Performance Audit of Incurred Costs – University of North Carolina, Charlotte

REPORT PREPARED BY COTTON & COMPANY ASSURANCE AND ADVISORY, LLC





AT A GLANCE

Performance Audit of Incurred Costs – University of North Carolina, Charlotte Report No. OIG 23-1-004 February 3, 2023

AUDIT OBJECTIVE

The National Science Foundation Office of Inspector General engaged Cotton & Company Assurance and Advisory, LLC (C&C) to conduct a performance audit of incurred costs at the University of North Carolina, Charlotte (UNCC) for the period November 1, 2018, to October 31, 2021. The auditors tested approximately \$939,000 of the more than \$31.6 million of costs claimed to NSF. The audit objective was to determine if costs claimed by UNCC on NSF awards were allowable, allocable, reasonable, and in compliance with NSF award 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 UNCC's compliance with certain federal regulations, NSF policies and procedures, and UNCC's internal policies. The auditors questioned \$6,048 of costs claimed by UNCC during the audit period. Specifically, the auditors found \$3,322 of inappropriately allocated expenses and \$2,726 in unallowable expenses. The auditors also identified two additional findings related to non-compliance with UNCC policies, for which there were no questioned costs: non-compliance with federal requirements for specialized service facilities and non-compliance with UNCC policy. C&C is responsible for the attached report and the conclusions expressed in it. NSF OIG does not express any opinion on the conclusions presented in C&C's audit report.

RECOMMENDATIONS

The auditors included four findings in the report with associated recommendations for UNCC to provide supporting documents that it has repaid the questioned costs and to strengthen administrative and management controls.

AUDITEE RESPONSE

UNCC agreed with the majority of the findings in the report. UNCC'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: February 3, 2023

TO: Alex Wynnyk

Acting Director

Division of Institution and Award Support

Jamie French Director

Division of Grants and Agreements

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FROM: Mark Bell

Assistant Inspector General

Office of Audits

SUBJECT: Audit Report No. 23-1-004, University of North Carolina, Charlotte

This memorandum transmits the Cotton & Company Assurance and Advisory, LLC (C&C) report for the audit of costs charged by the University of North Carolina, Charlotte (UNCC) to its sponsored agreements with the National Science Foundation during the period November 1, 2018, to October 31, 2021. The audit encompassed approximately \$939,000 of the more than \$31.6 million of costs claimed to NSF during the period. The audit objective was to determine if costs claimed by UNCC on NSF awards were allowable, allocable, reasonable, and in compliance with NSF award 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

C&C 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 C&C's audit report. To fulfill our responsibilities, we:

- reviewed C&C'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 C&C, as necessary, to discuss audit progress, findings, and recommendations;
- reviewed the audit report prepared by C&C; 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 Billy McCain at 703.292.7100 or OIGpublicaffairs@nsf.gov.

Attachment

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Stephen Willard	Karen Marrongelle	Charlotte Grant-Cobb	Ken Lish
Dan Reed	Christina Sarris	Allison Lerner	Billy McCain
Victor McCrary	Teresa Grancorvitz	Lisa Vonder Haar	Jennifer Kendrick
John Veysey	Janis Coughlin-Piester	Ken Chason	Louise Nelson
Ann Bushmiller	Rochelle Ray	Dan Buchtel	Karen Scott





EXECUTIVE SUMMARY

The Cotton & Company audit team determined that the University of North Carolina, Charlotte (UNCC) needs improved oversight of the allocation and documentation of expenses charged to NSF awards to ensure costs claimed are reasonable, allocable, and allowable in accordance with all federal and NSF regulations and UNCC policies. Specifically, the audit report includes four findings and a total of \$6,048 in questioned costs.

AUDIT OBJECTIVES

The National Science Foundation Office of Inspector General engaged Cotton Company Assurance and Advisory, LLC to conduct a performance audit of costs that UNCC incurred for the period from November 1, 2018, to October 31, 2021. The audit objectives included evaluating UNCC's management environment award determine whether any further audit work was warranted and performing additional audit work, as determined appropriate. We have attached a full description of the audit's objectives, scope, and methodology as Appendix B.

AUDIT CRITERIA

The audit team assessed UNCC's compliance with relevant federal regulations (i.e., 2 Code of Federal Regulations [CFR] 200 and 2 CFR 220), NSF Proposal and Award Policies and Procedures Guides (PAPPGs) (NSF 14-1, 15-1, 16-1, 17-1, 18-1, 19-1, and 20-1), NSF award terms and conditions, and UNCC policies and procedures. The audit team included references to relevant criteria within each finding and defined key terms within the Glossary located in Appendix E.

We conducted this performance audit in accordance with *Generally Accepted Government Auditing Standards* (GAGAS) issued by the Comptroller General of the United States.

AUDIT FINDINGS

As summarized in <u>Appendix C</u>, the auditors identified and questioned \$6,048 of direct and indirect costs that UNCC inappropriately claimed during the audit period, including:

- \$3,322 of inappropriately allocated expenses
- \$2,726 of unallowable expenses

The audit report also includes two compliance-related findings for which the auditors did not question any costs:

- Non-compliance with federal requirements for specialized service facilities
- Non-compliance with UNCC policy

RECOMMENDATIONS

The audit report includes 10 recommendations for NSF's Director of the Division of Institution and Award Support related to resolving the \$6,048 in questioned costs and ensuring UNCC strengthens its award management environment, as summarized in Appendix D.

AUDITEE RESPONSE

UNCC agreed with most of the findings in the report and agreed to reimburse NSF for \$6,048 in questioned costs. UNCC's response is attached, in its entirety, to the report as **Appendix A**.

