

Performance Audit of Incurred Costs - University of South Carolina

REPORT PREPARED BY WITHUM SMITH+BROWN, PC

NATIONAL SCIENCE FOUNDATION
OFFICE OF INSPECTOR GENERAL

June 29, 2021
OIG 21-1-016





AT A GLANCE

Performance Audit of Incurred Costs – University of South Carolina

Report No. OIG 21-1-016

June 29, 2021

AUDIT OBJECTIVE

The National Science Foundation Office of Inspector General engaged WithumSmith+Brown, PC (Withum) to conduct a performance audit of incurred costs at the University of South Carolina (UofSC) for the period March 1, 2016, to February 28, 2019. The auditors tested more than \$1.7 million of the \$40.9 million of costs claimed to NSF. The audit objective was to determine if costs claimed by UofSC on NSF awards were allowable, allocable, reasonable, and in compliance with NSF awards terms and conditions and Federal financial assistance requirements. A full description of the audit's objective, scope, and methodology is attached to the report as Appendix B.

AUDIT RESULTS

The report highlights concerns about UofSC's compliance with certain Federal and NSF award requirements. The auditors questioned \$140,360 of costs claimed by UofSC during the audit period. Specifically, the auditors identified \$93,738 in purchases and adjustments near or after award expiration, \$25,277 in inadequate documentation, \$20,883 in unallocable and unreasonable costs, and \$462 in foreign currency conversion errors. Withum is responsible for the attached report and the conclusions expressed in it. NSF OIG does not express any opinion on the conclusions presented in Withum's audit report.

RECOMMENDATIONS

The auditors included 4 findings in the report with associated recommendations for UofSC to provide supporting documentation that it has repaid the questioned costs and to ensure UofSC strengthens administrative and management controls.

AUDITEE RESPONSE

UofSC agreed with the findings in the report. UofSC's response is attached in its entirety as Appendix A.

FOR FURTHER INFORMATION, CONTACT US AT OIGPUBLICAFFAIRS@NSF.GOV.



National Science Foundation • Office of Inspector General
2415 Eisenhower Avenue, Alexandria, Virginia 22314

MEMORANDUM

DATE: June 29, 2021

TO: Dale Bell
Director
Division of Institution and Award Support

Jamie French
Director
Division of Grants and Agreements

FROM: Mark Bell [REDACTED]
Assistant Inspector General
Office of Audits

SUBJECT: Audit Report No. 21-1-016, University of South Carolina

This memorandum transmits the WithumSmith+Brown (Withum) report for the audit of costs charged by the University of South Carolina (UofSC) to its sponsored agreements with the National Science Foundation during the period March 1, 2016, to February 28, 2019. The audit encompassed more than \$1.7 million of the \$40.9 million claimed to NSF during the period. The objective of the audit was to determine if costs claimed by UofSC on NSF awards were allowable, allocable, reasonable, and in compliance with NSF awards terms and conditions and Federal financial assistance requirements. A full description of the audit's objective, scope, and methodology is attached to the report as Appendix B.

Please coordinate with our office during the 6-month resolution period, as specified by OMB Circular A-50, to develop a mutually agreeable resolution of the audit findings. 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 the Audit

Withum is responsible for the attached auditors' report and the conclusions expressed in this report. We do not express any opinion on the conclusions presented in Withum's audit report. To fulfill our responsibilities, we:

- reviewed Withum’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 Withum, as necessary, to discuss audit progress, findings, and recommendations;
- reviewed the audit report prepared by Withum; and
- coordinated issuance of the audit report.

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 Jae Kim at 703.292.7100 or OIGpublicaffairs@nsf.gov.

Attachment

cc:

Anneila Sargent
John Veysey
Ann Bushmiller
Christina Sarris
Fleming Crim
Judy Chu

Judy Hayden
Teresa Grancorvitz
Kim Silverman
Alex Wynnyk
Rochelle Ray
Ellen Ochoa

Victor McCrary
Carrie Davison
Allison Lerner
Lisa Vonder Haar
Ken Chason
Dan Buchtel

