Performance Audit of Incurred Costs – Brown University

REPORT PREPARED BY SIKICH CPA LLC



U.S. NATIONAL SCIENCE FOUNDATION Office of Inspector General August 16, 2024 OIG 24-1-013



At a Glance

Performance Audit of Incurred Costs – Brown University OIG 24-1-013 | August 16, 2024

AUDIT OBJECTIVE

The U.S. National Science Foundation Office of Inspector General engaged Sikich CPA LLC (Sikich) to conduct a performance audit of costs that Brown University (Brown) incurred on 346 NSF awards during the period of October 1, 2019, to September 30, 2022. The auditors tested approximately \$2 million of the \$76.4 million of costs claimed to NSF during the period. The audit objective was to evaluate Brown's award management environment and determine if costs claimed by Brown 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 Brown's compliance with certain federal and NSF award requirements, NSF award terms and conditions, and Brown policies. The auditors questioned \$78,318 of costs claimed by Brown during the audit period. Specifically, the auditors found \$47,384 of unallowable expenses, \$24,263 of inappropriately allocated expenses, and \$6,671 of unallowable expenses associated with indirect cost rates. The auditors also identified two compliance related findings for which there were no questioned costs: non-compliance with Brown's Lodging Policy and a fringe benefit rate not appropriately applied. Sikich is responsible for the attached report and the conclusions expressed in it. NSF OIG does not express any opinion on the conclusions presented in Sikich's audit report.

RECOMMENDATIONS

The auditors included 5 findings in the report with associated recommendations for NSF to resolve the \$78,318 in questioned costs and to ensure Brown strengthens its award management environment.

AUDITEE RESPONSE

Brown generally agreed with the findings included in the audit report and agreed to reimburse NSF for \$61,259 of the \$78,318 in questioned costs. Brown's response is attached, in its entirety, to the report as Appendix A.

CONTACT US

For congressional, media, and general inquiries, email <u>OIGPublicAffairs@nsf.gov</u>.



U.S. NATIONAL SCIENCE FOUNDATION Office of Inspector General

MEMORANDUM

DATE:	August 16, 2024
то:	Quadira Dantro Director Division of Institution and Award Support National Science Foundation
	Jamie French Director Division of Grants and Agreements National Science Foundation
FROM:	Theresa S. Hull Assistant Inspector General Office of Audits, Inspections, and Evaluations

SUBJECT: Final Report No. 24-1-013, *Brown University*

This memorandum transmits the Sikich CPA LLC (Sikich) report for the audit of costs charged by Brown University (Brown) to 346 NSF awards during the period October 1, 2019, to September 30, 2022. The audit encompassed approximately \$2 million of the \$76.4 million of costs claimed to NSF during the period. The audit objective was to evaluate Brown's award management environment and determine if costs claimed by Brown 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

Sikich 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 Sikich's audit report. To

fulfill our responsibilities, we:

- reviewed Sikich'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 Sikich, as necessary, to discuss audit progress, findings, and recommendations;
- reviewed the audit report prepared by Sikich; 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 Sarah Adams at 703-292-7100 or <u>OIGPublicAffairs@nsf.gov</u>.

Attachment

CC: Darío Gil, Victor McCrary, Wanda Ward, Scott Stanley, John Veysey, Ann Bushmiller, Micah Cheatham, Judy Hayden, Christina Sarris, Janis Coughlin-Piester, Alex Wynnyk, Rochelle Ray, Charlotte Grant-Cobb



EXECUTIVE SUMMARY

The Sikich CPA LLC (formerly known as Cotton & Company Assurance and Advisory, LLC) audit team determined that Brown University (Brown) needs improved oversight of expenses charged to NSF awards to ensure costs claimed are reasonable, allocable, and allowable in accordance with all federal and NSF regulations, NSF award terms and conditions, and Brown policies and procedures. Specifically, the audit report includes five findings and a total of \$78,318 in questioned costs.

AUDIT OBJECTIVES

The National Science Foundation Office of Inspector General engaged Sikich CPA LLC (herein referred to as "we"), to conduct a performance audit of costs Brown claimed during the period of October 1, 2019, to September 30, 2022. The audit objectives included determining whether costs claimed on NSF awards were allowable, allocable, reasonable, and in compliance with NSF award terms and conditions and applicable federal financial assistance requirements. We have attached a full description of the audit's objectives, scope, and methodology as **Appendix B**.

AUDIT CRITERIA

The audit team assessed Brown's compliance with 2 Code of Federal Regulations (CFR) 200 (versions effective 12/26/2014 and 11/12/2020); NSF Proposal and Award Policies and Procedures Guides (PAPPGs) 15-1, 16-1, 17-1, 18-1, 19-1, 20-1, and 22-1; NSF award terms and conditions; and Brown policies and procedures. The audit team included references to relevant criteria within each finding and defined key terms within the Glossary located in <u>Appendix E</u>.

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 \$78,318 of direct and indirect costs that Brown inappropriately claimed during the audit period, including:

- \$47,384 of unallowable expenses
- \$24,263 of inappropriately allocated expenses
- \$6,671 of indirect cost rates not appropriately applied to expenses

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

- Non-compliance with Brown's Travel Lodging Policy
- Fringe benefit rate not appropriately applied

Recommendations

The audit report includes 14 recommendations for NSF's Director of the Division of Institution and Award Support related to resolving the \$78,318 in questioned costs and ensuring Brown strengthens its award management environment, as summarized in <u>Appendix D</u>.

AUDITEE RESPONSE

Brown generally agreed with the findings included in the audit report and agreed to reimburse NSF for \$61,259 of the \$78,318 in questioned costs. Brown's response is attached, in its entirety, to the report as <u>Appendix A</u>.

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Abbreviations

ACM\$	Award Cash Management \$ervice
Brown	Brown University
CFR	Code of Federal Regulations
FY	Fiscal Year
GAGAS	Generally Accepted Government Auditing Standards
GL	General Ledger
MTDC	Modified Total Direct Cost
NICRA	Negotiated Indirect Cost Rate Agreement
NSF	National Science Foundation
OIG	Office of Inspector General
PAPPG	Proposal and Award Policies and Procedures Guide
PI	Principal Investigator
POP	Period of Performance

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; 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 contractors to provide these audit services.

NSF OIG engaged Sikich CPA LLC (formerly known as Cotton & Company Assurance and Advisory, LLC, and herein referred to as "we"), to conduct a performance audit of costs claimed by Brown University (Brown). Brown is a private, non-profit institution located in Providence, Rhode Island. In fiscal year (FY) 2022, Brown reported approximately \$263 million in grants and contracts revenue, with \$167.5 million received from federal grants and contracts—including NSF—as illustrated in Figure 1.

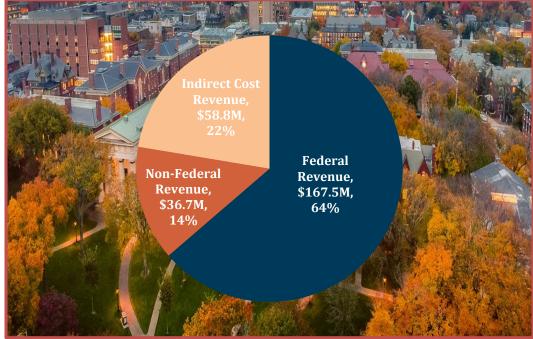


Figure 1: Brown's FY 2022 Grants and Contracts Revenue

Source: The chart data is supported by Brown's FY 2023 Annual Financial Report. (https://president.brown.edu/sites/default/files/Presidents Financial Report FY23.pdf) The photo of Brown's campus is publicly available on Brown's website. (https://admission.brown.edu/visit/campus-tours-0)

AUDIT SCOPE

This performance audit—conducted under Order No. 140D0422F0888—was designed to meet the objectives identified in the Objectives, Scope, and Methodology section of this report (Appendix B) and was conducted in accordance with *Generally Accepted Government Auditing Standards* (GAGAS), issued by the Comptroller General of the United States.

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

As illustrated in Figure 2, Brown provided general ledger (GL) data to support the \$76.4 million in expenses it claimed on 346 NSF awards during our audit **period of performance** (POP) of October 1, 2019, to September 30, 2022.