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Abbreviations

ACM\$	Award Cash Management \$ervice
CFR	Code of Federal Regulations

FY Fiscal Year

GAGAS Generally Accepted Government Auditing Standards

GL General Ledger

GCA Grants & Contracts Administration

IBS Institutional Base Salary
ISP Internal Service Provider
NSF National Science Foundation
OIG Office of Inspector General

PAPPG Proposal and Award Policies and Procedures Guide

POP Period of PerformanceTSO Technology Solutions Office

UNCC University of North Carolina, Charlotte

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" (Pub. L. No. 81-507). NSF funds research and education in science and engineering by awarding grants and contracts to educational and research institutions throughout the United States.

Most federal agencies have an Office of Inspector General that provides independent oversight of the agency's programs and operations. Part of NSF OIG's mission is to conduct audits and investigations to prevent and detect fraud, waste, and abuse. In support of this mission, NSF OIG may conduct independent and objective audits, investigations, and other reviews to promote the economy, efficiency, and effectiveness of NSF programs and operations, as well as to safeguard their integrity. NSF OIG may also hire a contractor to provide these audit services.

NSF OIG engaged Cotton & Company Assurance and Advisory, LLC (referred to as "we") to conduct a performance audit of costs incurred by the University of North Carolina, Charlotte (UNCC). UNCC is a public research university located in Charlotte, North Carolina. In fiscal year (FY) 2021, UNCC reported more than \$45 million in operating revenue from grants and contracts, with \$37.21 million received from federal sources—including NSF as illustrated in Figure 1.



Figure 1: UNCC's FY 2021 Grants and Contracts Revenue

Source: The chart data is available on the UNCC Financial Services website (https://drive.google.com/file/d/19PHs igDgzD62mYxEwJqdopv[FNEoda/view?usp=sharing]. The photo of UNCC's campus is publicly available on UNCC's website (https://inside.charlotte.edu/news-features/2020-09-21/unc-charlotte-setsenrollment-record-more-30000-students).

AUDIT SCOPE

This performance audit—conducted under Order No. 140D0421F0603—was designed to meet the objectives identified in the Objectives, Scope, and Methodology section of this report (<u>Appendix B</u>) and was conducted in accordance with *Generally Accepted Government Auditing Standards*, issued by the Comptroller General of the United States.

The objectives of this performance audit were to evaluate UNCC's award management environment; to determine if costs claimed on NSF awards were allowable, allocable, reasonable, and in compliance with relevant federal and NSF regulations; to determine whether any further audit work was warranted; and to perform any additional audit work, as determined appropriate. Appendix B provides detailed information regarding the two phases in which we conducted this engagement: the Audit Survey Phase and the Audit Reporting Phase.

As illustrated in Figure 2, UNCC provided general ledger (GL) data to support the \$31 million in expenses it claimed on 199 NSF awards during our audit period of performance (POP) of November 1, 2018, to October 31, 2021.



Figure 2: Costs Claimed on NSF Awards from November 1, 2018, Through October 31, 2021^1

Source: Auditor analysis of accounting data that UNCC provided, illustrating the total costs supported by UNCC's GL (\$31,634,852) by expense type, using financial information to support costs incurred on NSF awards during the audit period. Please note that the "Salaries and Wages" in this table include salaries and administrative and clerical services costs. Additionally, the "Other Direct Costs" in this table include computer services, consultant services, materials and supplies, publications, other direct costs, and expenses UNCC did not map to a specific NSF budget category.

¹ The total award-related expenses that UNCC reported in its GL exceeded the \$31,613,101 reported in NSF's Award Cash Management \$ervice (ACM\$). However, because UNCC's GL data of \$31,634,852 materially reconciled to NSF's ACM\$ records, we determined that the GL data was appropriate for the purposes of this engagement.

We judgmentally selected 50 transactions totaling \$938,636² (see Table 1) for transaction-based testing and evaluated supporting documentation to determine whether the costs claimed on the NSF awards were <u>allocable</u>, <u>allowable</u>, and <u>reasonable</u>, and whether they were in conformity with NSF award terms and conditions, organizational policies, and applicable federal financial assistance requirements.

Table 1: Summary of Selected Transactions

Subawards	7	\$304,558
Equipment	4	189,086
Salaries and Wages	8	58,000
Materials and Supplies	3	26,000
Travel	4	13,077
Fringe Benefits	2	6,582
	=	

Source: Auditor summary of selected transactions.

AUDIT RESULTS

We identified and questioned \$6,048 in costs that UNCC charged to five NSF awards. We also identified expenses that UNCC charged to two NSF awards that did not result in questioned costs, but resulted in non-compliance with federal, NSF, or UNCC-specific policies. See Table 2 for a summary of questioned costs by finding area, Appendix C for a summary of questioned costs by NSF award, and Appendix D for a summary of all recommendations.

Table 2: Summary of Questioned Costs by Finding Area

\$3,322
-

Source: Auditor summary of findings identified.

² The \$938,636 represents the total value of the 50 transactions selected for transaction-based testing. It does not represent the dollar base of the total costs reviewed during the audit.

³ The expense amounts reported represent the total dollar value of the transactions selected for our sample; they do not include the total <u>fringe benefits</u> or <u>indirect costs</u> applied to the sampled transactions. However, we tested the fringe benefits and indirect costs for allowability.

We made 10 recommendations for NSF's Director of the Division of Institution and Award Support related to resolving the \$6,048 in questioned costs and ensuring UNCC strengthens its administrative and management procedures for monitoring federal funds. We communicated the results of our audit and the related findings and recommendations to UNCC and NSF OIG. We included UNCC's response to this report, in its entirety, in Appendix A.