Ken Lish
Jae Kim
Jennifer Kendrick
Louise Nelson
Karen Scott
Priscilla Agyepong

University of South Carolina

Audit of Incurred Costs

National Science Foundation Office of Inspector General

June 25, 2021

OIG 21-1-016

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Abbreviations

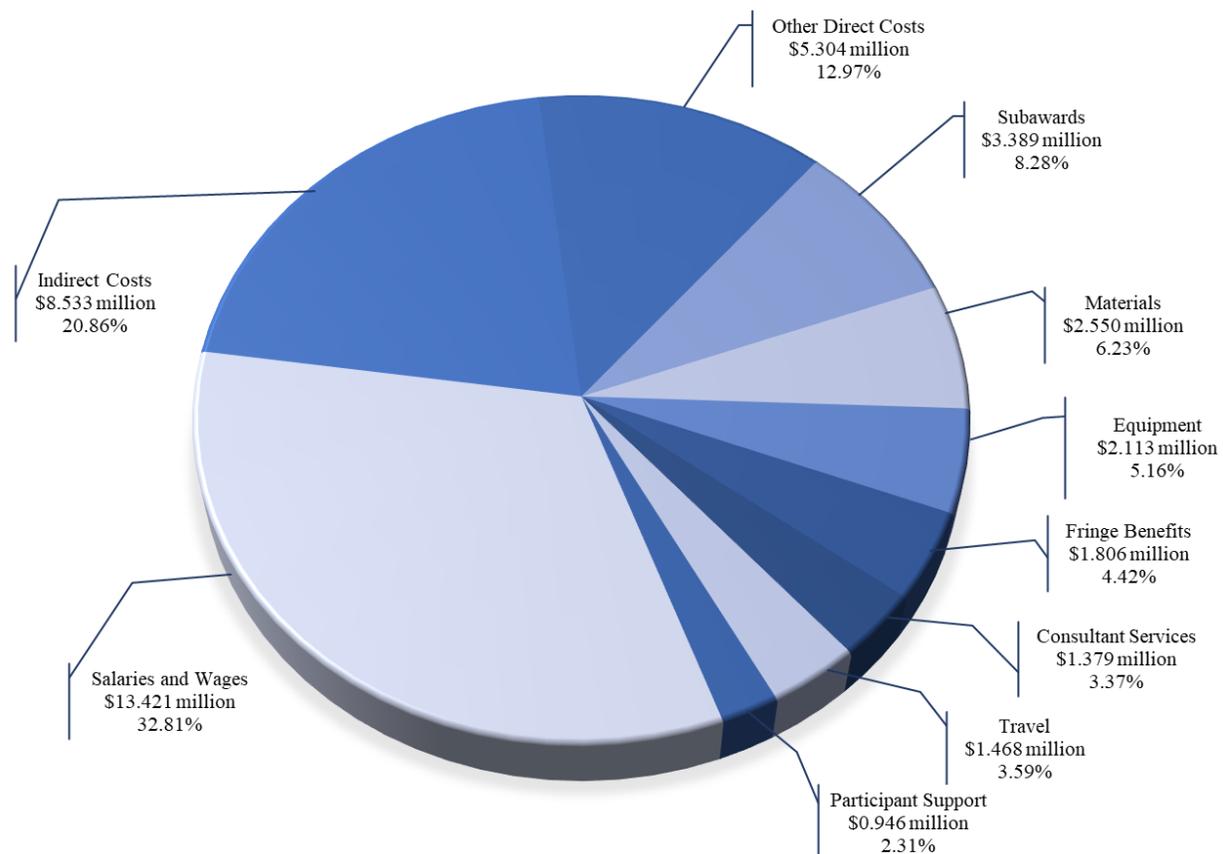
F&A	Facilities and Administrative (costs)
PAPPG	Proposal and Award Policies and Procedures Guide
PI	Principal Investigator
UofSC	University of South Carolina

Background

The National Science Foundation 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; and for other purposes.”¹ 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 awardees must follow Federal and NSF award regulations and guidance in administering NSF awards. The University of South Carolina (UofSC) is a comprehensive research university with annual sponsored research awards that totaled more than \$200 million for the past eight years. Between March 1, 2016, and February 28, 2019, UofSC claimed approximately \$40.9 million in expenditures on 234 NSF awards. See Figure 1 for an analysis of these costs by budget category.

Figure 1. Costs Claimed by NSF Budget Category, March 1, 2016, to February 28, 2019



Source: Auditor summary of accounting data provided by UofSC

¹ National Science Foundation Act of 1950, Pub. L. No. 81-507

Results of Audit

NSF OIG engaged WithumSmith+Brown, PC (referred to as “we”) to audit the costs claimed by UofSC on NSF awards for the period beginning March 1, 2016, and ending February 28, 2019. In our testing of 262 judgmentally selected transactions, we identified 49 transactions totaling \$140,360 of questioned costs charged to 21 NSF awards. Improved oversight is needed in four areas to ensure costs claimed are reasonable, necessary, and in accordance with Federal and NSF award requirements. The four areas include: 1) \$93,738 in purchases and adjustments near or after award expiration; 2) \$25,277 of inadequate documentation; 3) \$20,883 in unallocable and unreasonable costs; and 4) \$462 in foreign currency conversion errors. See Appendix C for a schedule of questioned costs by award.

Finding 1: Purchases and Adjustments Near or After Award Expiration

We questioned \$93,738 for purchases and adjustments near or after the end of award periods for items that were not allowable under Federal regulations² and NSF Proposal and Award Policies and Procedures Guides (PAPPG).³

Equipment, Materials, and Supplies Purchased, Received, or Adjusted at the End of the Award

We questioned 21 transactions, charged to eight awards, totaling \$93,738, for the purchase of equipment, materials, and supplies, and for adjustments made, near or after the award expiration date. The purchases and adjustments do not appear reasonable, necessary, fully allocable, or to provide benefit to the awards charged, as shown in Table 1.

² According to 2 CFR Part 220, Appendix A, §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....” Additionally, according to 2 CFR Part 220, Appendix A, §C.4, “[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....” According to 2 CFR §200.403(a), a cost must be necessary, reasonable and allocable to be allowable under a Federal award. Additionally, according to 2 CFR §200.405(a), “[a] cost is allocable to a particular Federal award or other cost objective if the goods or services involved are chargeable or assignable to that Federal award or cost objective in accordance with relative benefits received....”

³ According to NSF PAPPGs 14-1, 15-1, and 16-1, Part II, Chapter V.A.2.c and 17-1, Chapter X.A.2.c., grantees “typically should not purchase items of equipment, computing devices, or restock materials and supplies in anticipation of grant expiration when there is little or no time left for such items to be utilized in the actual conduct of the research.”

