary research focus of the NSF award. They discussed mathematical questions of [REDACTED] theory, and the educational outreach program that the engineering school at the University [REDACTED] has

developed. Such an outreach program is also part of the broader impact for the NSF award, and this demonstrates that the collaboration travel expense is reasonable because it supported the furtherance and aims of the NSF award. The stays in [REDACTED] were taken as personal days between travel days and the hotels were only paid on travel days, which is a reasonable expense for the travel related to the NSF award. Cost allocation based on the effort distribution of the PI and Co-PI is deemed as a reasonable way to allocate costs for travel when multiple projects are benefited; per §200.405 Allocable costs, “[i]f a cost benefits two or more projects or activities in proportions that can be determined without undue effort or cost, the cost should be allocated to the projects based on the proportional benefit.” KUCR contends that the effort allocation is a reasonable way to determine proportional benefit. As previously noted, NSF waived the requirement for prior approval for foreign travel and rebudgeting between cost categories, so there was no need to request permission to rebudget the travel. There is not a requirement for all travel to be listed in final technical reports or referenced explicitly in the report, unless the award is for a conference, which this is not.

The University accepts the findings made with respect to specific cost items listed in “Unreasonable Travel” and have already removed the costs for the airfare to [REDACTED] and the hotel cancellation fee. KUCR will work with NSF to resolve the other costs questioned in this area, and as detailed below, is increasing controls and improving processes around travel.

KUCR accepts some of the findings made with respect to “Travel Near or After the Award Expiration” on award [REDACTED] and award [REDACTED]. KUCR will work with NSF to address the costs associated with these findings and is working to improve controls and processes as noted below. KUCR believes the travel on award [REDACTED] is reasonable as it allowed the PI to work with collaborators on the project and share the research results, even though the travel was at the end of the project. Per the PI, the travel benefited the project by furthering the dissemination of the research at the [REDACTED] Conference, an international conference that typically draws 1,700 attendees from > 60 countries. In the NSF PAPPG, Chapter XI, section 4, Dissemination and Sharing of Research Results, states that investigators are expected to share with other researchers the primary data gathered during the course of work under NSF grant and that grantees are expected to encourage and facilitate such sharing. KUCR believes the travel expenses were directly related to the dissemination of research results produced by this award and that the travel expenses should therefore be allowable. The trip was taken from 5/22/12 through 6/6/12; personal time that was not charged to the grant was taken from 6/1-6/5 since the award expired on 5/31/12. As previously noted, NSF waived the need to approve rebudgets for travel and does not require travel specifics to be included in final reports.

KUCR has strengthened the administrative and management controls and processes around travel costs in several ways. Increased training around the review process to ensure costs are reasonable and allowable has been developed. As noted above, the University of Kansas has adopted the IRS’s 60-day travel reimbursement requirement; travel reimbursements requested 60 or more days after travel are reviewed on an ad hoc basis for approval and if approved, the reimbursement is a taxable benefit to the traveler. An electronic system to better track and report travel expenses is also being implemented (expected go-live is December 2017).

Awardee Response Finding #3

KUCR concurs with this recommendation and has already taken steps to start a review of the current retention and storage process to ensure all necessary documentation is stored in a manner that is accessible for the required amount of time. While we were able to provide some documentation to

support the transactions, we were unable to provide all of the original vouchers. Improved processes for reviewing rebudgeting of participant support costs have already been implemented, including greater scrutiny at all levels of rebudgeting (the shared service centers and post award grant specialists) and a process to ensure the Program Officer is contacted if the rebudgeting affects funds budgeted for participant support. We also sent a staff member to NSF training that included a discussion on use of participant support funds, and that staff member has shared what was learned with research staff. KUCR also included information from NSF regarding participant support funds, and the appropriate uses of these funds, in a campus information session that was held in Spring 2017.

Awardee Response Finding #4

KUCR agrees that there was an error in the ACM\$ draw; it was determined that it was the result of a human error in data entry. To address this error, a refund in the amount of \$13,047 was returned to NSF and KUCR completed a review of retroactive funding adjustments to determine possible process improvements. As a result of the June 2016 review, KUCR strengthened administrative and management controls by implementing a process to allow for better tracking and management of the funding adjustments.