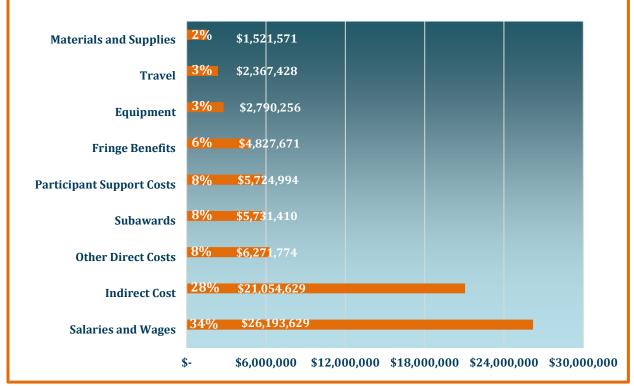


Figure 2: Costs Claimed on NSF Awards from October 1, 2019, to September 30, 2022

Source: Auditor analysis of accounting data Brown provided, illustrating the total costs (\$76,483,362) by expense type, using financial information to support costs incurred on NSF awards during the audit period. The "Other Direct Costs" category includes other direct costs, computer services, consultant services, and publications.

We judgmentally selected 72 transactions totaling \$2,024,149¹ (see Table 1) and evaluated supporting documentation to determine whether the costs claimed on the NSF awards were allocable, allowable, and reasonable, and whether they were in conformity with NSF award terms and conditions, organizational policies, and applicable federal financial assistance requirements.

Budget Category	Transaction Count	Expense Amount ²
Equipment	8	\$856,848
Participant Support Costs	9	325,462
Subawards	3	252,208
Other Direct Costs	11	143,160
Travel	13	129,187
Salaries and Wages	6	89,228
Materials and Supplies	6	84,900
Consultant Services	8	69,562
Indirect Cost	1	37,042
Computer Services	4	20,749
Fringe Benefits	2	10,423
Publications	1	5,380
Total	<u>72</u>	<u>\$2,024,149</u>

Table 1: Summary of Selected Transactions

Source: Auditor summary of selected transactions.

Additionally, we performed non-transaction-based cluster testing in two areas to evaluate whether Brown appropriately: (1) <u>allocated</u> publication costs and (2) charged equipment and material and supply purchases made near an award's expiration date to NSF awards.

AUDIT RESULTS

We identified and questioned \$78,318 in costs that Brown charged to 16 NSF awards. We also identified expenses that Brown charged to six NSF awards that did not result in **questioned costs**, but did result in non-compliance with federal and NSF-specific policies and procedures. See Table 2 for a summary of questioned costs by finding area, **Appendix** <u>**C**</u> for a summary of questioned costs by NSF award, and **Appendix D** for a summary of all recommendations.

¹ The \$2,024,149 represents the total value of the 72 transactions selected for transaction-based testing and does not represent the dollar base of the total costs reviewed during the audit.

² 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.

Table 2: Summary of Questioned Costs by Finding Area

Finding Description	Questioned Costs
Unallowable Expenses	\$47,384
Inappropriately Allocated Expenses	24,263
Indirect Cost Rates Inappropriately Applied	6,671
Non-Compliance with Brown's Travel Lodging Policy	-
Fringe Benefit Rate Inappropriately Applied	-
Total	<u>\$78,318</u>

Source: Auditor summary of findings identified.

We made 14 recommendations for NSF's Director of the Division of Institution and Award Support related to resolving the \$78,318 in questioned costs and ensuring Brown strengthens its administrative and management policies, procedures, and controls for monitoring federal funds. We communicated our audit results and the related findings and recommendations to Brown and NSF OIG. We included Brown's response to this report, in its entirety, in <u>Appendix A</u>.

FINDING 1: UNALLOWABLE EXPENSES

Brown charged 11 NSF awards a total of \$47,384 in <u>publication</u>, <u>material and supply</u>, and long-term visa expenses that were unallowable per federal regulations³ and NSF <u>Proposal and Award Policies and Procedures Guides (PAPPGs)</u>.⁴

Unallowable Publication Expenses

Brown charged eight NSF awards for \$35,310 in expenses incurred to publish research papers that it did not verify acknowledged the NSF award(s) charged, as required for the publication expenses to be allowable per federal regulations⁵ and NSF PAPPGs,⁶ as illustrated in Table 3.

³ According to 2 Code of Federal Regulations (CFR) § 200.403 (December 26, 2014) and 2 CFR § 200.403 (Revised November 12, 2020), *Factors affecting allowability of costs*, (a), for a cost to be allowable, it must be allocable and reasonable for the performance of the federal award. Further, section (g) states that, in order for a cost to be allowable, it must be adequately documented. See <u>Appendix E</u> of this report for additional factors affecting the allowability of costs.

⁴ According to NSF PAPPGs 18-1, 19-1, and 20-1 Part II, Chapter X, Section A, *Basic Considerations*, grantees should ensure all costs charged to NSF awards meet the requirements of the cost principles contained in 2 CFR § 200, Subpart E, grant terms and conditions, and any other specific requirements of both the award notice and the applicable program solicitation.

⁵ According to 2 CFR § 200.461 (December 26, 2014) and 2 CFR § 200.461 (Revised November 12, 2020), *Publication and printing costs*, (b), charges for professional journal publications are allowable where: (1) the publications report work supported by the federal government.

⁶ According to NSF PAPPGs 18-1, 19-1, and 20-1 Part II, Chapter XI, Section E.4.a, *Grantee Obligations*, the grantee is responsible for assuring acknowledgement of NSF support is made in any publication of any materials developed under an NSF project.

Expense Date	NSF Award No.	Expense Amount	Notes
September 2019		\$2,909	а
November 2019		2,113	b
November 2019		1,934	С
December 2019		3,250	d
March 2020		8,743	е
May 2020		2,431	f
March 2021		3,154	g
April 2021		3,138	h
May 2021		3,218	i
December 2021		4,420	j

Table 3: Unallowable Publication Expenses

Source: Auditor summary of identified exceptions.

- a) In September 2019, Brown charged NSF Award No. for \$2,909 in expenses incurred to publish a research paper that acknowledged support from other NSF awards, but did not report that the research was supported by NSF Award No.
- **b)** In November 2019, Brown charged NSF Award No. for \$2,113 in expenses incurred to publish a research paper that did not acknowledge that the research was supported by NSF Award No.
- c) In November 2019, Brown charged NSF Award No. for \$1,934 in expenses incurred to publish a research paper that did not acknowledge that the research was supported by NSF Award No.
- **d)** In December 2019, Brown charged NSF Award No. for \$3,250 in expenses incurred to publish a research paper that did not acknowledge that the research was supported by NSF Award No.
- e) In March 2020, Brown charged NSF Award No. for \$8,743 in expenses incurred to publish a research paper that broadly acknowledged support from NSF, but did not report that the research was specifically supported by NSF Award No.
- **f)** In May 2020, Brown charged NSF Award No. **In Control** for \$2,431 in expenses incurred to publish a research paper that Brown determined was charged to the NSF award in error.
- **g)** In March 2021, Brown charged NSF Award No. **1** for \$3,154 in expenses incurred to publish a research paper that broadly acknowledged support from NSF, but did not report that the research was specifically supported by NSF Award No.
- **h)** In April 2021, Brown charged NSF Award No. **The second secon**

but did not report that the research was specifically supported by NSF Award No.

- i) In May 2021, Brown charged NSF Award No. for \$3,218 in expenses incurred to publish a research paper that broadly acknowledged support from NSF, but did not report that the research was specifically supported by NSF Award No.
- **j)** In December 2021, Brown charged NSF Award No. **1** for \$4,420 in expenses incurred to publish a research paper that Brown determined was not allowable on the NSF award charged.

Unallowable Materials and Supplies Expenses

Brown charged three NSF awards for \$8,924 in unallowable materials and supplies expenses, as illustrated in Table 4.

Expense Date	Expense Date NSF Award No.		se Date		Unallowable Expenses Associated With:	Notes
April 2021		\$2,499	Materials and Supplies	a		
April 2021		2,243	Materials and Supplies	b		
April 2021		2,113	Materials and Supplies	С		
July 2021		2,069	Materials and Supplies	d		

Table 4: Unallowable Materials and Supplies Expenses

Source: Auditor summary of identified exceptions.