Table 1. Transactions and Adjustments Near or After the Award Expiration

Description	Award Number	Questioned Invoice	Questioned F&A	Questioned Total	Days Remaining in Award Period	UofSC Agreed to Reimburse
Tube Assemblies		\$ 13,680	\$ --	\$ 13,680	(46)	\$ 13,680
Tube Assemblies		13,654	--	13,654	(11)	13,654
Apple Computer		4,616	2,146	6,762	44	6,762
Probes		4,484	1,480	5,964	--	5,964
Apple Computer		3,390	1,576	4,966	54	4,966
Cisco System		3,376	1,519	4,895	(6)	4,895
Tablet and Phone		3,186	1,434	4,620	43	4,620
Digestion Bombs		2,945	1,326	4,271	7	4,271
Apple Computer		2,722	1,225	3,947	27	3,947
Apple Computer		2,654	1,194	3,848	28	3,848
Drone and Sensor		2,515	1,170	3,685	(165)	3,685
Lab Supplies		2,420	799	3,219	(9)	3,219
Tablet		2,362	1,063	3,425	9	3,425
Apparatus		2,331	1,049	3,380	(26)	3,380
Gaming Laptop, Monitor and Support		2,085	938	3,023	2	3,023
Apple Laptop		1,785	803	2,588	29	2,588
Access Probes		1,528	504	2,032	--	2,032
Lab Supplies		1,099	494	1,593	--	1,593
Lab Supplies		1,026	338	1,364	(9)	1,364
User Licenses		1,018	474	1,492	64	1,492
Lab Supplies		1,000	330	1,330	(9)	1,330
		\$ 73,876	\$ 19,862	\$ 93,738		\$ 93,738

Source: Auditor analysis of questioned transactions

The questioned items include:

- Tube Assemblies – \$13,680 on NSF Award No. [REDACTED] for photomultiplier tube assemblies that were purchased on September 15, 2016, on an award that expired on July 31, 2016. The equipment was purchased and received 1.5 months after the award expiration and therefore could not benefit this award.
- Tube Assemblies – \$13,654 on NSF Award No. [REDACTED] for photomultiplier tube assemblies that were purchased on August 11, 2016, on an award that expired on July 31, 2016. The equipment was purchased 11 days after the award expiration and therefore could not benefit this award.
- Apple Computer – \$6,762 on NSF Award No. [REDACTED] for the purchase of an iMac, monitor, and accessories on July 18, 2017, on an award that expired August 31, 2017. The computer and accessories were available for 6 percent of the award period (44 out of 730 days). According to UofSC, this purchase was charged to this account due to the PI's oversight or miscommunication. Although the computing capabilities were beneficial to the award, the outcome could have been achieved with other available resources. The

computer and accessories were not necessary, reasonable, fully allocable, or prudent for the administration of the award.

- Probes – \$5,964 on NSF Award No. [REDACTED] for the purchase of various probes on February 28, 2017, the same day as the NSF award expiration. The probes were received after the award expiration and therefore could not benefit this award.
- Apple Computer – \$4,966 on NSF Award No. [REDACTED] for the purchase of a MacBook Pro on December 8, 2017, on an award that expired January 31, 2018. The PI stated that his old computer failed and he needed a new computer, but this computer was not used exclusively on this NSF award. The computer, charged 100 percent to this NSF award, was only available for 8 percent of the award period (54 out of 640 days). Given the limited time remaining, this charge does not appropriately reflect the relative benefits received by the award.
- Cisco System – \$4,895 on NSF Award No. [REDACTED] for the purchase of a system ordered on July 6, 2016, on an award that expired on June 30, 2016. The item was ordered 6 days after the award expiration and therefore could not benefit this award.
- Tablet and Phone – \$4,620 on NSF Award No. [REDACTED] for the purchase of a Surface Pro 4 and Nexus 5x Phone, ordered on May 18, 2016, on an award that expired June 30, 2016. The tablet and phone were available for 3 percent of the award period (43 out of 1,245 days), but were charged 100 percent to the NSF award. Given the limited time remaining, this charge does not appropriately reflect the relative benefits received by the award.
- Digestion Bombs – \$4,271 on NSF Award No. [REDACTED] for 70 percent of the cost of six acid digestion bombs that were shipped on July 24, 2017, on an award that expired July 31, 2017. The supplies were available for less than 1 percent of the award period (7 out of 1,460 days). UofSC could not provide support for the allocation methodology, and given the limited time remaining, this charge does not appear to appropriately reflect the relative benefits received by the award.
- Apple Computer – \$3,947 on NSF Award No. [REDACTED] for the purchase of a computer that was shipped on June 3, 2016, on an award that expired June 30, 2016. The computer was available for 2 percent of the award period (27 out of 1,245 days), but was charged 100 percent to the NSF award. Given the limited time remaining, this charge does not appropriately reflect the relative benefits received by the award.
- Apple Computer – \$3,848 on NSF Award No. [REDACTED] for the purchase of a computer that was shipped on June 2, 2016, on an award that expired June 30, 2016. The computer was available for 2 percent of the award period (28 out of 1,245 days), but was charged 100 percent to the NSF award. Given the limited time remaining, this charge does not appropriately reflect the relative benefits received by the award.
- Drone and Sensor – \$3,685 on NSF Award No. [REDACTED] for the purchase of a drone and altitude sensor. The items were purchased on October 26, 2016, but were not posted to the NSF award until February 12, 2018. The posting occurred 15-months after the original purchase, and 6-months after the award expiration on August 31, 2017. According to the documentation provided, the items were related to the award. Per UofSC response, these expenses were charged to the incorrect account, and during reconciliation of the NSF

award, they discovered and corrected the oversight. There were 309 days remaining on the award when the purchase was made; however, the purchase was not moved on to the award until 165 days after expiration.