FINDING 1: INAPPROPRIATELY ALLOCATED EXPENSES

UNCC did not always allocate expenses to NSF awards based on the relative benefits the awards received, as required by both federal regulations⁴ and NSF <u>Proposal and Award Policies and Procedures Guides (PAPPGs)</u>.⁵ As a result, UNCC charged one NSF award a total of \$3,322 in inappropriately allocated <u>publication</u> expenses,⁶ as illustrated in Table 3.

Table 3: Inappropriately Allocated Expenses

			Publication De	tails		
Expense Date	Amount Charged	NSF Award Charged	Funding Sources Referenced/ Acknowledged	Percent Allocable	Amount Inappropriately Allocated	Note
January 2021	\$3,322			Unable to Determine	\$3,322	a

Source: Auditor summary of identified exception.

a) In January 2021, UNCC charged NSF Award No. for \$3,322 in publication costs, which represented 100 percent of the costs UNCC incurred to publish a research article that acknowledged nine funding sources as having contributed to the published research. Although UNCC's allocation methodology states that the research described in this publication related to the objective of NSF Award No. because UNCC acknowledged that the research also benefitted other projects, UNCC does not appear to have appropriately allocated the expense based on the relative benefit NSF Award No. received. Specifically, six of the nine awards referenced as support were still active at the time of publication, and the

⁴ According to 2 Code of Federal Regulations (CFR) § 200.405, *Allocable costs*, (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).

⁵ NSF PAPPG 17-1, Part II, Chapter X, Section A, *Basic Considerations*, states that grantees should ensure all costs charged to NSF awards meet the requirements of the applicable federal cost principles, grant terms and conditions, and any other specific requirements of both the award notice and the applicable program solicitation.

⁶ According to 2 CFR § 200.461, *Publication and Printing Costs*, (b), charges for professional journal publications are allowable where: (1) the publication reports work supported by the federal government; and (2) the charges are levied impartially on all items published by the journal, whether the items are under a federal award or not.

published research appears to relate to the objectives of multiple active awards. We were unable to determine what portion of this expense is allocable to NSF Award No.

Conclusion

UNCC did not have sufficient policies, procedures, or internal controls in place to ensure that it reasonably allocated costs incurred based on the relative benefits each NSF award received. Specifically, UNCC did not require personnel to verify and/or justify that they appropriately allocated publication costs to all funding sources that benefitted from the costs incurred.

We are therefore questioning \$3,322 of expenses that UNCC inappropriately allocated to one NSF award. UNCC concurred with the full \$3,322 in questioned costs, as illustrated in Table 4.

Table 4: Finding 1 Summary: Inappropriately Allocated Expenses

NSF			Questioned Costs			S
Award No.	Description	Fiscal Year	Direct	Indirect	Total	UNCC Agreed to Reimburse
	January 2021 Publication Expenses	2021	\$2,200	\$1,122	\$3,322	\$3,322
Total			<u>\$2,200</u>	<u>\$1,122</u>	<u>\$3,322</u>	<u>\$3,322</u>

Source: Auditor summary of identified exception.

Recommendations

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

- 1.1 Direct UNCC to provide documentation supporting that it has repaid or otherwise credited the \$3,322 in questioned publication expenses for which it has agreed to reimburse NSF.
- 1.2 Direct UNCC to strengthen its administrative and management controls and processes for supporting the allocation of publication expenses to sponsored projects. Updated processes could include:
 - Requiring Principal Investigators or other designated staff to both document and justify the allocation methodologies used when charging publication expenses to sponsored projects.
 - Implementing a standard documentation and retention process to support the allocation of publication expenses that benefit multiple awards.

1.3 Direct UNCC to provide training on how to assess and document the methodology used to allocate publication expenses across each sponsored award acknowledged in the publication.

University of North Carolina, Charlotte Response: UNCC agreed to reimburse NSF for the \$3,322 in questioned costs. Additionally, UNCC agreed to work with Principal Investigators and department staff to strengthen its processes to ensure that personnel properly identify, justify, and allocate publication costs benefitting multiple awards.

Auditor's Additional Comments: Our position regarding this finding has not changed.

FINDING 2: UNALLOWABLE EXPENSES

UNCC charged four NSF awards for \$2,726 in gift card incentive, alcohol, and <u>salary</u> expenses that are unallowable under federal regulations⁷ and NSF PAPPGs.⁸

Unallowable Gift Card Expenses

UNCC charged two NSF awards for \$2,401 in unallowable gift card incentive expenses, as illustrated in Table 5.

Table 5: Unallowable Gift Card Incentive Expenses

Expense Date	NSF Award No.	Unallowable Total	Unallowable Expenses Associated With:	Notes
November 2019		\$227	November 2019 Unused Gift Cards	a
March 2020		2,174	March 2020 Unused Gift Cards	b

- a) In November 2019, UNCC charged NSF Award No. for \$227 in costs incurred to purchase gift cards that UNCC did not use to benefit the award.
- **b)** In March 2020, UNCC charged NSF Award No. for \$2,174 in costs incurred to purchase gift cards that UNCC did not use to benefit the award.

⁷ According to 2 CFR § 200.403, *Factors affecting allowability of costs*, for a cost to be allowable, it must be adequately documented, necessary, and reasonable for the performance of the federal award. See Appendix E of this report for additional factors affecting the allowability of costs.

⁸ According to NSF PAPPG 18-1, Part II, Chapter X, Section A, *Basic Considerations*, expenditures under NSF cost-reimbursement grants are governed by the federal cost principles and must conform to NSF policies, grant special provisions, and grantee internal policies. Grantees should ensure that costs claimed under NSF grants meet the requirements of the cost principles, grant terms and conditions, and other specific requirements of both the award notice and the applicable program solicitation.

Unallowable Alcohol Expenses

UNCC charged one NSF award for \$325 in unallowable alcohol expenses,⁹ as illustrated in Table 6.