- a) In April 2021, Brown charged NSF Award No. for \$2,499 in materials and supplies that Brown acknowledged were incorrectly charged to the award.
- **b)** In April 2021, Brown charged NSF Award No. **1** for \$2,243 in materials and supplies that Brown acknowledged were unallowable.
- **c)** In April 2021, Brown charged NSF Award No. **for** \$2,113 in materials and supplies that were ultimately not used to benefit the award.
- **d)** In July 2021, Brown charged NSF Award No. **for** \$2,069 in materials and supplies that Brown acknowledged were unallowable.

Unallowable Long-Term Visa Expense

Brown charged one NSF award for \$3,150 for a long-term visa, which is not allowable per federal regulations⁷ and the NSF PAPPG,⁸ as illustrated in Table 5.

⁷ According to 2 CFR § 200.463 (December 26, 2014), *Recruiting costs*, (d), short-term, travel visa costs (as opposed to longer-term, immigration visas) are generally allowable expenses that may be proposed as a direct cost.

⁸ NSF PAPPG 18-1, Part II, Chapter XI, Section F.4, *Passports and Visas*, states that NSF assumes no responsibility for securing passports or visas required by any person because of participation in an NSF-supported project. For restrictions concerning directly charging visa costs to an NSF award, see 2 CFR § 200.463.

Expense	NSF Award	Expense	Unallowable Expenses Associated	Notes
Date	No.	Amount	With:	
November 2020		\$3,150	Long-Term Visa	а

Table 5: Unallowable Long-Term Visa Expense

Source: Auditor summary of identified exception.

a) In November 2020, Brown charged NSF Award No. a post-doctoral research associate's long-term visa. for \$3,150 to apply for

Conclusion

Brown's policies, procedures, and internal controls did not always ensure that publications appropriately acknowledged funding support from the applicable NSF award, materials and supplies were allowable and charged based on the relative benefits received by the NSF award, and long-term visa expenses were not charged to NSF awards. We are therefore questioning \$47,384 of unallowable expenses charged to 11 NSF awards, which Brown agreed to reimburse, as illustrated in Table 6.

NSF		Fiscal	Questioned Costs			
Award No.	Description	Year	Direct	Indirect	Total	Brown Agreed to Reimburse
	September 2019 Publication	2020	\$1,790	\$1,119	\$2,909	\$2,909
	November 2019 Publication	2020	1,300	813	2,113	2,113
	November 2019 Publication	2020	1,190	744	1,934	1,934
	December 2019 Publication	2020	2,000	1,250	3,250	3,250
	March 2020 Publication	2020	5,380	3,363	8,743	8,743
	May 2020 Publication	2020	1,496	935	2,431	2,431
	March 2021 Publication	2021	1,990	1,164	3,154	3,154
	April 2021 Publication	2021	1,980	1,158	3,138	3,138
	May 2021 Publication	2021	1,980	1,238	3,218	3,218
	December 2021 Publication	2022	2,780	1,640	4,420	4,420
	April 2021 Materials and Supplies	2021	1,538	961	2,499	2,499
	April 2021 Materials and Supplies	2021	1,380	863	2,243	2,243
	April 2021 Materials and Supplies	2021	1,300	813	2,113	2,113
	July 2021 Materials and Supplies	2021	1,301	768	2,069	2,069
	November 2020 Long-Term Visa	2021	2,500	650	3,150	3,150
Total			<u>\$29,905</u>	<u>\$17,479</u>	<u>\$47,384</u>	<u>\$47,384</u>

Table 6: Finding 1 Summary: Unallowable Expenses

Source: Auditor summary of identified exceptions.

Recommendations

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

- 1.1 Direct Brown to provide documentation supporting that it has repaid or otherwise credited the \$47,384 in questioned publication, materials and supplies, and long-term visa costs for which it has agreed to reimburse NSF.
- 1.2 Direct Brown to implement additional procedures which require it to verify that a publication acknowledges the NSF funding source(s) that supported the published research prior to the expense being charged to the NSF award(s).
- 1.3 Direct Brown to establish additional guidance regarding how to review invoices and receipts that include materials and supplies charged to NSF awards. This guidance should address how to ensure materials and supplies expenses are allowable and properly allocated to the funding sources that directly benefit from the purchase.
- 1.4 Direct Brown to create additional resources that provide guidance regarding the allowable charging of visa fees on NSF awards. This guidance should address how Brown will ensure it does not charge unallowable long-term visa fees to NSF awards.

Brown University Response: Brown agreed to reimburse NSF for the \$47,384 in questioned costs. Further, Brown noted that it will implement additional procedures for verifying that publications acknowledge the applicable NSF funding source(s) prior to charging the expense to the NSF award(s); develop and disseminate refreshed guidance for reviewing materials and supplies invoices and receipts; and amend its federal cost guidance to reflect that long-term visa fees are not allowable on NSF awards.

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

FINDING 2: INAPPROPRIATELY ALLOCATED EXPENSES

Brown did not always allocate expenses to NSF awards based on the relative benefits the awards received, as required per federal regulations⁹ and NSF PAPPGs.¹⁰ As a result, Brown charged five NSF awards a total of \$24,263 in inappropriately allocated expenses for publications and materials and supplies purchased near grant expiration.

⁹ According 2 CFR § 200.405 (December 26, 2014) and 2 CFR § 200.405 (Revised November 12, 2020), *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.

¹⁰ According to NSF PAPPG 18-1, 19-1, and 20-1 Part II, Chapter X, Section A, *Basic Considerations*, grantees should ensure all costs charged to NSF awards meet the requirements of the cost principles contained in 2 CFR § 200, Subpart E, *grant terms and conditions*, and any other specific requirements of both the award notice and the applicable program solicitation.

Inappropriately Allocated Publication Expenses

Brown charged four NSF awards for \$17,059 in inappropriately allocated publication expenses,¹¹ as illustrated in Table 7.

Expense Date	NSF Award No.	Amount Charged	Percentage Not Allocable	Amount Inappropriately Allocated	Notes
May 2020		\$5,928	66.66	\$3,952	a
June 2021		4,867	50	2,434	b
January 2022		6,048	75	4,536	С
May 2022		9,206	66.66	6,137	d

Table 7: Inappropriately Allocated Publication Expenses

Source: Auditor summary of identified exceptions.

- a) In May 2020, Brown charged NSF Award No. for \$5,928—or 100 percent of the expenses incurred to publish a research paper that acknowledged support from NSF Award Nos. and second and second Because the research paper acknowledged that three awards contributed to the research, and Brown acknowledged the research performed under NSF Award Nos. and supported the Principal Investigator's (PI's) advisor and access to a database used to perform the research, \$3,952—or 66.66 percent—of costs associated with this publication expense are not allocable to this award.
- **b)** In June 2021, Brown charged NSF Award No. **Second** for \$4,867—or 100 percent—of the expenses incurred to publish a research paper that acknowledged support from NSF Award Nos. **Second** and **Second** Because the research paper acknowledged that two awards contributed to the research, and Brown acknowledged the research performed under NSF Award No. **Second** had an impact on the information in the publication, \$2,434—or 50 percent—of costs associated with this publication expense are not allocable to this award.
- c) In January 2022, Brown charged NSF Award No. for \$6,048—or 100 percent—of the expenses incurred to publish a research paper that acknowledged support from NSF Award Nos. for a more and for Because the research paper acknowledged that four awards contributed to the research, and Brown acknowledged the concepts and methods developed under NSF Award Nos. for and for a more applied to the research that resulted in the publication, \$4,536—or 75 percent—of costs associated with this publication expense are not allocable to this award.
- **d)** In May 2022, Brown charged NSF Award No. **for** \$9,206—or 100 percent—of the expenses incurred to publish a research paper that acknowledged support

¹¹ According to 2 CFR § 200.461 (December 26, 2014) and 2 CFR § 200.461 (Revised November 12, 2020), *Publication and printing costs*, (b), page charges for professional journal publications are allowable where: (1) the publications report work supported by the federal government; and (2) the charges are levied impartially on all items published by the journal, whether or not under a federal award.

from NSF Award Nos. **Sectors** and **sectors** and an award from another federal sponsor. Because the research paper acknowledged that three awards contributed to the research, and Brown acknowledged NSF Award No. **Sectors** and the other sponsored award were relevant to the research conducted, \$6,137—or 66.66 percent—of costs associated with this publication expense are not allocable to this award.