- Lab Supplies – \$3,219 on NSF Award [REDACTED] for the purchase of mounting bases, clamps, and magnesium oxide on June 29 and July 21, 2016. These purchases were not transferred to the NSF award until March 9, 2017, 9 days after the award expiration on February 28, 2017. According to UofSC, the laboratory supplies were purchased to replace those used up by REU students.
- Tablet – \$3,425 on NSF Award [REDACTED] for the purchase of a Surface Pro 4 ordered on June 21, 2016, on an award that expired on June 30, 2016. The tablet was ordered with less than 1 percent of the award period remaining (9 out of 1,245 days), but was charged 100 percent to the NSF award. Given the limited time remaining, this charge does not appropriately reflect the relative benefits received by the award.
- Apparatus – \$3,380 on NSF Award [REDACTED] for the purchase of a stress/strain apparatus that was ordered on June 20, 2016 and shipped on July 26, 2016, on an award that expired on June 30, 2016. The apparatus was received after the award expiration and therefore could not benefit this award.
- Gaming Laptop, Monitor, and Support – \$3,023 on NSF Award [REDACTED] for the purchase of an Alienware 17 gaming laptop, monitor, and software support that was ordered on June 28, 2016, 2 days prior to the award expiration on June 30, 2016. The items were ordered 2 days prior to the award expiration and therefore could not benefit this award.
- Apple Laptop – \$2,588 on NSF Award [REDACTED] for the purchase of a computer that was shipped on June 1, 2016, on an award that expired June 30, 2016. The computer was available for 2 percent of the award period (29 out of 1,245 days), but was charged 100 percent to the NSF award. Given the limited time remaining, this charge does not appropriately reflect the relative benefits received by the award.
- Access Probes – \$2,032 on NSF Award [REDACTED] for the purchase of access probes that were shipped on February 28, 2017, the same day as the NSF award expiration. The access probes were received after the award expiration and therefore could not benefit this award.
- Lab Supplies – \$1,593 on NSF Award [REDACTED] for the purchase of consumable lab supplies that were invoiced and shipped between April 30 and May 23, 2018, on an award that expired April 30, 2018. The supplies were received after the award expiration and therefore could not benefit this award.
- Lab Supplies – \$1,364 on NSF Award [REDACTED] for the purchase of various lab supplies between June 24, 2016 and July 19, 2016, that were not transferred to the NSF award until March 9, 2017, 9 days after the award expiration on February 28, 2017. Per UofSC, these purchase card items were originally posted to the incorrect account.
- User Licenses – \$1,492 on NSF Award [REDACTED] for 30 percent of the renewal of annual software licenses on June 28, 2017, on an award that expired on August 31, 2017. The software was available for approximately 6 percent of the award period (64 out of 1,095 days).

- Lab Supplies – \$1,330 on NSF Award [REDACTED] for the purchase of lab supplies on September 1, 2016, that were not transferred to the NSF award until March 9, 2017, 9 days after the award expiration on February 28, 2017. Per UofSC, these were laboratory supplies purchased to replace those used up by REU students.

The UofSC personnel did not adequately review these questioned expenditures, which resulted in unreasonable costs. Enhanced oversight procedures and controls should be adopted to review expenditures charged near or after the end of the award period. Having improved oversight processes ensures costs are reasonable and allowable, thus reducing the risk that funds may not be used as required to accomplish the necessary project objectives in accordance with Federal and NSF PAPPG requirements. UofSC concurred with all \$93,738 of the questioned costs, as illustrated in Table 1.

Recommendations

We recommend that NSF’s Director of the Division of Institution and Award Support:

1. Direct UofSC to provide documentation supporting that it has repaid or otherwise credited the \$93,738 of questioned equipment, material, and supply costs for which it has agreed to reimburse NSF.
2. Direct UofSC to strengthen the administrative and management controls, training, processes, and procedures over expenditures near the end of an award. Processes could include requiring UofSC to review all equipment and materials/supplies purchased during the final 90 days of an award’s period of performance to evaluate whether the costs are allocable in accordance with all relevant Federal and sponsor-specific regulations before charging the expenses to a sponsored project.

Summary of Awardee Response

UofSC agrees with this finding. See Appendix A for the complete UofSC response.

Auditor’s Additional Comments

UofSC’s comments are responsive to this finding. Once NSF determines that the recommendations have been adequately addressed and the \$93,738 in questioned costs have been resolved, this finding should be closed.

Finding 2: Inadequate Documentation

We identified \$25,277 of costs charged to six awards that were not adequately supported and therefore not in compliance with Federal requirements⁴ and UofSC policy,⁵ as shown below in Table 2.

Table 2. Description of Questioned Transaction Due to Inadequate Documentation

Description	Award Number	Total Questioned*	Award Expiration or Final Report Date	Date UofSC was Notified of Audit	Retention Period End Date	UofSC Agreed to Reimburse
Documentation provided does not support transactions selected:						
Lab Supplies	██████████	\$ 1,275	05/31/2017	03/25/2019	06/01/2020	\$ 1,275
Materials and Supplies	██████████	2,442	06/30/2018	03/25/2019	07/01/2021	2,442
Subtotal		3,717				3,717
Documentation provided was missing supporting invoice:						
Lab Supplies	██████████	6,602	05/31/2017	03/25/2019	06/01/2020	6,602
Bad Debt Expense	██████████	5,183	11/29/2016	03/25/2019	Once the audit findings have been resolved and final action has been taken	5,183
Materials and Supplies	██████████	2,438	06/30/2018	03/25/2019	07/01/2021	2,438
Laboratory Analysis	██████████	3,370	07/31/2018	03/25/2019	08/01/2021	3,370
Lab Supplies	██████████	2,056	07/31/2018	03/25/2019	08/01/2021	2,056
Various Supplies	██████████	1,911	07/31/2020	03/25/2019	08/01/2023	1,911
Subtotal		21,560				21,560
Total		\$ 25,277				\$ 25,277

Source: Auditor analysis of questioned transactions

*Total questioned includes the applicable F&A costs.