Table 6: Unallowable Alcohol Expense

Expense Date	NSF Award No.	Unallowable Total	Unallowable Expenses Associated With:	Notes
July 2019		\$325	Alcohol	

Source: Auditor summary of identified exception.

a) In July 2019, UNCC charged NSF Award No. for \$325 in alcohol expenses it incurred during an Industrial Advisory Board meeting.

Unallowable Salary Expense

UNCC charged one NSF award for unallowable salary expenses that UNCC did not calculate based on an Institutional Base Salary (IBS) rate, ¹⁰ as illustrated in Table 7.

Table 7: Unallowable Salary Expense

Expense Date	NSF Award No.	Unallowable Total	Unallowable Expenses Associated With:	Notes
May 2020		-	Salary Not Calculated Using IBS	a

Source: Auditor summary of identified exception.

a) In May 2020, UNCC charged NSF Award No. for \$3,807 in salary expenses incurred to pay a Research Associate Professor. Although the salary expenses appear to have benefitted the award charged, the employee's compensation rate fluctuated based on the nature and type of work performed and was not based on an IBS rate.¹¹

Conclusion

UNCC did not have sufficient policies, procedures, or internal controls in place to ensure it only charged allowable costs to NSF awards. Specifically, UNCC's procedures did not always ensure that UNCC used gift cards to benefit the award(s) charged, did not charge alcohol expenses to NSF awards, and based salary expenses on an IBS rate, consistent with federal guidance and NSF regulations. We are therefore questioning \$2,726 of unallowable

⁹ According to 2 CFR § 200.423, *Alcoholic Beverages*, costs of alcoholic beverages are unallowable. Further, NSF PAPPG 18-1, Part I, Chapter II, Section C.2.g.xiii, *Allowable and Unallowable Costs*, (c), states that grantees may not request or spend NSF funds for alcoholic beverages.

¹⁰ According to 2 CFR § 200.430(h)(2), *Salary Basis*, charges of a faculty member's salary to federal awards must not exceed the proportionate share of the faculty member's IBS for the period during which the faculty member worked on the award.

¹¹ Because UNCC used multiple compensation rates to calculate the amount charged and the employee did not have an IBS, we were unable to determine the portion of costs that we should question.

expenses charged to four NSF awards. UNCC concurred with the full \$2,726 in questioned costs, as illustrated in Table 8.

Table 8: Finding 2 Summary: Unallowable Expenses

			Questioned Costs			
NSF Award No.	Description	Fiscal Year	Direct	Indirect	Total	UNCC Agreed to Reimburse
	November 2019 Gift Card Incentive Expenses	2020	\$150	\$77	\$227	\$227
	March 2020 Gift Card Incentive Expenses	2020	1,440	734	2,174	2,174
	July 2019 Alcohol Expenses	2020	215	110	325	325
	May 2020 Salary Expenses	2020	-	-	-	-
Total			<u>\$1,805</u>	<u>\$921</u>	<u>\$2,726</u>	<u>\$2,726</u>

Source: Auditor summary of identified exceptions.

Recommendations

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

- 2.1 Direct UNCC to provide documentation supporting that it has repaid or otherwise credited the \$2,726 in questioned gift card and alcohol expenses for which it has agreed to reimburse NSF.
- 2.2 Direct UNCC to strengthen its policies and procedures for tracking incentive gift cards used to benefit NSF awards, including adding controls requiring personnel to remove incentive gift card expenses from NSF awards if gift cards go unused.
- 2.3 Direct UNCC to strengthen its administrative and management procedures for ensuring it does not charge alcohol expenses to NSF awards. Updated processes should require UNCC to verify that invoices for hosted events do not include alcohol charges before paying the invoices.
- 2.4 Direct UNCC to update its policies, procedures, and internal controls for establishing an Institutional Base Salary for each employee, including updating its processes to require UNCC to apply all salary charges in accordance with the Institutional Base Salary rate.
- 2.5 Direct UNCC to reassess the salary charged for each employee whose pay was based on a fluctuating salary rate rather than on an Institutional Base Salary and coordinate with NSF's Resolution and Advanced Monitoring Branch to determine the allowable salary expenses for each employee.

University of North Carolina, Charlotte Response: UNCC agreed to reimburse NSF for the full \$2,726 in unallowable costs; however, it neither agreed nor disagreed with the questioned unallowable salary expense. Specifically:

- **Unallowable Gift Card Expenses:** UNCC agreed to reimburse NSF for the \$2,401 in questioned gift card expenses. It noted that it will strengthen its processes to ensure personnel only charge gift card purchases to awards as needed and when used to benefit the award.
- *Unallowable Alcohol Expenses:* UNCC agreed to reimburse NSF for the \$325 in questioned alcohol expenses. It noted that it will work with Principal Investigators and department staff to strengthen its review process to ensure invoices for hosted events do not include alcohol expenses.
- Unallowable Salary Expenses: UNCC did not state whether it agreed or disagreed
 with this exception; it simply noted that there were no questioned costs associated
 with the unallowable salary expense and that the salary expense benefitted the
 award. UNCC further stated that it applies salary charges in accordance with the
 Institutional Base Salary rate, but that it will review its processes to ensure
 continued compliance.

Auditor's Additional Comments: Our position regarding this finding has not changed. Specifically:

- Unallowable Gift Card and Alcohol Expenses: As UNCC agreed with the questioned
 costs identified for unallowable gift card and alcohol expenses, our position
 regarding these exceptions has not changed.
- *Unallowable Salary Expenses:* Although UNCC stated that the salary expense benefitted the award, it calculated the salary amount charged using multiple compensation rates that fluctuated based on the nature and type of work performed rather than calculating the salary amount using an Institutional Base Salary rate. Because UNCC did not calculate the salary expense using an Institutional Base Salary rate, our position regarding this exception has not changed.