Inappropriately Allocated Materials and Supplies Near Grant Expiration

Brown charged one NSF award for \$7,204 in materials and supplies purchased near NSF award expiration dates when there was little-to-no time left for the items to be utilized to benefit the award research,¹² as illustrated in Table 8.

Table 0. III	appropriate	ly Anotaleu Male	erials and Supplies Near Grant Expirati	UII
Expense Date	NSFInappropriatelyAward No.Allocated Total			
October 2021		\$3,501	iPad, 2-year Protection Plan, and Computer Peripherals	а
November 2021		1,784	External Memory Drive	b
January 2022		1,919	Computer Monitor	С

Table 8: Inappropriately Allocated Materials and Supplies Near Grant Expiration

Source: Auditor summary of identified exceptions.

- a) In October 2021, Brown charged NSF Award No. for \$3,501 in materials and supplies for an iPad, 2-year protection plan, keyboard, and other computer peripherals. These items were purchased within the last 71 days of the award's period of performance, the protection plan covered a period that extended beyond the award expiration date, and Brown's justification did not support the items purchased at the end of the award were necessary to achieve the award objectives.
- **b)** In November 2021, Brown charged NSF Award No. for \$1,784 to purchase an external memory drive. Although the purchase was initiated 38 days prior to the award end date, Brown did not provide documentation to support the date the memory drive was received, nor that it would have been available and installed to benefit the award prior to the award ending.
- c) In January 2022, Brown charged NSF Award No. for \$1,919 to purchase a computer monitor. Although the purchase was initiated 38 days prior to the award end date, Brown did not provide documentation to support the date the monitor was received, nor that it would have been available and installed to benefit the award prior to the award ending.

¹² According to NSF PAPPG 19-1, Chapter X, Section A.2.c., *Post-End Date Costs*, the grantee typically should not purchase items of equipment, computing devices, or restock materials and supplies in anticipation of the end date of the grant when there is little-to-no time left for such items to be utilized in the actual conduct of the research.

Conclusion

Brown did not have sufficient policies, procedures, or internal controls in place to ensure that it reasonably allocated expenses based on the relative benefits each NSF award received. Specifically, Brown did not ensure that it appropriately allocated publication expenses to all funding sources that supported the published research, nor that it provided documentation supporting that materials and supplies purchased near NSF award expiration with little-to-no time left for the items to be utilized to benefit the award research were appropriately allocated based on the relative benefit received. We are therefore questioning \$24,263 of inappropriately allocated expenses charged to five NSF awards. Brown agreed to reimburse NSF for \$7,204 of the questioned costs, but disagreed with the remaining \$17,059, as illustrated in Table 9.

NSF			Questioned Costs			
Award No.	Description	Fiscal Year(s)	Direct	Indirect	Total	Brown Agreed to Reimburse
	May 2020 Publication	2020	\$2,432	\$1,520	\$3,952	\$0
	June 2021 Publication	2021	1,498	936	2,434	-
	January 2022 Publication	2022	3,600	936	4,536	-
	May 2022 Publication	2022	3,860	2,277	6,137	-
	October 2021 iPad, Protection Plan, and Computer Peripherals	2022	2,202	1,299	3,501	3,501
	November 2021 External Memory Drive	2022	1,122	662	1,784	1,784
	January 2022 Computer Monitor	2022	1,207	712	1,919	1,919
Total			<u>\$15,921</u>	<u>\$8,342</u>	<u>\$24,263</u>	<u>\$7,204</u>

Table 9: Finding 2 Summary: Inappropriately Allocated Expenses

Source: Auditor summary of identified exceptions.

Recommendations

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

- 2.1 Resolve the \$17,059 in questioned inappropriately allocated publication costs and direct Brown to repay or otherwise remove the sustained questioned costs from its NSF awards.
- 2.2 Direct Brown to provide documentation supporting it has repaid or otherwise credited the \$7,204 in questioned materials and supplies expenses for which it has agreed to reimburse NSF.

- 2.3 Direct Brown to produce formal written guidance and provide training on how to assess and document the methodology used to allocate publication costs consistent with the benefits received by acknowledged funding sources.
- 2.4 Direct Brown to update its processes and procedures to require Principal Investigators or other designated staff to both document and justify the allocation methodologies used when charging expenses to NSF awards near grant expiration dates.

Brown University Response: Brown partially agreed with the finding, agreeing to reimburse NSF for the \$7,204 in questioned materials and supplies expenses, but disagreeing with the \$17,059 in questioned publication costs. Brown stated that the PIs followed the guidance from NSF's *Research Terms & Conditions - Agency Specific Requirements, Grant General Conditions*, PAPPG(s), and FAQs for Public Access. Specifically, Brown noted that the PIs acknowledged all awards that impacted the research being published, and Brown believes the PIs' rationale supports that the cost allocations were appropriate based on the relative benefits each project received. However, Brown noted it will work to develop and disseminate formal written guidance on how PIs must document the methodology used to allocate publication costs consistent with the benefits received from the acknowledged funding sources.

Auditors' Additional Comments: Our position regarding this finding has not changed. Specifically, Brown charged 100 percent of each publication cost to a single NSF award, rather than allocating the costs across the funding sources that impacted the research. As the PIs' rationales acknowledge that the other awards identified contributed to the published research, and the relative benefits received by the awards charged are not consistent with the amounts allocated to the awards, our position regarding this finding has not changed.

FINDING 3: INDIRECT COST RATES NOT APPROPRIATELY APPLIED

Brown did not apply—or ensure one subawardee applied—indirect cost rates consistent with their federally <u>Negotiated Indirect Cost Rate Agreements (NICRAs)</u> when charging direct expenses to six NSF awards. As a result, Brown charged \$6,671 in unallowable indirect costs or did not appropriately apply indirect cost rates to direct expenses charged to six NSF awards.

Indirect Cost Rates Not Appropriately Applied

Brown does not have a formally documented policy or procedure in place to ensure it—or its subawardees—consistently charge indirect costs using a rate no greater than the NICRA rate(s) in effect as of the NSF award or <u>subaward</u> date. Specifically, Brown does not have a formal process for documenting its decision to apply—or to allow its subawardees to apply—a proposed indirect cost rate when the proposed rate is different than the NICRA rate(s) effective at the time of the award or subaward. As a result, Brown charged \$5,569 in unallowable indirect costs to one NSF award and did not apply the appropriate indirect cost rates to two NSF awards, as illustrated in Table 10.

NSF Award No.	Award Date	Expense Date(s)	Rate Applied (%)	Appropriate Rate (%)	Inappropriately Charged Indirect Costs	Notes
	08/05/2019	09/30/2021	58.50	59.00	\$0	a
	06/13/2019	12/07/2021	59.00	62.50	-	b
	06/27/2019	08/01/2020 - 06/10/2022	54.00	43.40	5,569	с

Table 10: Indirect Cost Rates Not Appropriately Applied

Source: Auditor summary of identified exceptions.

- **a)** In September 2021, Brown charged NSF Award No. **Security** for \$3,899 in expenses for labor hours to repair a piece of **equipment**. Although the indirect cost rate Brown should have applied was 59.00 percent, Brown inappropriately applied its 58.50 percent indirect cost rate.¹³
- **b)** In December 2021, Brown charged NSF Award No. **For \$2,780** in expenses incurred to publish a research paper. Although the indirect cost rate Brown should have applied was 62.50 percent,¹⁴ Brown applied its 59.00 percent indirect cost rate.
- **c)** Between August 2020 and June 2022, Brown charged NSF Award No. **b** for \$80,920 in expenses invoiced by a subawardee. Although the indirect cost rate the subawardee should have applied was 43.40 percent, the subawardee applied its 54.00 percent indirect cost rate.¹⁵ As a result, Brown overcharged \$5,569 to the NSF award for indirect costs the subawardee inappropriately invoiced to Brown.

Indirect Cost Rates Not Appropriately Applied to Brown's Modified Total Direct Cost Base

Brown did not consistently apply its indirect cost rate to the <u>Modified Total Direct Cost</u> (<u>MTDC</u>) base established in its NICRAs,¹⁶ in accordance with federal regulations.¹⁷ As a

¹³ Brown's NICRA dated May 26, 2020, established a predetermined indirect cost rate of 58.50 percent for oncampus research from July 1, 2020, to June 30, 2021, and a 59.00 percent rate for on-campus research from July 1, 2021, to June 30, 2022.