⁴ 2 CFR § 200.333 states: “Financial records, supporting documents, statistical records, and all other non-Federal entity records pertinent to a Federal award must be retained for a period of three years from the date of submission of the final expenditure report...Federal awarding agencies and pass-through entities must not impose any other record retention requirements...”

2 CFR 215.53(b) states: “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...” 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.”

⁵ Per University of South Carolina, BUSA Business Affairs, Purchasing Policy, BUSA 7.00, “all documentation of purchases (sales, slips, receipts, packing lists, etc.) and monthly statements must be reconciled and maintained for internal and external audit.”

Specifically, we questioned:

- Lab Supplies – \$7,877 in NSF Award No. [REDACTED] for lab supplies. Supporting documentation could not be located for \$6,602 in lab supply purchases. For the remaining \$1,275, the documentation that was provided did not agree to the total expenditures. Therefore, we were unable to verify the validity of the transactions.
- Bad Debt Expense – \$5,183 in NSF Award No. [REDACTED] for bad debt expenditures. Supporting documentation could not be located. Furthermore, bad debt expenditures are unallowable.
- Materials and Supplies – \$4,880 in Award No. [REDACTED] for various supplies. Supporting documentation was not provided. For \$2,438, UofSC did not retain the supporting invoices. For the remaining \$2,442, UofSC provided documentation acknowledging the receipt of a UofSC purchase order dated July 7, 2016, but did not provide the documentation to support the transaction. Additionally, this acknowledgement did not correspond to the total expenditure. Per UofSC, documentation is maintained by the departments. With staff turnover, administrative error resulted in missing receipts and the untimely identification of the issue.
- Laboratory Analysis – \$3,370 in NSF Award No. [REDACTED] for payment for a laboratory analysis. Supporting documentation was not provided. UofSC provided an email from the PI requesting the expenditure be billed to the award, but no other documentation was provided.
- Lab Supplies – \$2,056 in NSF Award No. [REDACTED] for the purchase of lab supplies. Supporting documentation was not provided. The transaction selected included 13 invoices. UofSC was unable to provide support for 7 of the 13 invoices. Therefore, we could not verify the validity of the purchases.
- Various Supplies – \$1,911 in NSF Award No. [REDACTED] for the purchase of various supplies. Supporting documentation was not provided. Per UofSC, documentation is maintained by the departments. With staff turnover, an administrative oversight resulted in missing receipts and the untimely identification of the issue.

UofSC did not retain or provide adequate documentation, which resulted in unallowable costs. Without a process to ensure that documentation is available and accessible in accordance with Federal requirements, there is increased risk that funds may not be used as required to accomplish the necessary project objectives. UofSC concurred with all \$25,277 of the questioned costs, as illustrated in Table 2.

Recommendations

We recommend that NSF’s Director of the Division of Institution and Award Support:

1. Direct UofSC to provide documentation supporting that it has repaid or otherwise credited the \$25,277 of questioned unsupported costs for which it has agreed to reimburse NSF.
2. Direct UofSC to strengthen the administrative and management controls, training, processes, and procedures related to document retention.

Summary of Awardee Response

UofSC agrees with this finding. See Appendix A for the complete UofSC response.

Auditor’s Additional Comments

UofSC’s comments are responsive to this finding. Once NSF determines that the recommendations have been adequately addressed and the \$25,277 in questioned costs have been resolved, this finding should be closed.

Finding 3: Unallocable and Unreasonable Costs

We questioned 20 transactions in eight categories, charged to seven awards, totaling \$20,883, for various unallocable or unreasonable purchases.⁶ These purchases do not appear reasonable, necessary, fully allocable, or to provide benefit to the awards charged, as noted below in Table 3.

Table 3. Summary of Unallocable and Unreasonable Costs

Description	Award Number	Questioned Invoice	Questioned Fringe	Questioned F&A	Questioned Total	UofSC Agreed to Reimburse
Salaries and Wages	██████	\$ 4,912	\$ 276	\$ 2,412	\$ 7,600	\$ 7,600
Research Materials	██████	5,450	--	1,826	7,276	7,276
Travel	██████	2,310	--	1,074	3,384	3,384
Travel		900	--	405	1,305	1,305
Publication Costs	██████	599	--	257	856	856
Registration Fee		128	--	60	188	188
Cleaning Supplies	██████	123	--	57	180	180
Rental Car Gas	██████	64	--	30	94	94
Total		\$ 14,486	\$ 276	\$ 6,121	\$ 20,883	\$ 20,883

Source: Auditor analysis of questioned transactions

⁶ According to 2 CFR Part 220, Appendix A, §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.” Additionally, according to 2 CFR §200.405(a), “[a] cost is allocable to a particular Federal award or other cost objective if the goods or services involved are chargeable or assignable to that Federal award or cost objective in accordance with relative benefits received.”