FINDING 3: Non-Compliance with Federal Requirements for Specialized Service Facilities

UNCC charged one NSF award for services provided by UNCC's Technology Solutions Office (TSO), a <u>specialized service facility</u>, using a methodology that did not result in TSO recovering the aggregate costs of the services, as required for the costs to be allowable per federal regulations. ¹² Specifically, although UNCC noted that TSO's charges are based on the

¹² According to 2 CFR § 200.468(b), *Specialized Service Facilities*, specialized service facilities must charge for services based on actual use of the services and on a schedule of rates or established methodology that is designed to recover only the aggregate costs of the services.

salary and fringe benefits of the Technology Architect who provides the services, UNCC charged NSF Award No. for TSO services using an hourly rate that was not based on the Technology Architect's actual salary.

Conclusion

Because the hourly rate TSO charged was less than the hourly rate it should have charged based on the Technology Architect's salary, we are not questioning any costs associated with this finding. However, because UNCC did not have sufficient internal controls in place to ensure that its specialized service facility appropriately charged costs to NSF awards using its established methodology, we are noting a compliance exception, as illustrated in Table 9.

Table 9: Finding 3 Summary: Non-Compliance with Federal Requirements for Specialized Service Facilities

NSF Award No.	Compliance Exception Identified	Fiscal Year		
	Non-Compliance with Federal Requirements	2020		
	for Specialized Service Facilities	2020		

Source: Auditor summary of identified exception.

Recommendation

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

- 3.1. Direct UNCC to strengthen its administrative and management processes and procedures regarding specialized service facility billings, to ensure compliance with federal requirements. Updated processes could include:
 - Performing periodic reviews of specialized service expenses charged to sponsored awards to ensure that billing rates are accurate.
 - Requiring individuals who are independent from the rate-setting process to perform periodic quality control reviews of all specialized service facility billing rates, to ensure that the rates are free from errors.

University of North Carolina, Charlotte Response: UNCC agreed with this finding and noted that it will update its existing recharge unit procedures manual to strengthen its review and analysis process and ensure expenses charged to awards comply with federal regulations and UNCC policy.

Auditor's Additional Comments: Our position regarding this finding has not changed.

FINDING 4: NON-COMPLIANCE WITH UNCC POLICY

UNCC did not always comply with its <u>travel</u> policies and procedures,¹³ which require that the Grants & Contracts Administration (GCA) approve any travel to be reimbursed from a sponsored fund before UNCC incurs any expenses related to the travel, as illustrated in Table 10.

Table 10: Non-Compliance with UNCC Policy

Expense Date	NSF Award No.	Fiscal Year	Travel Policy Compliance Exception	Note
December 2019		2020	Appropriate Approval Not Received	a

Source: Auditor summary of identified exception.

a) In December 2019, UNCC charged NSF Award No. for \$1,268 in travel expenses incurred to enable a graduate student to present at a conference. Although the travel appears to have benefitted the award charged, GCA did not authorize the travel before UNCC incurred the expenses.

Conclusion

UNCC did not have adequate controls in place to ensure that it consistently complied with, or documented its compliance with, its sponsored travel policies and procedures, which required GCA's prior approval for all travel expenses charged to sponsored funds. Because this instance of non-compliance did not directly result in UNCC charging unallowable costs to NSF awards, we are not questioning any costs related to this exception. However, we are noting a compliance finding for the instance in which UNCC did not comply with its internal procedures when charging costs to one NSF award, as illustrated in Table 11.

Table 11: Finding 4 Summary: Non-Compliance with UNCC Policy

NSF Award No.	Compliance Exception Identified	Fiscal Year
	Non-Compliance with UNCC Policy	2020

Source: Auditor summary of identified exception.

Recommendation

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

4.1 Direct UNCC to strengthen its administrative and management controls to ensure that travelers obtain appropriate authorization for sponsored travel prior to incurring expenses.

¹³ According to UNCC's Research Administration Policy 50.2, *Travel Funded by Sponsored Awards, Travel Authorizations*, any travel to be reimbursed by a sponsored fund must be approved by the Grants & Contracts Administration (GCA) before UNCC incurs any travel expenses.

University of North Carolina, Charlotte Response: UNCC agreed with the finding and stated that it updated its *Policy 50.2: Travel Funded by Sponsored Awards* to specify that personnel are required to obtain prior approval from UNCC's GCA for international travel when seeking reimbursement from a sponsored fund.

Auditor's Additional Comments: Our position regarding this finding has not changed.

Cotton & Company Assurance and Advisory, LLC



Erin Mooney Meredith, CPA, CFE, CGFM Partner January 31, 2023 Appendix A: UNCC's Response



December 1, 2022

Cotton & Company Assurance and Advisory, LLC 333 John Carlyle Street, Suite 500 Alexandria, Virginia 22314

Attention: Erin Meredith, CPA, CFE, CGFM

Dear Ms. Meredith,

The University of North Carolina at Charlotte Grants and Contracts Administration worked diligently with Cotton & Company Assurance and Advisory, LLC over the course of several months as a performance audit was conducted on behalf of the National Science Foundation (NSF) Office of Inspector General (OIG). The audit gave the university an opportunity to review our internal processes and policies, but most importantly ensure we are in compliance with all applicable federal laws, guidelines and regulations related to sponsored awards. The university reviewed the audit report and has already reimbursed or credited the appropriate NSF awards a total amount of \$6,048. In addition, we have identified and will implement policy changes to strengthen our procedures to ensure compliance with federal requirements for travel and specialized service facilities, respectively.

We thank you for the time and effort spent with our staff during the audit process, and look forward to our continuous work of making a positive impact through research in partnership with the NSF.