¹⁴ Brown's NICRA dated June 10, 2019, established a predetermined indirect cost rate of 62.50 percent for oncampus research from July 1, 2018, to June 30, 2019.

¹⁵ Per Brown's subawardee's indirect cost rate agreement, as identified on its website, the indirect cost rate applicable to the subaward was 43.40 percent.

¹⁶ Brown's NICRAs dated January 24, 2018, June 10, 2019, and February 12, 2021, state that MTDCs consist of all salaries and wages, fringe benefits, materials and supplies, services, travel, and subgrants and subcontracts up to the first \$25,000 of each subgrant or subcontract (regardless of the period covered by the subgrant or subcontract). MTDCs shall exclude equipment, capital expenditures, charges for patient care, tuition remission, rental costs, scholarships and fellowships, participant support costs, and the portion of each subgrant and subcontract in excess of \$25,000.

¹⁷ According to 2 CFR § 200.68 (December 26, 2014) and 2 CFR § 200.68 (Revised November 12, 2020), *Modified Total Direct Costs*, all direct <u>salaries and wages</u>, applicable fringe benefits, materials and supplies, services, and travel are included in the MTDC; however, equipment and capital expenditures are excluded.

result, Brown charged \$1,102 in unallowable indirect costs to one NSF award and did not appropriately apply indirect costs to two NSF awards, as illustrated in Table 11.

NSF Award No.	Direct Expense Type	NSF Award Date	Transaction Date	Rate Applied (%)		Inappropriately Charged Indirect Costs	Notes
	Materials and Supplies	08/14/2018	06/30/2022	0	62.50 ¹⁸	\$0	а
	Participant Support	12/03/2021	08/01/2022	26.00	-	1,102	b
	Materials and Supplies	08/06/2019	08/31/2022	-	59.50 ¹⁹	-	С

Table 11: Indirect Cost	Rates Not Appropri	ately Applied to MTDC Base
	indeed not inper oprio	

Source: Auditor summary of identified exceptions.

- **a)** In June 2022, Brown charged NSF Award No. for \$1,265 in materials and supplies expenses that Brown inadvertently posted to an account that was excluded from Brown's MTDC base.
- **b)** In August 2022, Brown charged NSF Award No. for \$1,102 in indirect costs inappropriately applied to <u>participant support costs</u>. Specifically, Brown accounted for expenses to provide a participant with supplies for their internship as materials and supplies and included them within the MTDC base, rather than accounting for the expenses as participant support costs, which are excluded from the MTDC base.
- **c)** In August 2022, Brown charged NSF Award No. for \$1,392 for materials and supplies that Brown inadvertently posted to an account that was excluded from Brown's MTDC base.

Conclusion

Brown did not have sufficient policies, procedures, or internal controls in place to ensure both it and its subawardees monitored, evaluated, and/or adjusted their budgeted indirect cost rates after the NSF awards and subawards were awarded to determine the appropriate indirect cost rate to apply per their most recent NICRAs. Further, Brown did not have sufficient policies, procedures, or internal controls in place to ensure it charged direct expenses to GL accounts consistent with its NICRAs.

¹⁸ Brown's NICRA dated January 24, 2018, established a predetermined indirect cost rate of 62.50 percent for on-campus research from July 1, 2017, to June 30, 2019.

¹⁹ Brown's NICRA dated June 10, 2019, established a predetermined indirect cost rate of 62.50 percent for oncampus research from July 1, 2018, to June 30, 2019. The same rate was provisional from July 1, 2019, until amended. Brown's NICRA dated May 26, 2020, established a predetermined indirect cost rate of 59.50 percent for on-campus research from July 1, 2022, to June 30, 2023.

We are therefore questioning \$6,671 in indirect costs charged to two NSF awards and noting four compliance exceptions for the instances in which Brown applied the incorrect indirect cost rates. Brown agreed to reimburse NSF for the \$6,671 in questioned costs, as illustrated in Table 12.

NSF			Questioned Costs			
Award No.	Description	Fiscal Year(s)	Direct	Indirect	Total	Brown Agreed to Reimburse
	September 2021 Indirect Cost Rate Not Appropriately Applied	2022	\$0	\$0	\$0	\$0
	December 2021 Indirect Cost Rate Not Appropriately Applied	2022	-	-	-	-
	August 2020 - June 2022 Indirect Cost Rate Not Appropriately Applied by Subawardee	2020 - 2022	5,569	-	5,569	5,569
	June 2022 Materials and Supplies Excluded from MTDC	2022	-	-	-	-
	August 2022 Participant Support Costs Included in MTDC	2023	-	1,102	1,102	1,102
	August 2022 Materials and Supplies Excluded from MTDC	2023	-	-	-	-
Total			<u>\$5,569</u>	<u>\$1,102</u>	<u>\$6,671</u>	<u>\$6,671</u>

Table 12: Finding 3 Summary: Indirect Cost Rates Not Appropriately Applied toBrown's MTDC Base

Source: Auditor summary of identified exceptions.

Recommendations

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

- 3.1 Direct Brown to provide documentation supporting that it has repaid or otherwise credited the \$6,671 in questioned indirect costs for which it has agreed to reimburse NSF.
- 3.2 Direct Brown to update its current award set-up practices to: (1) ensure that it sets up accounts for NSF awards, such that each account applies indirect costs using the appropriate rates established in the Negotiated Indirect Cost Rate Agreement in effect as of the date of grant award; and/or (2) document its decision to apply indirect costs using lower rates.

- 3.3 Direct Brown to strengthen its policies, procedures, or internal controls for how to verify—and how to document its verification of—its subawardees' election to use proposed indirect cost rates. This should address how Brown will ensure that the decision to use proposed indirect cost rates will not result in NSF being overcharged for indirect costs in cases when negotiated rates decrease between the date a subaward is proposed and the date a subaward is awarded within a single Negotiated Indirect Cost Rate Agreement.
- 3.4 Direct Brown to strengthen its policies, procedures, and internal control processes for applying its federally negotiated indirect cost rates to NSF awards. These updated policies, procedures, and internal control processes should ensure Brown is:
 - Appropriately applying its indirect cost rates to all direct costs that should be included in its Modified Total Direct Cost base per its negotiated indirect cost rate agreements.
 - Accurately classifying all costs for accounts that are included within its Modified Total Direct Cost base per its negotiated indirect cost rate agreements.

Brown University Response: Brown agreed to reimburse NSF for the \$6,671 in questioned costs. Brown noted it will ensure the appropriate indirect cost rate— established per its NICRA effective as of the award date—is incorporated during account set-up, or will document its decision to apply a lower indirect cost rate. Additionally, Brown agreed to strengthen its policies, procedures, and internal control processes for applying its indirect cost rate to an appropriate MTDC base. Finally, Brown noted it will develop a documented procedure to verify that subawardees apply indirect cost rates consistent with their approved NICRAs.

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

FINDING 4: NON-COMPLIANCE WITH BROWN'S TRAVEL LODGING POLICY

Brown did not comply with its <u>**Travel**</u> Lodging Policy²⁰ when charging lodging expenses to one NSF award, as illustrated in Table 13.

Table 13: Non-Compliance with Brown's Travel Lodging Policy

NSF Award No. Fis	scal Year	Expense Date	Lodging Compliance Exception:	Notes
	2023	July 2022	Lack of Itemized Lodging Receipt	а

Source: Auditor summary of identified exception.

a) In July 2022, Brown charged NSF Award No. for \$185 in lodging expenses for an individual to attend the

²⁰ Brown's *Travel Policy: Lodging* requires a detailed hotel bill displaying a \$0 balance for reimbursement of lodging expenses.

conference. Although Brown provided a booking confirmation supporting the traveler paid for the one-night stay in advance, it did not provide a detailed hotel bill showing a zero-dollar balance, as required per its policy.

Conclusion

Brown did not have sufficient controls in place to ensure that it obtained the appropriate documentation to support lodging expenses prior to reimbursement. Because this instance of non-compliance did not result in Brown charging unallowable costs to the NSF award, we are not questioning any costs related to this exception. However, we are noting a compliance exception for this instance in which Brown did not comply with its internal Travel Lodging Policy, as illustrated in Table 14.