Specifically, we questioned:

- \$7,600 in NSF Award No. [REDACTED] for salaries and wages that were charged to the award in error. Per UofSC, "Upon inspection, it was discovered this was charged in error due to a keying mistake. This expense has been removed and charged to a departmental account."
- \$7,276 in NSF Award No. [REDACTED] for research materials that were charged to the award in error. The PI is responsible for reviewing the fiscal reports to ensure all charges are properly recorded.⁷ Expenditures were allocated to this award on June 22, 2017, 99 days after the award began on March 15, 2017. However, it was not until documentation was provided in relation to this audit that the expenditures were identified as unallocable to the award, 803 days after the final reimbursement was requested through ACM\$.
- \$3,384 in NSF Award No. [REDACTED] for travel expenses for the PI to meet with a collaborator and attend a meeting at the University [REDACTED]. Per UofSC, this expense should not have been charged to the award, and was the result of a clerical error. Due to staff turnover, this error was not caught until final reconciliation of the award at closeout.
- \$1,305 in NSF Award No. [REDACTED] for airfare and meals per diem that did not benefit the award. We questioned \$1,222 for the purchase of a flight that did not benefit the NSF award. UofSC stated that it purchased airfare, but the travel agency booked the ticket under the wrong name. The travel agency could not change the ticket, so it had to purchase another ticket. Both flights were inappropriately charged to the NSF award.

Additionally, we questioned \$83 in NSF Award No. [REDACTED] for meals that did not benefit the NSF award. The meeting was from May [REDACTED], 2016. The traveler arrived in [REDACTED] on May [REDACTED], 2016, 3 days before the meeting was held. Therefore, we questioned the meals charged on May [REDACTED] and May [REDACTED] as they did not benefit the NSF award.

- \$856 in NSF Award No. [REDACTED] for publication costs. According to UofSC, the expenses were incurred to cover the publication costs of the results generated from the project. However, the invoice provided was for an advertisement for a job posting described as a Postdoctoral Position in Plant Biology.
- \$188 in NSF Award No. [REDACTED] for a portion of a conference registration fee. UofSC provided a Travel Authorization form showing the conference registration fee was \$501, but did not provide a receipt supporting the registration fee. UofSC charged \$128 of the conference registration fee to the NSF award and stated that the remaining amount was covered by departmental funds. UofSC stated that the PI is no longer with UofSC and was unable to provide any additional justification for the allocation.
- \$180 in NSF Award No. [REDACTED] for the purchase of general purpose cleaning supplies.
- \$94 in NSF Award No. [REDACTED] charged for gas for a rental car. UofSC stated "While a rental car is mentioned, no expenses were charged or reimbursement sought." However, gas for the rental car was charged to the NSF award.

UofSC personnel did not adequately review these expenditures, which resulted in unallocable costs. Enhanced oversight procedures and controls should be adopted to review expenditures charged to the award. Having improved oversight processes ensures costs are reasonable and

⁷ UofSC Policy, FINA 3.15, *Contracts and Grants -- Closeouts*

allowable, thus reducing the risk that funds may not be used as required to accomplish the project objectives in accordance with Federal regulations and NSF PAPPG requirements.⁸ UofSC concurred with all \$20,883 of the questioned costs, as illustrated in Table 3.

Recommendations

We recommend that NSF’s Director of the Division of Institution and Award Support:

1. Direct UofSC to provide documentation supporting that it has repaid or otherwise credited the \$20,883 of questioned unallocable and unreasonable costs for which it has agreed to reimburse NSF.
2. Direct UofSC to strengthen the administrative and management controls, training, processes, and review procedures for the NSF award expenditures.

Summary of Awardee Response

UofSC agrees with this finding. See Appendix A for the complete UofSC response.

Auditor’s Additional Comments

UofSC’s comments are responsive to this finding. Once NSF determines that the recommendations have been adequately addressed and the \$20,883 in questioned costs have been resolved, this finding should be closed.

Finding 4: Foreign Currency Conversion Error

UofSC claimed excess costs of \$462 on two NSF awards. The overcharge occurred because UofSC failed to properly convert [REDACTED] and [REDACTED] [REDACTED] to US Dollars before the costs were charged to the awards.

- \$312 on NSF Award No. [REDACTED] for an equipment purchase that was recorded using the incorrect exchange rate. UofSC could not provide documentation to support the exchange rate used.
- \$150 on NSF Award No. [REDACTED] for a visa charge that was recorded using the incorrect exchange rate. UofSC made a reimbursement, however the amount was in [REDACTED] [REDACTED] and should have been converted to US Dollars.

UofSC acknowledged the errors when providing responses to the audit.

⁸ According to NSF PAPPGs 13-1, 15-1, and 16-1, Part II, Chapter V.A, and 17-1 and 18-1, Chapter X Section A, ...grantees are responsible for ensuring that all costs charged to NSF awards meet the requirements of the applicable cost principles, grant terms and conditions, and requirements of the award terms and conditions and the applicable program solicitation.

Without a process in place to ensure the proper charging of expenditures that require foreign currency conversion, there is an increased risk that funds may not be spent in accordance with Federal regulations.⁹ UofSC personnel did not adequately monitor the expenditures requiring foreign currency conversion charged to NSF awards which resulted in unallowable costs. UofSC concurred with all \$462 of questioned costs.

Recommendations

We recommend that NSF's Director of the Division of Institution and Award Support:

1. Direct UofSC to provide documentation supporting that it has repaid or otherwise credited the \$462 of questioned currency conversion costs for which it has agreed to reimburse NSF.
2. Direct UofSC to strengthen processes for reviewing and approving costs charged to NSF awards that require foreign currency conversion.

Summary of Awardee Response

UofSC agrees with this finding. See Appendix A for the complete UofSC response.

Auditor's Additional Comments

UofSC's comments are responsive to this finding. Once NSF determines that the recommendations have been adequately addressed and the \$462 in questioned costs have been resolved, this finding should be closed.