Sincerely,

DocuSigned by:

Darlene Booker

Darlene Booker

Interim Executive Director, Grants and Contracts Administration

DocuSigned by:

John Daniels

Dr. John Daniels

Interim Vice Chancellor, Division of Research

Vice Chancellor for Division of Research

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UNC Charlotte Response to NSF OIG Performance Audit Findings

FINDING 1: INAPPROPRIATELY ALLOCATED EXPENSES

NSF Award No.	Unallowable Total	UNC Charlotte Response			
	\$3,322	UNC Charlotte reimbursed NSF via check on 6/23/2022. The			
		University will work with Principal Investigators and department			
		staff to strengthen our processes to ensure publication costs			
		benefiting multiple awards are clearly identified, justified and			
		properly allocated.			

FINDING 2: UNALLOWABLE EXPENSES

NSF Award No.	Unallowable Total	UNC Charlotte Response			
	\$227	UNC Charlotte credited the award as it was an active award through 9/30/2022. The University will strengthen our processes to ensure gift card purchases are only charged to the award as needed and used to benefit the award.			
	\$2,174	UNC Charlotte reimbursed NSF via check on 5/5/2022. The University will strengthen our processes to ensure gift card purchases are only charged to the award as needed and used to benefit the award.			
	\$325	UNC Charlotte was credited the unallowable expense by the partner institution with whom the event was hosted as this award is active through 8/31/2023. The University will work with Principal Investigators and department staff to strengthen our review process to ensure invoices for hosted events do not include expenses for alcohol.			
	-	There are no unallowable costs associated with this finding, the salary expense did benefit the award. UNC Charlotte does apply salary charges in accordance with the Institutional Salary Base Rate, but will review our processes to ensure continued compliance.			

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FINDING 3: NON-COMPLIANCE WITH FEDERAL REQUIREMENTS FOR SPECIALIZED SERVICE FACILITIES

NSF Award No. Compliance UNC Charlotte Response Exception Identified		
	Non-Compliance with Federal Requirements for Specialized Service Facilities	UNC Charlotte agrees with this finding. A Recharge Unit Procedures Manual is already in place to provide guidance, financial and administrative support to staff. The University will update the Recharge Unit Procedures Manual to strengthen the review and analysis process to ensure expenses charged to the award are in compliance with federal regulations and UNC Charlotte policy.

FINDING 4: NON-COMPLIANCE WITH UNCC POLICY

NSF Award No.	Travel Policy Compliance Exception	UNC Charlotte Response
	Appropriate Approval Not Received	UNC Charlotte agrees with this finding. The University updated Policy 50.2: Travel Funded by Sponsored Awards on 8/6/2022 to clearly specify prior approval must be received from Grants and Contracts Administration for international travel reimbursed from a sponsored fund.

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APPENDIX B: OBJECTIVES, SCOPE, AND METHODOLOGY

OBJECTIVES

The NSF OIG Office of Audits engaged Cotton & Company Assurance and Advisory, LLC (referred to as "we") to conduct an audit survey, the objectives of which were to evaluate UNCC's award management environment; to determine if costs claimed on NSF awards were allowable, allocable, reasonable, and in compliance with NSF award terms and conditions and applicable federal financial assistance requirements; to determine whether any further audit work was warranted and recommend a path forward as described in the task order performance work statement; and to perform any additional audit work as determined appropriate.

SCOPE

The audit population included approximately \$31 million in expenses UNCC claimed on 199 NSF awards during our audit POP of November 1, 2018, to October 31, 2021.

METHODOLOGY

Based on the objectives and scope of the audit, we conducted this engagement in two phases, as follows:

Audit Survey Phase

After obtaining NSF OIG's approval for our audit plan, we performed the audit survey steps outlined in the original audit plan. Generally, these steps included:

- Assessing the reliability of the GL data that UNCC provided by comparing the costs charged to NSF awards per UNCC's accounting records to the reported net expenditures reflected in the ACM\$ drawdown requests.
 - Our work required us to rely on computer-processed data obtained from UNCC and NSF OIG. NSF OIG provided award data that UNCC reported through ACM\$ during our audit period.
 - We assessed the reliability of the GL data that UNCC provided by (1) comparing the costs charged to NSF awards per UNCC's accounting records to the reported net expenditures reflected in the ACM\$ drawdown requests that UNCC submitted to NSF during the audit survey POP; and (2) reviewing the parameters that UNCC used to extract transaction data from its accounting systems. We identified several discrepancies between the amounts supported by UNCC's general ledger and the amounts that UNCC claimed per NSF's ACM\$ system; however, we found UNCC's computer-processed data to be sufficiently reliable for the purposes of the audit survey, as UNCC was able to provide justification for all discrepancies identified and we did not identify any issues with the parameters that UNCC used to extract the accounting data.

- We found NSF's computer-processed data to be sufficiently reliable for the purposes of this audit. We did not review or test whether the data contained in NSF's databases or the controls over NSF's databases were accurate or reliable; however, the independent auditor's report on NSF's financial statements for fiscal year 2021 found no reportable instances in which NSF's financial management systems did not substantially comply with applicable requirements.
- UNCC provided detailed transaction-level data to support \$31,634,852 in costs charged to NSF awards during the period, which was greater than the \$31,613,101 UNCC claimed in ACM\$ for 199 awards. This data resulted in a total audit universe of \$31,634,852 in expenses claimed on 199 NSF awards.
- Obtaining and reviewing all available accounting and administrative policies and procedures, external audit reports, desk review reports, and other relevant information UNCC and NSF OIG provided, as well as any other relevant information that was available online.
- Summarizing our understanding of federal, NSF, and UNCC-specific policies and procedures surrounding costs budgeted for or charged to NSF awards and identifying the controls in place to ensure that costs charged to sponsored projects were reasonable, allocable, and allowable.
 - In planning and performing this audit, we considered UNCC's internal controls, within the audit's scope, solely to understand the directives or policies and procedures UNCC has in place to ensure that charges against NSF awards complied with relevant federal regulations, NSF award terms, and UNCC policies.
- Evaluating the strengths and weaknesses of the policies and procedures that UNCC
 has in place to control the inherent, fraud, and control risks identified for each
 budget category.
- Providing UNCC with a list of 50 transactions that we selected based on the results
 of our data analytics and requesting that UNCC provide documentation to support
 each transaction.
- Reviewing the supporting documentation UNCC provided and requesting additional documentation as necessary to ensure we obtained sufficient, appropriate evidence

to assess the allowability of each sampled transaction under relevant federal, ¹⁴ NSF, ¹⁵ and UNCC policies. ¹⁶