Table 14: Finding 4 Summary: Non-Compliance with Brown's Travel Lodging Policy

NSF Award No.	Compliance Exception Identified	Fiscal Year
	Non-Compliance with Brown's Travel Lodging Policy	2023
Source: Auditor summary of	f identified exception.	

Recommendations

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

4.1 Direct Brown to strengthen its internal controls for retaining documentation to support lodging expenses. These updated internal controls could include providing annual training to ensure travelers and individuals responsible for approving travel reimbursements are aware of the documentation required for lodging reimbursements per its institutional policies.

Brown University Response: Brown agreed with this finding, stating it offers training on compliance with federal and institutional travel requirements and has updated its institutional travel policy to strengthen controls and specify the documentation required to support lodging expenses.

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

FINDING 5: FRINGE BENEFIT RATE NOT APPROPRIATELY APPLIED

Brown did not apply its full-time employee fringe benefit rate consistent with its NICRA when charging direct expenses to one NSF award.²¹ Specifically, Brown applied a fringe benefit rate that was not one of the approved fringe benefit rates established in any of Brown's NICRAs, as illustrated in Table 15.

²¹ According to Brown's NICRA dated March 18, 2022, fringe benefits are charged using the rates listed in the "Fringe Benefits" section of the agreement. This NICRA established a 29.50 percent fringe benefit rate for full-time employees from July 1, 2022, to June 30, 2023.

Table 15: Fringe Benefit Rate Inappropriately Applied Using a Non-NICRA Rate

08/02/2018 08/31/2022 13.14 29.50 a	NSF Award <u>No.</u>	Award Date	Transaction Date	Rate Applied (%)	Appropriate Rate (%)	Note
		08/02/2018	08/31/2022	13.14	29.50	a

Source: Auditor summary of identified exception.

a) In August 2022, Brown charged NSF Award No. for fringe benefits for one employee that were not appropriately calculated. Specifically, Brown processed adjustments to correct salary charged to two NSF awards. After processing the adjustments the fringe benefits charged to NSF Award No. were 13.14 percent of the employee's salary expenses charged rather than 29.5 percent of the employee's salary cost, consistent with the fringe benefit rate included in Brown's NICRA dated March 18, 2022.

Conclusion

Brown did not have sufficient internal controls in place to ensure it applied the appropriate negotiated fringe benefit rate to direct costs when processing adjustments prior to charging fringe benefits to an NSF award. Because this instance of Brown incorrectly calculating fringe benefits did not result in Brown charging unallowable costs to NSF awards, we are not questioning any expenses associated with this exception. However, we are noting a compliance exception for this instance in which Brown did not apply a fringe benefit rate consistent with its NICRA, as illustrated in Table 16.

Table 16: Finding 5 Summary: Fringe Benefit Rate Inappropriately Applied

NSF Award No.								
	August 2022 Fringe Benefit Rate Not Appropriately Applied	2023						
Source: Auditor sum	<i>Source:</i> Auditor summary of identified exception.							

Recommendation

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

5.1 Direct Brown to strengthen its monitoring procedures to ensure it appropriately applies the fringe benefit rates included within its negotiated indirect cost rate agreements.

Brown University Response: Brown agreed with this finding and stated it has taken measures to ensure that fringe benefit rates are applied as specified in its NICRAs.

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

Sikich CPALLC

July 31, 2024

APPENDIX A: BROWN'S RESPONSE



Office of Sponsored Projects 350 Eddy Street, Box 1929 Providence, RI 02912 Tel: 401 863-2777 Fax: 401 863-7292

Brown University Responses to NSF Performance Audit of Incurred Costs

Finding 1 Unallowable Expenses

Brown agreed with the Unallowable Expenses finding and will credit and/ or reimburse NSF for questioned publication (\$35,310) materials and supplies (\$8,924) costs. Brown has previously repaid \$3,150 for unallowable long-term visa costs and shared this documentation with Sikich. Brown will implement additional procedures to verify that a publication acknowledges the applicable NSF funding source(s) prior to the expense being charged to the NSF award(s). Brown will develop and disseminate refreshed guidance regarding material and supply invoices and receipts review. Brown will amend its federal cost guidance to reflect that long-term visa fees are not allowable on NSF awards.

Finding 2 Inappropriately Allocated Expenses

Inappropriately Allocated Publication Expenses: Brown disagrees with \$17,059 in questioned costs and has provided further documentation on the publication allocation methodologies for the four cited awards (Table 7, items a – d). Brown confirmed that the PIs followed the guidance from NSF's Research Terms & Conditions -Agency Specific Requirements, Grant General Conditions (GC-1), PAPPG(s) and FAQS for Public Access, which states "the grantee is responsible for assuring that an acknowledgment of NSF support is made in any publication (including world wide web pages) of any material based on or developed under the project". In these four cases, PIs acknowledged all awards that impacted the research being published and provided a rationale as to cost allocation and relative to the benefits each project received. Brown will work to develop used to allocate publication costs consistent with the benefits received from the acknowledged funding sources.

Inappropriately Allocated Purchases Near Grant Expiration: Brown agrees with this finding. Brown will strengthen written guidance to PIs and other staff on adequate documentation of allocation methodologies used when charging expenses near grant expiration dates. Brown will reimburse NSF for \$7,204 in questioned costs.

Finding 3: Indirect Cost Rates Not Appropriately Applied

Brown agrees with the indirect cost rates inappropriately applied finding and will reimburse NSF for \$6,671. Brown notes that all identified variances in the application of indirect costs rates (Table 10 a, b) resulted in reduced reimbursement of F&A costs to the university. Brown will confirm that account set-up will incorporate the appropriate rates established in the negotiated indirect cost rate agreement (NICRA) in effect as of the date of grant award and/or (2) document its decision to apply indirect costs using lower rates.

Brown agrees to strengthen its policies, procedures, and internal control processes for applying its rate and accurately classifying costs in the MTDC base per the NICRA. Additionally, Brown will develop and follow a documented procedure to verify subawardees follow their approved NICRAS, ensuring the government is not overcharged.

Finding 4: Non-Compliance with Brown's Lodging Policy

Brown agrees with this compliance exception. The University has updated its institutional travel policy to strengthen controls and clarified documentation to support lodging expenses. Furthermore, Brown University offers training entitled "Traveling on Sponsored Projects," which specifically addresses compliance with federal and institutional travel regulations and requirements.

Finding 5: Fringe Benefit Rate Not Appropriately Applied

Brown agrees with Fringe Benefit Rate Not Appropriately Applied compliance exception. The University has taken measures to ensure that Fringe Benefit rates are applied as specified in the Negotiated Indirect Cost Rate Agreement.

Submitted: July 11, 2024

Patrice A. Carroll Senior Director, Office of Sponsored Projects APPENDIX B: OBJECTIVES, SCOPE, AND METHODOLOGY

OBJECTIVES

The NSF OIG Office of Audits engaged Sikich CPA LLC (formerly known as Cotton & Company Assurance and Advisory, LLC and herein referred to as "we"), to conduct an audit of the costs that Brown University (Brown) claimed on NSF awards during the audit period of performance (POP) of October 1, 2019, through September 30, 2022. The objectives of the audit were to evaluate Brown's award management environment; determine if costs claimed are allowable, allocable, reasonable, and in compliance with NSF award terms and conditions and applicable federal financial assistance requirements; and 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 \$76.4 million in expenses that Brown claimed on 346 NSF awards during our audit POP of October 1, 2019, through September 30, 2022.

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 general ledger (GL) data Brown provided by comparing the costs charged to NSF awards per Brown's accounting records to the reported net expenditures reflected in its NSF Award Cash Management \$ervice (ACM\$) drawdown requests.
 - Our work required us to rely on computer-processed data obtained from Brown and NSF OIG. NSF OIG provided award data that Brown reported through NSF's ACM\$ during our audit period.
 - We assessed the reliability of the GL data that Brown provided by (1) comparing the costs charged to NSF awards per Brown's accounting records to the reported net expenditures reflected in the ACM\$ drawdown requests that Brown submitted to NSF during the audit POP; and (2) reviewing the parameters that Brown used to extract transaction data from its accounting systems. We found Brown's computer-processed data to be sufficiently reliable for the purposes of the audit. We did not identify any exceptions with the parameters that Brown 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 (FY) 2022 found no reportable instances in which NSF's financial management systems did not substantially comply with applicable requirements.