Awardee Response Finding #5

KUCR accepts some of the findings made with respect to “Unreasonable Cost Transfers” and is working to implement stronger administrative and management controls and processes related to reviewing costs to ensure allowability of cost transfers on sponsored projects. These controls will focus on ensuring the benefit to the project as well as the timeliness of any transfer. In regard to the “Promotional Purchases and Advertising Were Not Reasonable or Necessary” finding, KUCR agrees that the advertising costs were not allowable and have moved this cost off the NSF Award. However, KUCR believes that the shirt costs were necessary as they aided the interviewers to identify themselves to subjects and allowed for successful completion of the fieldwork funded on the project. We provided documentation from the award proposal that described the fieldwork of the research team that would justify this type of purchase on the award. Per 2 CFR 220, Appendix A, Section J.1.c(4), specific public relation-related costs can be incurred for “Other specific purposes necessary to meet the requirements of the sponsored agreement.” As such, we believe that this charge is reasonable and allowable on this project.

Awardee Response #6

KUCR concurs with this recommendation. We have controls in place to ensure pre-award spending is adequately reviewed and approved, including a process to review any account that is set-up prior to award issuance to ensure approvals are in place and not issuing subawards without sponsor approval of pre-award spending and that these processes are consistently followed. We will work to strengthen the controls and processes to ensure charges occurring more than 90 days prior to the award effective date are not charged to an award without NSF approval. The University of Kansas is implementing a new financials system that has functionality to clearly track pre-award spending. KUCR will create a business process that utilizes this system functionality and ensures that sponsor approval for pre-award spending greater than 90 days is obtained and documented. Once this business process is developed, training around the process to guarantee that employees understand the process and the guidance governing the pre-award spending process will be executed.

Awardee Response to Other Matter: Effort Reporting Not Completed Timely and Completely

KUCR has made important changes to its effort reporting system, policies, and procedures in recent years that demonstrates our commitment to improving the controls for compliance with federal regulations. In July 2016 KUCR implemented electronic effort certification, utilizing ecrt®, a system widely used at top research institutions to support compliance with effort reporting. In addition to pulling data directly out of the University's Human Resources/Payroll system to ensure payroll is commensurate with effort reports, the system also facilitates recertification of effort due to payroll cost transfers, ensures certification of payroll appointments that were processed late, enables effort report retention and reporting on certifications, and provides increased transparency and controls over the process. The system allows ease of certifier access and provides transparency regarding outstanding certifications to ensure certification deadlines are met. Effort Coordinators and KUCR staff run reports to ensure departments, centers, and schools are certifying in a timely manner to be compliant with University policy.

In addition to the robust system functionality, a complete revision of the processes and policies around effort certification at the University of Kansas was also implemented starting in 2015 and in conjunction with the implementation of the ecrt system. These revisions included ensuring all non-student personnel on sponsored projects are certifying their own effort, clarifying roles for all campus personnel involved in the effort process, and establishing clearer deadlines and consequences for missing these deadlines.

These updated policies and practices have been widely communicated to the University of Kansas research community as part of a broader educational effort to ensure that PIs and campus personnel understand their role and responsibilities within the process.

The controls this system provides, in conjunction with the improved processes and education for certifiers, provide reasonable assurance that KUCR is compliant with Federal regulations.

Sincerely,



Alicia M. Reed
Director of Research Administration
University of Kansas Center for Research, Inc.
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Lawrence, KS 66045

Appendix B: Objective, Scope, Methodology and Criteria

Objective

To determine if costs claimed by KUCR on NSF awards are allowable, allocable, reasonable, and in compliance with NSF and Federal financial assistance requirements.

Scope

Our audit included assessing the allowability, allocability, and reasonableness of costs claimed by KUCR through the Award Cash Management Service for the 3-year period beginning October 1, 2011, through September 30, 2014. NSF OIG obtained from KUCR all award transactions comprising all costs claimed to NSF during this period. This provided an audit universe of approximately \$72 million, in more than 119,000 transactions, across 289 individual NSF awards. For transaction testing, NSF OIG judgmentally selected 250 transactions totaling more than \$2.2 million and utilized a data analytics approach to identify potential risk areas.

The audit work was conducted at the auditors' offices; at NSF in Arlington, Virginia; and onsite at KUCR in Lawrence, Kansas. Onsite fieldwork was conducted during March and April 2017. At the conclusion of our fieldwork, we provided a summary of our results to NSF OIG personnel for review. We also provided the summary of results to KUCR personnel to ensure that they were aware of each of our findings and did not have any additional documentation to support the questioned costs.