- Holding virtual interviews and walkthroughs with UNCC in April 2022 to discuss payroll (including effort reporting), fringe benefits, travel, participant support costs, procurement, equipment (including an inventory check), Graduate Research Fellowship Program, other direct costs (e.g., patent, relocation, recruiting, interest, advertising/public relations, entertainment, fundraising, lobbying, selling/marketing, and training costs), grant close-out procedures, subawards, ACM\$ processing, indirect costs, and other general policies (e.g., pre- and post-award costs, program income, whistle-blower information, research misconduct, and conflict of interest policies).
- Preparing an organizational risk assessment that (1) summarized the results of our planning/initial fieldwork, (2) included areas of elevated risk of noncompliance that we identified in the organization's award management environment, and (3) contained our recommendations for expanded testing.

Audit Reporting Phase

Based on the procedures, risk assessment, and interviews performed during the survey phase, in consultation with NSF OIG, we determined that no additional audit work was warranted.

At the conclusion of our fieldwork, we provided a summary of our results to NSF OIG personnel for review. We also provided the summary to UNCC personnel to ensure that UNCC was aware of each of our findings and that it did not have additional documentation to support the questioned costs.

We conducted this performance audit in accordance with *Generally Accepted Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

¹⁴ We assessed UNCC's compliance with 2 CFR Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards,* and 2 CFR Part 220, *Cost Principles for Educational Institutions* (Office of Management and Budget [OMB] Circular A-21), as appropriate.

¹⁵ We assessed UNCC's compliance with NSF PAPPGs 14-1, 15-1, 16-1, 17-1, 18-1, 19-1, and 20-1 and with NSF award-specific terms and conditions, as appropriate.

 $^{^{16}}$ We assessed UNCC's compliance with internal UNCC policies and procedures surrounding costs budgeted for or charged to NSF awards.

APPENDIX C: SUMMARY OF QUESTIONED COSTS

Appendix C, Table 1: Schedule of Questioned Costs by Finding

Einding	Description	Question	Total	
Finding	Description	Unsupported	Unallowable	Total
1	Inappropriately Allocated Expenses	\$0	\$3,322	\$3,322
2	Unallowable Expenses	-	2,726	2,726
-	Non-Compliance with Federal Requirements for Specialized Service Facilities	-	-	-
4	Non-Compliance with UNCC Policy	-	-	-
Total		<u>\$0</u>	<u>\$6,048</u>	<u>\$6,048</u>

Appendix C, Table 2: Summary of Questioned Costs by NSF Award Number

NSF Award No.	No. of Exceptions	Questioned Direct Costs	Questioned Indirect Costs	Questioned Total	UNCC Agreed to Reimburse
	1	\$0	\$0	\$0	\$0
	1	-	-	-	-
	1	2,200	1,122	3,322	3,322
	1	1,440	734	2,174	2,174
	1	215	110	325	325
	1	150	77	227	227
	1	-	-	-	-
Total	<u>Z</u>	<u>\$4,005</u>	<u>\$2,043</u>	<u>\$6,048</u>	<u>\$6,048</u>

Appendix C, Table 3: Summary of Questioned Costs by NSF Award Number and Expense Description

Finding No.	NSF Award No.	Description Fisc Year		Direct	Indirect	Total	UNCC Agreed to Reimburse
1) Inappropriately Allocated Expenses		January 2021 Publication Expenses	2021	\$2,200	\$1,122	\$3,322	\$3,322
-		November 2019 Gift Card Incentive Expenses	2020	150	77	227	227
2) Unallowable		March 2020 Gift Card Incentive Expenses	2020	1,440	734	2,174	2,174
Expenses		July 2019 Alcohol Expenses	2020	215	110	325	325
		May 2020 Salary Expenses	2020	-	-	-	-
 Non-Compliance with Federal Requirements for Specialized Service Facilities 		Non-Compliance with Federal Requirements for Specialized Service Facilities	2020	-	-	-	-
4) Non-Compliance with UNCC Policy		Non-Compliance with UNCC Policy	2020	-	-	-	-
Total				<u>\$4,005</u>	<u>\$2,043</u>	<u>\$6,048</u>	<u>\$6,048</u>