June 25, 2021

⁹ 2 CFR §200.403(a), states that a cost must be necessary, reasonable and allocable to be allowable under a Federal award. Furthermore, per §200.400(d), "the accounting practices of the non-Federal entity must be consistent with these cost principles and support the accumulation of costs as required by the principles, and must provide for adequate documentation to support costs charged to the Federal award."

Appendix A: Awardee Response



Office of the Controller

May 17, 2021

National Science Foundation
Office of Inspector General
2415 Eisenhower Ave
Alexandria, VA 22314

Subj: Audit of Incurred Costs – Management Response

To Whom It May Concern:

Please find herein our management response to the questioned costs identified in the discussion draft report. If you have any questions, please do not hesitate to contact us.

Finding 1: Purchases and Adjustments Near or After Award Expiration

Management agrees with the finding and recommendation. The University of South Carolina understands the importance of accurate and timely expense allocation to awards. Within the last several years, the Grants and Funds Management Office has experienced more than 80% turnover in staff. As a result, the University seized the opportunity to evaluate and upgrade the positions to gain a more experienced and knowledgeable staff of accountants, including hiring a new Director and Assistant Director in FY18. Since FY18, the Controller's Office has developed new financial reporting tools and implemented several enhancements to current resources to assist faculty and staff in the review, management, and reconciliation of their awards. New resources include the development of the Grant Dashboard and the creation of a new Time and Effort Reporting system. Enhancements include an upgraded payroll reporting tool, enhanced expense transaction workflow approvals, and implementation of several automated notifications alerting PIs and Project Team members as the award end date approaches. The Controller's Office has also developed training webinars specifically targeted for researchers and grant administration staff. These webinars are available on demand and offered live several times throughout the year. The Controller's Office has also implemented a comprehensive Cost Transfer Policy. Internally, the Grants and Funds Management Office has also enhanced procedures for closing out grant awards and reviewing transactions for compliance. The Controller's Office has also created a Compliance Department to ensure established policies and procedures are followed. The majority of the findings (35 out of the 262 selections or 71%) occurred in FY16 and FY17 with a dramatic decrease in FY18 and FY19 as shown in the table below. We believe the decrease is a direct result of the various process improvements we've made

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across the Controller’s Office and University. UofSC also received no findings related to research and development awards in the FY20 single audit.

Fiscal Year	Total NSF Selections	Number of Findings	Percentage Per FY
FY16	60	6	12%
FY17	79	29	59%
FY18	65	10	20%
FY19	58	4	8%
Total	262	49	100%

Finding 2: Inadequate Documentation

Management agrees with the finding and recommendation. The University of South Carolina understands the importance of retaining adequate documentation and is committed to ensuring documentation is available and accessible in accordance with federal, state, and University requirements. The Controller’s Office is currently in the process of implementing Hyland OnBase, an electronic record system. Once complete, all Controller Office documents will be electronic and available on demand for all central departments (payroll, accounts payable, travel, etc.). The Controller’s Office has also hired a Records Manager to maintain the system and overall record retention for the Controller’s Office. Since FY17, the Controller’s Office has also implemented the expense module within PeopleSoft Finance for employee reimbursement and travel. Expense module training is offered monthly to ensure users are properly educated and appropriate documentation is attached to support all costs. Live webinars are also hosted annually to review the various types of payment requests and their associated documentation requirements; these webinars are recorded and available for researchers and grant administration staff to view on demand along with job aids.

Finding 3: Unallocable and Unreasonable Costs

Management agrees with the finding and recommendation. The University of South Carolina understands the importance of reviewing expenditures to ensure costs are reasonable and allowable. Within the last several years, the Grants and Funds Management Office has experienced more than 80% turnover in staff. As a result, the University seized the opportunity to evaluate and upgrade the positions to gain a more experienced and knowledgeable staff of accountants, including hiring a new Director and Assistant Director in FY18. With new and higher level staff, emphasis has been placed on oversight procedures and controls to ensure costs are allowable and reasonable. The Controller’s Office has also developed training webinars specifically targeted for researchers and grant administration staff. These trainings are available on demand and offered live several times throughout the year. The Controller’s Office has also implemented a comprehensive Cost Transfer Policy. Internally, the Grants and Funds Management Office has also enhanced procedures for closing out grant awards and reviewing transactions for compliance. The Controller’s Office has also created a Compliance Department to ensure established policies and procedures are followed. The majority of the findings (35 out of the 262 selections or 71%) occurred in FY16 and FY17 with a dramatic decrease in FY18 and FY19 as shown in the table below. We believe the decrease is a direct result of the various process improvements we’ve made across the

Controller's Office and University. UofSC also received no findings related to research and development awards in the FY20 single audit.

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FY16	60	6	12%
FY17	79	29	59%
FY18	65	10	20%
FY19	58	4	8%
Total	262	49	100%

Finding 4: Foreign Currency Conversion Error

Management agrees with the finding and recommendation. The University of South Carolina is committed to ensuring expenses are converted to the proper currency and allocated in accordance with federal regulations. The Controller's Office has reviewed these errors and noted that they both occurred in FY17 and believes sufficient controls, process improvements, and enhanced oversight have been implemented to prevent these errors from reoccurring. Staff have been trained to review all invoices, receipts, and requests for reimbursement and convert any foreign currency to US\$ prior to issuing payments. The Controller's Office has also discussed the currency conversion errors with the Central Accounts Payable staff as well as the Leadership staff of the colleges in which the error occurred.

Sincerely,



Mandy Kibler
Associate Vice President and University Controller
University of South Carolina

Appendix B: Objective, Scope, Methodology, and Criteria

Objective

To determine if costs claimed by UofSC on NSF awards were allowable, allocable, reasonable, and in compliance with NSF award terms and conditions and Federal financial assistance requirements.