- Brown provided detailed transaction-level data to support \$76,483,362 in costs charged to NSF awards during the POP, which was less than the \$76,483,850 Brown claimed in ACM\$ for the 346 awards. This data resulted in a total audit universe of \$76,483,362 in expenses claimed on 346 NSF awards.
 - Because the GL data materially reconciled to NSF's ACM\$ records, we determined that the GL data was appropriate for the purposes of this engagement.
- Obtaining and reviewing all available accounting and administrative policies and procedures, external audit reports, desk review reports, and other relevant information that Brown and NSF OIG provided, as well as any other relevant information that was available online.
- Summarizing our understanding of federal, NSF, and Brown-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 Brown's internal controls within the audit's scope solely to understand the directives or policies and procedures Brown has in place to ensure that charges against NSF awards complied with relevant federal regulations, NSF award terms and conditions, and Brown policies.
- Providing Brown with a list of 42 transactions that we selected based on the results of our data analytics and requesting that Brown provide documentation to support each transaction.
- Reviewing the supporting documentation Brown 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,²² NSF,²³ and Brown policies.²⁴

²² We assessed Brown's compliance with 2 CFR § 200 and Revised 2 CFR § 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*, as appropriate.

²³ We assessed Brown's compliance with NSF PAPPGs 15-1, 16-1, 17-1, 18-1, 19-1, 20-1, and 22-1, and with NSF award-specific terms and conditions, as appropriate.

²⁴ We assessed Brown's compliance with internal Brown policies and procedures surrounding costs budgeted for or charged to NSF awards.

- Holding virtual interviews and walkthroughs with Brown in May 2023 to discuss payroll (including fringe benefits and effort reporting), travel, participant support costs, procurement, equipment (including an inventory check), other direct costs (e.g., patent, relocation, recruiting, interest, advertising/public relations, entertainment, fundraising, lobbying, selling/marketing, and training costs), subawards, ACM\$ processing, indirect costs, and other general policies (e.g., pre-and post-award costs, program income, whistleblower 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.

Expanded Testing Audit Phase

Based on the areas of elevated risk of noncompliance identified during the audit survey phase, we determined that we should perform further audit procedures that included:

- Conducting additional data analytics, evaluating the results of the analytics, and re-running analytical tests, as necessary.
- Selecting an additional audit sample of 30 transactions.
- Conducting additional fieldwork, which included providing the list of 30 transactions to Brown and requesting and reviewing supporting documentation until we had obtained sufficient, appropriate evidence to enable us to assess the allowability of each sampled transaction.
- Conducting additional audit work in two areas to evaluate whether Brown appropriately: (1) allocated publication costs and (2) charged equipment and material/supply purchases to NSF awards near the award's expiration date.

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 Brown personnel to ensure that Brown 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* (GAGAS), 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. APPENDIX C: SUMMARY OF QUESTIONED COSTS

Finding	Description	Question	ed Costs	Total
rmung	Description	Unsupported	Unallowable	IUldi
1	Unallowable Expenses	\$0	\$47,384	\$47,384
2	Inappropriately Allocated Expenses	-	24,263	24,263
3	Indirect Cost Rates Not Appropriately Applied	-	6,671	6,671
4	Non-Compliance with Brown's Travel Lodging Policy	-	-	-
5	Fringe Benefit Rate Not Appropriately Applied	-	-	-
Total		<u>\$0</u>	<u>\$78,318</u>	<u>\$78,318</u>

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

Source: Auditor summary of questioned costs by finding.

NSF Award No.	No. of Transaction Exceptions	Questioned Direct Costs	Questioned Indirect Costs	Questioned Total	Brown Agreed to Reimburse
	1	\$2,432	\$1,520	\$3,952	\$0
	2	2,918	1,824	4,742	4,742
	1	2,000	1,250	3,250	3,250
	1	1,190	744	1,934	1,934
	1	2,500	650	3,150	3,150
	2	2,796	1,748	4,544	4,544
	1	-	-	-	-
	2	1,498	936	2,434	-
	2	3,280	2,051	5,331	5,331
	1	1,790	1,119	2,909	2,909
	1	5,569	-	5,569	5,569
	2	2,780	1,640	4,420	4,420
	2	7,370	4,527	11,897	11,897
	1	-	-	-	-
	1	-	-	-	-
	5	5,832	3,441	9,273	9,273
	2	5,840	3,435	9,275	3,138
	1	3,600	936	4,536	-
	1	-	1,102	1,102	1,102
Total	<u>30</u>	<u>\$51,395</u>	<u>\$26,923</u>	<u>\$78,318</u>	<u>\$61,259</u>

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

Source: Auditor summary of questioned costs by NSF award number.

Finding No.	NSF Award No.	Description	Fiscal Year(s)	Direct	Indirect	Total	Brown Agreed to Reimburse
		September 2019 Publication	2020	\$1,790	\$1,119	\$2,909	\$2,909
		November 2019 Publication	2020	1,300	813	2,113	2,113
		November 2019 Publication	2020	1,190	744	1,934	1,934
		December 2019 Publication	2020	2,000	1,250	3,250	3,250
		March 2020 Publication	2020	5,380	3,363	8,743	8,743
		May 2020 Publication	2020	1,496	935	2,431	2,431
		March 2021 Publication	2021	1,990	1,164	3,154	3,154
		April 2021 Publication	2021	1,980	1,158	3,138	3,138
1) Unallowable		May 2021 Publication	2021	1,980	1,238	3,218	3,218
Expenses		December 2021 Publication	2022	2,780	1,640	4,420	4,420
1		April 2021 Materials and Supplies	2021	1,538	961	2,499	2,499
		April 2021 Materials and Supplies	2021	1,380	863	2,243	2,243
		April 2021 Materials and Supplies	2021	1,300	813	2,113	2,113
		July 2021 Materials and Supplies	2022	1,301	768	2,069	2,069
		November 2020 Long-Term Visa	2021	2,500	650	3,150	3,150
		May 2020 Publication	2020	2,432	1,520	3,952	-
		June 2021 Publication	2021	1,498	936	2,434	-
		January 2022 Publication	2022	3,600	936	4,536	-
2) Inappropriately		May 2022 Publication	2022	3,860	2,277	6,137	-
Allocated Expenses		October 2021 iPad, Protection Plan, and Computer Peripherals	2022	2,202	1,299	3,501	3,501
		November 2021 External Memory Drive	2022	1,122	662	1,784	1,784

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

Finding No.	NSF Award No.	Description	Fiscal Year(s)	Direct	Indirect	Total	Brown Agreed to Reimburse
		January 2022 Computer Monitor	2022	1,207	712	1,919	1,919
		September 2021 Indirect Cost Rate Not Appropriately Applied	2022	-	-	-	-
		December 2021 Indirect Cost Rate Not Appropriately Applied	2022	-	-	-	-
3) Indirect Cost Rates Not		August 2020 - June 2022 Indirect Cost Rate Not Appropriately Applied by Subawardee	2020 - 2022	5,569	-	5,569	5,569
Appropriately Applied		June 2022 Materials and Supplies Excluded from MTDC	2022	-	-	-	-
		August 2022 Participant Support Costs Included in MTDC	2023	-	1,102	1,102	1,102
		August 2022 Materials and Supplies Excluded from MTDC	2023	-	-	-	-
4) Non-Compliance with Brown's Travel Lodging Policy		July 2022 Lodging	2023	-	-	-	-
5) Fringe Benefit Rate Not Appropriately Applied		Fringe Benefit Rate Not Appropriately Applied	2023	-	-	-	-
Total				<u>\$51,395</u>	<u>\$26,923</u>	<u>\$78,318</u>	<u>\$61,259</u>

Source: Auditor summary of identified exceptions.