KUCR management is responsible for establishing and maintaining effective internal control to help ensure that Federal award funds are used in compliance with laws, regulations, and award terms. In planning and performing our audit, we considered KUCR's internal control solely for the purpose of understanding the policies and procedures relevant to the financial reporting and administration of NSF awards in order to evaluate KUCR's compliance with laws, regulations, and award terms applicable to the items selected for testing, but not for the purpose of expressing an opinion on the effectiveness of KUCR's internal control over award financial reporting and administration. Accordingly, we do not express an opinion on the effectiveness of KUCR's internal control over its award financial reporting and administration.

This performance audit was conducted in accordance with Generally Accepted Government Auditing Standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for the conclusions based on the audit objective. The auditors believe that the evidence obtained provides a reasonable basis for the conclusions based on the audit objective.

Methodology

At NSF OIG's request, KUCR provided detailed transaction data for all costs charged to NSF awards for the period October 1, 2011, through September 30, 2014. NSF OIG reviewed available accounting and administration policies and procedures, relevant documented management

initiatives, previously issued external audit reports and desk review reports, and schedules and reconciliations prepared by KUCR and agreed them to supporting accounting records.

After verifying that the population of data was appropriate, NSF OIG analyzed the data contained in the KUCR general ledger and supporting detailed ledgers to identify anomalies, outliers, and aberrant transactions. NSF OIG then judgmentally selected a sample of transactions to test based on NSF OIG-defined criteria.

NSF OIG identified transactions for testing, provided this list to KUCR, and requested documentation to support each transaction. We reviewed the supporting documentation provided by KUCR and evaluated the allowability, allocability, and reasonableness of each transaction. When necessary, we requested additional supporting documentation, reviewed it, and obtained explanations and justifications from knowledgeable personnel until we had sufficient support to assess the allowability, allocability, and reasonableness of each transaction. Our work required us to rely on the computer-processed data obtained from KUCR and NSF OIG. We assessed NSF's computer-processed data and found it to be sufficiently reliable for the purposes of this audit.

Criteria

We assessed KUCR's compliance with its internal policies and procedures, as well as the following:

- 2 CFR Part 220, *Cost Principles for Educational Institutions* (OMB Circular A-21);
 - 2 CFR Part 215, *Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations* (OMB Circular A-110);
 - NSF Proposal and Award Policies and Procedures Guide (includes the *Grant Proposal Guide* and *Award and Administration Guide*);
 - NSF Award Specific Terms and Conditions; and
 - NSF Federal Demonstration Partnership Research Terms and Conditions.
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Appendix C: Questioned Costs Summary by Award

Award Number	Direct Costs	ITTC Fee	Indirect Costs	Total Questioned	Total Unsupported
Finding 1: Unreasonable Equipment					
	135,071	--	--	135,071	--
	29,600	--	--	29,600	--
	3,067	--	1,350	4,417	--
	2,335	--	607	2,942	--
Finding 1 Total	170,073	--	1,957	172,030	--
Finding 2: Unreasonable Travel					
	25,670	--	12,065	37,735	--
	11,485	--	5,053	16,538	--
	7,247	507	3,412	11,166	--
	6,890	482	3,391	10,763	--
	2,274	--	1,047	3,321	--
	3,284	--	1,445	4,729	--
	1,778	--	818	2,596	--
	1,530	--	--	1,530	--
	861	--	396	1,257	--
	551	--	270	821	--
	561	--	261	822	--
	131	9	66	206	--
Finding 2 Total	62,262	998	28,224	91,484	--
Finding 3: Inadequate Documentation and Unallowable Participant Support					
	42,054	--	--	42,054	14,055
Finding 3 Total	42,054	--	--	42,054	14,055
Finding 4: Improper ACM\$ Request					
	13,047	--	--	13,047	--
Finding 4 Total	13,047	--	--	13,047	--
Finding 5: Unreasonable or Unallowable Transactions					
	4,770	--	2,218	6,988	--
	1,264	--	586	1,850	--
Finding 5 Total	6,034	--	2,804	8,838	--
Finding 6: Purchases before Award Effective Date					
	1,015	71	510	1,596	--
Finding 6 Total	\$ 1,015	\$ 71	\$ 510	\$ 1,596	--



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