Scope

Our audit included assessing the allowability, allocability, and reasonableness of costs claimed by UofSC through the Award Cash Management Service for the 3-year period beginning March 1, 2016, and ending February 28, 2019.

The audit was conducted in two phases: an Audit Survey Phase and an Incurred Cost Audit Phase. The audit work was conducted at the auditors' offices and onsite at UofSC in Columbia, SC. Onsite Audit Survey fieldwork was conducted in November 2019. Offsite Incurred Cost fieldwork continued in October 2020.

UofSC 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 UofSC's internal control solely to understand the policies and procedures relevant to the financial reporting and administration of NSF awards. We also evaluated UofSC's compliance with laws, regulations, and award terms applicable to the items selected for testing, but not to express an opinion on the effectiveness of UofSC's internal control over award financial reporting and administration. Accordingly, we do not express an opinion on the effectiveness of UofSC'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

The audit was conducted in two phases: an Audit Survey Phase and an Incurred Cost Audit Phase. The Audit Survey Phase was conducted as follows:

- UofSC provided detailed transaction data for all costs charged to NSF awards for the period March 1, 2016, through February 28, 2019. This provided an audit universe of \$40,909,723, with more than 43,000 transactions, across 234 individual NSF awards.
- We assessed the reliability of the data provided by UofSC by 1) comparing costs charged to NSF award accounts within UofSC's accounting records to reported net expenditures,

as reflected in UofSC's financial reports submitted to NSF for the corresponding periods; 2) performing general ledger to sub-ledger reconciliations of accounting data; and 3) reviewing and testing the parameters UofSC used to extract transaction data from its accounting records and systems. Based on our testing, we found UofSC's computer-processed data sufficiently reliable for the purposes of this audit.

- We conducted onsite walk-throughs and interviews to gain a detailed understanding of UofSC's systems, processes, policies, and procedures.
- We obtained and 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 UofSC and verified them against supporting accounting records. To ensure that the internal controls were properly designed to detect, deter, and prevent fraud, errors and irregularities, we judgmentally selected a sample of 33 transactions designed to test various internal controls. These transactions were tested to assess the internal controls, the applicable policies and procedures, and the compliance with Federal regulations, NSF PAPPG's and the award terms.
- At the conclusion of our fieldwork, we provided a summary of our results and recommendation to NSF OIG personnel for review and approval.

Based on the issues identified during the Survey Phase, we determined that an additional Incurred Cost Audit phase was warranted. The Incurred Cost Phase was conducted as follows:

- We judgmentally selected 229 transactions, totaling more than \$1.7 million based on issues identified in the Survey Phase.
- Selected transactions were provided to UofSC, with a request for the documentation to support each transaction.
- We conducted additional audit work in the following areas: 1) follow-up on general ledger ACM\$ reconciliation issues, 2) ensured participant support costs were fully expended, and if not, that UofSC received prior approval as necessary, 3) obtained additional information on cost share, and 4) reviewed the indirect costs rates applied.
- We reviewed the supporting documentation provided by UofSC and evaluated the allowability, allocability, and reasonableness of each transaction.
- When necessary, we requested additional supporting documentation.
- We also obtained explanations and justifications from knowledgeable personnel until we had sufficient support to assess the allowability, allocability, and reasonableness of each transaction.

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 UofSC personnel to ensure that they were aware of each of our findings and did not have any additional documentation to support the questioned costs.

Our work required us to rely on the computer-processed data obtained from UofSC and NSF OIG. We assessed NSF's computer-processed data and found it to be sufficiently reliable for the purposes of this audit. We did not review or test whether the data contained in, or controls over, NSF's databases were accurate or reliable; however, the independent auditor's report on NSF's financial statements for fiscal years 2016, 2017 and 2018 found no reportable instances in which NSF's financial management systems did not substantially comply with applicable requirements.

Criteria

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

- 2 CFR Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*
- 2 CFR Part 220, *Cost Principles for Educational Institutions* (Office of Management and Budget 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* (Office of Management and Budget 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

Appendix C: Questioned Costs Summary by Award

Award Number	Direct Costs Questioned	Fringe Benefits Questioned	Indirect Costs Questioned	Total Questioned	Total Unsupported
Finding 1: Purchases and Adjustments Near or After Award Expiration					
	\$ 27,334	\$ --	\$ --	\$ 27,334	--
	20,501	--	9,225	29,726	--
	10,458	--	3,451	13,909	--
	7,131	--	3,316	10,447	--
	3,390	--	1,576	4,966	--
	2,945	--	1,326	4,271	--
	1,099	--	494	1,593	--
	1,018	--	474	1,492	--
Finding 1 Total	73,876	--	19,862	93,738	--
Finding 2: Inadequate Documentation					
	5,377	--	2,500	7,877	7,877
	5,183	--	--	5,183	5,183
	3,366	--	1,514	4,880	4,880
	2,300	--	1,070	3,370	3,370
	1,403	--	653	2,056	2,056
	1,304	--	607	1,911	1,911
Finding 2 Total	18,933	--	6,344	25,277	25,277
Finding 3: Unallocable and Unreasonable Costs					
	4,912	276	2,412	7,600	--
	5,450	--	1,826	7,276	--
	2,438	--	1,134	3,572	--
	900	--	405	1,305	--
	599	--	257	856	--
	123	--	57	180	--
	64	--	30	94	--
Finding 3 Total	14,486	276	6,121	20,883	--
Finding 4: Foreign Currency Conversion Error					
	312	--	--	312	--
	102	--	48	150	--
Finding 4 Total	414	--	48	462	--



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