APPENDIX D: SUMMARY OF RECOMMENDATIONS

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

- 1.1 Direct Brown to provide documentation supporting that it has repaid or otherwise credited the \$47,384 in questioned publication, materials and supplies, and long-term visa costs for which it has agreed to reimburse NSF.
- 1.2 Direct Brown to implement additional procedures which require it to verify that a publication acknowledges the NSF funding source(s) that supported the published research prior to the expense being charged to the NSF award(s).
- 1.3 Direct Brown to establish additional guidance regarding how to review invoices and receipts that include materials and supplies charged to NSF awards. This guidance should address how to ensure materials and supplies expenses are allowable and properly allocated to the funding sources that directly benefit from the purchase.
- 1.4 Direct Brown to create additional resources that provide guidance regarding the allowable charging of visa fees on NSF awards. This guidance should address how Brown will ensure it does not charge unallowable long-term visa fees to NSF awards.
- 2.1 Resolve the \$17,059 in questioned inappropriately allocated publication costs and direct Brown to repay or otherwise remove the sustained questioned costs from its NSF awards.
- 2.2 Direct Brown to provide documentation supporting it has repaid or otherwise credited the \$7,204 in questioned materials and supplies expenses for which it has agreed to reimburse NSF.
- 2.3 Direct Brown to produce formal written guidance and provide training on how to assess and document the methodology used to allocate publication costs consistent with the benefits received by acknowledged funding sources.
- 2.4 Direct Brown to update its processes and procedures to require Principal Investigators or other designated staff to both document and justify the allocation methodologies used when charging expenses to NSF awards near grant expiration dates.
- 3.1 Direct Brown to provide documentation supporting that it has repaid or otherwise credited the \$6,671 in questioned indirect costs for which it has agreed to reimburse NSF.
- 3.2 Direct Brown to update its current award set-up practices to: (1) ensure that it sets up accounts for NSF awards, such that each account applies indirect costs using the appropriate rates established in the Negotiated Indirect Cost Rate Agreement in effect as of the date of grant award; and/or (2) document its decision to apply indirect costs using lower rates.

- 3.3 Direct Brown to strengthen its policies, procedures, or internal controls for how to verify—and how to document its verification of—its subawardees' election to use proposed indirect cost rates. This should address how Brown will ensure that the decision to use proposed indirect cost rates will not result in NSF being overcharged for indirect costs in cases when negotiated rates decrease between the date a subaward is proposed and the date a subaward is awarded, within a single Negotiated Indirect Cost Rate Agreement.
- 3.4 Direct Brown to strengthen its policies, procedures, and internal control processes for applying its federally negotiated indirect cost rates to NSF awards. These updated policies, procedures, and internal control processes should ensure Brown is:
 - Appropriately applying its indirect cost rates to all direct costs that should be included in its Modified Total Direct Cost base per its negotiated indirect cost rate agreements.
 - Accurately classifying all costs for accounts that are included within its Modified Total Direct Cost base per its negotiated indirect cost rate agreements.
- 4.1 Direct Brown to strengthen its internal controls for retaining documentation to support lodging expenses. These updated internal controls could include providing annual training to ensure travelers and individuals responsible for approving travel reimbursements are aware of the documentation required for reimbursement per its institutional policies.
- 5.1 Direct Brown to strengthen its monitoring procedures to ensure it appropriately applies the fringe benefit rates included within its negotiated indirect cost rate agreements.

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. *Allocation* means 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**.

Factors affecting allowability of costs. The tests of allowability of costs under these principles are: costs must meet the following general criteria in order to be allowable under Federal awards: (a) Be necessary and reasonable (b) Conform to any limitations or exclusions set forth in these principles or in the Federal award (c) Be consistent with policies and procedures (d) Be accorded consistent treatment (e) Be determined in accordance with generally accepted accounting principles (GAAP) (f) Not be included as a cost or used to meet cost sharing or matching requirements of any other federally-financed program (g) Be adequately documented. (2 CFR § 200.403). 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 federallyfinanced and other activities of the non-federal entity. (2 CFR § 200.403).
<u>Return to the term's initial use</u>.

Equipment. Tangible personal property—including information technology (IT) systems—having a useful life of more than 1 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. 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. Except as provided elsewhere in these principles, the costs of fringe benefits are allowable provided that the benefits are reasonable and are required by law, non-federal entity-employee agreement, or an establishment policy of the non-federal entity. (2 CFR § 200.431). **Return to the term's initial use**.

Indirect (F&A) Costs. This refers to those 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. To facilitate equitable distribution of indirect expenses to the cost objectives served, it may be necessary to establish a number of pools of indirect (F&A) costs. Indirect (F&A) cost pools must be distributed to benefitted cost objectives on bases that will produce an equitable result in consideration of relative benefits derived. (2 CFR § 200.56). **Return to the term's initial use**.

Modified Total Direct Cost (MTDC). All direct salaries and wages, applicable fringe benefits, materials and supplies, services, travel, and up to the first \$25,000 of each subaward (regardless of the POP) of the subawards under the award). MTDC excludes equipment, capital expenditures, charges for patient care, rental costs, tuition remission, scholarships and fellowships, participant support costs and the portion of each subaward in excess of \$25,000. Other items may only be excluded when necessary to avoid a serious inequity in the distribution of indirect costs, and with the approval of the cognizant agency for indirect costs. (2 CFR § 200.68).

Return to the term's initial use.

Materials and Supplies. All tangible personal property other than those described in § 200.33 Equipment. A computing device is a supply if the acquisition cost is less than the lesser of the capitalization level established by the non-Federal entity for financial statement purposes or \$5,000, regardless of the length of its useful life. (2 CFR § 200.94). **Return to the term's initial use**.

Negotiated Indirect Cost Rate. Generally charged to federal awards through the development and application of an indirect cost rate. In order to recover indirect costs related to federal awards, most organizations must negotiate an indirect cost rate with the federal agency that provides the preponderance of funding, or Health and Human Services (HHS) in the case of colleges and universities. (NSF Office of Budget, Finance, and Award Management).

Return to the term's initial use

Participant Support Costs. This refers to 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.**

Period of Performance (POP). The time during which the non-federal entity may incur new obligations to carry out the work authorized under the federal award. The federal awarding agency or pass-through entity must include start and end dates of the POP in the federal award. (2 CFR § 200.77). **Return to the term's initial use.**

Proposal & Award Policies & Procedures Guide (PAPPG). 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. If the PAPPG and the award conditions are silent on a specific area covered by 2 CFR § 200, the requirements specified in 2 CFR § 200 must be followed. (NSF PAPPG 22-1). Return to the term's initial use.

Publication Costs. Costs for electronic and print media, including distribution, promotion, and general handling of that media. (2 CFR § 200.461). <u>Return to the term's initial use</u>.

Questioned Cost. A cost that is questioned by the auditors because of an alleged violation of a provision of a law, regulation, contract, grant, cooperative agreement, or other agreement or document governing the expenditure of funds; a finding that, at the time of the audit, such cost is not support by adequate document; or a finding that the expenditure of funds for the intended purpose is unnecessary or unreasonable. (2 CFR 200.1). **Return to the term's initial use**.

Reasonable Cost. A reasonable cost is 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. Compensation for personal services includes all remuneration, paid currently, or accrued, for services of employees rendered during the POP under the federal award, including but not necessarily limited to wages and salaries. (2 CFR § 200.430). Return to the term's initial use.

Subawards. An award 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). <u>Return to the term's initial use</u>.

Travel costs. Expenses for transportation, lodging, subsistence, and related items incurred by employees who are in travel status on official business of the non-federal entity. Such costs may be charged on an actual cost basis, on a per diem or mileage basis in lieu of actual costs incurred, or on a combination of the two, provided the method used is applied to an entire trip and not to selected days of the trip, and results in charges consistent with those normally allowed in like circumstances in the non-federal entity's non-federally funded activities and in accordance with non-federal entity's written travel reimbursement policies. (2 CFR § 200.474).

Return to the term's initial use.

National Defense Authorization Act General Notification

Pursuant to Pub. L. No. 117-263 § 5274, business entities and non-governmental organizations specifically identified in this report have 30 days from the date of report publication to review this report and submit a written response to NSF OIG that clarifies or provides additional context for each instance within the report in which the business entity or non-governmental organizations is specifically identified. Responses that conform to the requirements set forth in the statute will be attached to the final, published report.

If you find your business entity or non-governmental organization was specifically identified in this report and wish to submit comments under the above-referenced statute, please send your response within 30 days of the publication date of this report to <u>OIGPL117-263@nsf.gov</u>, no later than September 20, 2024. We request that comments be in .pdf format, be free from any proprietary or otherwise sensitive information, and not exceed two pages. Please note, a response that does not satisfy the purpose set forth by the statute will not be attached to the final report.

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