APPENDIX D: SUMMARY OF RECOMMENDATIONS

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

- 1.1 Direct UNCC to provide documentation supporting that it has repaid or otherwise credited the \$3,322 in questioned publication expenses for which it has agreed to reimburse NSF.
- 1.2 Direct UNCC to strengthen its administrative and management controls and processes for supporting the allocation of publication expenses to sponsored projects. Updated processes could include:
 - Requiring Principal Investigators or other designated staff to both document and justify the allocation methodologies used when charging publication expenses to sponsored projects.
 - Implementing a standard documentation and retention process to support the allocation of publication expenses that benefit multiple awards.
- 1.3 Direct UNCC to provide training on how to assess and document the methodology used to allocate publication expenses across each sponsored award acknowledged in the publication.
- 2.1 Direct UNCC to provide documentation supporting that it has repaid or otherwise credited the \$2,726 in questioned gift card and alcohol expenses for which it has agreed to reimburse NSF.
- 2.2 Direct UNCC to strengthen its policies and procedures for tracking incentive gift cards used to benefit NSF awards, including adding controls requiring personnel to remove incentive gift card expenses from NSF awards if gift cards go unused.
- 2.3 Direct UNCC to strengthen its administrative and management procedures for ensuring it does not charge alcohol expenses to NSF awards. Updated processes should require UNCC to verify that invoices for hosted events do not include alcohol charges before paying the invoices.
- 2.4 Direct UNCC to update its policies, procedures, and internal controls for establishing an Institutional Base Salary for each employee, including updating its processes to require UNCC to apply all salary charges in accordance with the Institutional Base Salary rate.
- 2.5 Direct UNCC to reassess the salary charged for each employee whose pay was based on a fluctuating salary rate rather than on an Institutional Base Salary and coordinate with NSF's Resolution and Advanced Monitoring Branch to determine the allowable salary expenses for each employee.

- 3.1. Direct UNCC to strengthen its administrative and management processes and procedures regarding specialized service facility billings, to ensure compliance with federal requirements. Updated processes could include:
 - Performing periodic reviews of specialized service expenses charged to sponsored awards to ensure that billing rates are accurate.
 - Requiring individuals who are independent from the rate-setting process to perform periodic quality control reviews of all specialized service facility billing rates, to ensure that the rates are free from errors.
- 4.1 Direct UNCC to strengthen its administrative and management controls to ensure that travelers obtain appropriate authorization for sponsored travel prior to incurring expenses.

APPENDIX E: GLOSSARY

Allocable Cost. 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. This standard is met if the cost:

- (a) Is incurred specifically for the federal award.
- (b) Benefits both the federal award and other work of the non-federal entity and can be distributed in proportions that may be approximated using reasonable methods.
- (c) Is necessary to the overall operation of the non-federal entity and is assignable in part to the federal award in accordance with the principles in this subpart. (2 CFR § 200.405).

Return to the term's initial use.

Allocation refers to the process of assigning a cost, or a group of costs, to one or more cost objective(s), in reasonable proportion to the benefit provided or other equitable relationship. The process may entail assigning a cost(s) directly to a final cost objective or through one or more intermediate cost objectives. (2 CFR § 200.4). **Return to the term's initial use.**

Allowable Cost. Except where otherwise authorized by statute, costs must meet the following general criteria in order to be allowable under federal awards:

- (a) Be necessary and reasonable for the performance of the federal award and be allocable thereto under these principles.
- (b) Conform to any limitations or exclusions set forth in these principles or in the federal award as to types or amount of cost items.
- (c) Be consistent with policies and procedures that apply uniformly to both federally-financed and other activities of the non-federal entity. (2 CFR § 200.403).

Return to the term's initial use.

Equipment means tangible personal property—including information technology (IT) systems—having a useful life of more than one year and a per-unit acquisition cost which equals or exceeds the lesser of the capitalization level established by the non-federal entity for financial statement purposes, or \$5,000. (2 CFR § 200.33).

Return to the term's initial use.

Fringe Benefits refers to allowances and services provided by employers to their employees as compensation in addition to regular salaries and wages. Fringe benefits include, but are not limited to, the costs of leave (vacation, family-related, sick, or military), employee insurance, pensions, and unemployment benefit plans. (2 CFR § 200.431). **Return to the term's initial use.**

Indirect (F&A) Costs refers to costs incurred for a common or joint purpose benefitting more than one cost objective, and not readily assignable to the cost objectives specifically benefitted, without effort disproportionate to the results achieved. (2 CFR § 220, Appendix A, Section E.), (2 CFR § 200.56) and (2 CFR Revision § 200.1).

Return to the term's initial use.

Participant Support Costs refers to the 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 conferences or training projects. (2 CFR § 200.75).

Return to the term's initial use.

NSF Proposal & Award Policies & Procedures Guide (PAPPG) refers to the NSF publication which comprises documents relating to NSF's proposal and award process for the assistance programs of NSF. The PAPPG, in conjunction with the applicable standard award conditions incorporated by reference in award, serve as the NSF's implementation of 2 CFR § 200, *Uniform Administrative Requirements, Cost Principles,* and *Audit Requirements for Federal Awards.* (NSF PAPPG 19-1).

Return to the term's initial use.

Publication Costs refer to the direct costs incurred for publishing electronic and print media, including the distribution, promotion and handling of that media. (2 CFR § 200.461).

Return to the term's initial use.

Reasonable Cost means a cost that, in its nature and amount, does not exceed that which would have been incurred by a prudent person under the circumstances prevailing at the time the decision to incur the cost was made. (2 CFR § 200.404).

Return to the term's initial use.

Salaries and Wages mean the compensation for personal services including all remuneration, paid currently or accrued, for services of employees rendered during the period of performance under the Federal award, including but not necessarily limited to wages and salaries. (2 CFR § 200.430).

Return to the term's initial use.

Specialized Service Facilities refer to highly complex or specialized facilities operated by the non-Federal entity, such as computing facilities, wind tunnels, and reactors. (2 CFR § 200.468).

Return to the term's initial use.

Subawards mean awards provided by a pass-through entity to a subrecipient for the subrecipient to carry out part of a federal award received by the pass-through entity. It does not include payments to a contractor or payments to an individual that is a beneficiary of a federal program. A subaward may be provided through any form of legal agreement, including an agreement that the pass-through entity considers a contract. (2 CFR § 200.92).

Return to the term's initial use.

Travel Costs refer to expenses incurred for transportation, lodging, subsistence, and related items incurred by employees who are in travel status on official business of the non-federal entity. (2 CFR § 200.474).

Return to the term's initial use.

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