

Performance Audit of Incurred Costs – North Dakota State University

REPORT PREPARED BY COTTON & COMPANY
ASSURANCE AND ADVISORY, LLC



At a Glance

Performance Audit of Incurred Costs – North Dakota State University

November 16, 2023 | OIG 24-1-003



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 costs that North Dakota State University (NDSU) incurred on 92 NSF awards during the period of November 1, 2019, to October 31, 2022. The auditors tested more than \$2.1 million of the approximately \$25.5 million of costs claimed during the period. The audit objective was to determine if costs claimed by NDSU on NSF awards were allowable, allocable, reasonable, and in compliance with NSF award terms and conditions and federal financial assistance requirements. A description of the audit's objective, scope, and methodology is attached to the report as Appendix B.



AUDIT RESULTS

The report highlights concerns about NDSU's compliance with certain federal and NSF award requirements, NSF award terms and conditions, and NDSU policies. The auditors questioned \$7,870 of costs claimed by NDSU during the audit period related to unallowable participant support and travel costs. The auditors also identified one finding related to non-compliance with NDSU's effort reporting policy for which there were no questioned costs. In addition to the two findings, the audit report includes one area for improvement related to insufficient controls over the application of indirect cost rates. 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 two findings and one area for improvement in the report with associated recommendations for NSF to direct NDSU to provide documentation supporting that it repaid or otherwise credited the questioned costs and to ensure NDSU strengthens administrative and management controls.



AUDITEE RESPONSE

NDSU agreed with the findings and agreed to reimburse NSF for the questioned costs. NDSU's response is attached, in its entirety, to the report as Appendix A.



NATIONAL SCIENCE FOUNDATION
Office of Inspector General

MEMORANDUM

DATE: November 16, 2023

TO: Quadira Dantro
Director
Division of Institution and Award Support

Jamie French
Director
Division of Grants and Agreements

FROM: Theresa S. Hull [REDACTED]
Assistant Inspector General for Audits

SUBJECT: Audit Report No. 24-1-003, North Dakota State University

This memorandum transmits the Cotton & Company Assurance and Advisory, LLC (C&C) report for the audit of costs charged by North Dakota State University (NDSU) to 92 NSF awards during the period of November 1, 2019, to October 31, 2022. The audit encompassed more than \$2.1 million of the approximately \$25.5 million of costs claimed during the period. The audit objective was to determine if costs claimed by NDSU 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 Jeanette Hyatt at 703.292.7100 or OIGpublicaffairs@nsf.gov.

Attachment

CC: Stephen Willard, Dan Reed, Victor McCrary, John Veysey, Ann Bushmiller, Karen Marrongelle, Teresa Grancorvitz, Christina Sarris, Janis Coughlin-Piester, Alex Wynnyk, Rochelle Ray, Charlotte Grant-Cobb

EXECUTIVE SUMMARY

The Cotton & Company Assurance and Advisory, LLC audit team determined that North Dakota State University (NDSU) 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, NSF award terms and conditions, and NDSU policies and procedures. Specifically, the audit report includes two findings, one area for improvement, and a total of \$7,870 in questioned costs.

AUDIT OBJECTIVES

The National Science Foundation Office of Inspector General engaged Cotton & Company Assurance and Advisory, LLC (herein referred to as “we”), to conduct a performance audit of costs NDSU claimed during the period of November 1, 2019, to October 31, 2022. The audit objectives included evaluating NDSU’s award management environment to 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 NDSU’s compliance with 2 Code of Federal Regulations (CFR) 215, 2 CFR 220, and 2 CFR 200 (versions effective 12/26/2014 and 11/12/2020); NSF Proposal and Award Policies and Procedures Guides (PAPPGs) 14-1, 15-1, 17-1, 18-1, 19-1, 20-1, and 22-1; NSF award terms and conditions; and NDSU 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 [Appendix C](#), the auditors identified and questioned \$7,870 of direct and indirect costs that NDSU inappropriately claimed during the audit period, including:

- \$7,870 of unallowable expenses

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

- Non-compliance with NDSU effort reporting policy

In addition to the two findings, the audit report includes one area for improvement for NDSU to consider related to:

- Insufficient controls related to the application of indirect cost rates

RECOMMENDATIONS

The audit report includes four recommendations and one consideration for NSF’s Director of the Division of Institution and Award Support related to resolving the \$7,870 in questioned costs and ensuring NDSU strengthens its award management environment, as summarized in [Appendix D](#).

AUDITEE RESPONSE

NDSU agreed with the findings in the audit report and has agreed to reimburse NSF for the \$7,870 in questioned costs. NDSU’s response is attached, in its entirety, to the report as [Appendix A](#).

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Abbreviations

ACM\$	Award Cash Management Service
CFR	Code of Federal Regulations
FY	Fiscal Year
GAGAS	Generally Accepted Government Auditing Standards
GL	General Ledger
NDSU	North Dakota State University
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 Cotton & Company Assurance and Advisory, LLC (herein referred to as “we”), to conduct a performance audit of costs claimed by North Dakota State University (NDSU). NDSU’s main campus is located in Fargo, North Dakota, with Extension Service and Experiment Station Research Centers located all across the state. In fiscal year (FY) 2022, NDSU reported approximately \$458.2 million in revenue, with \$91.3 million received from federal sources—including NSF—as illustrated in Figure 1.

Figure 1: NDSU’s FY 2022 Operating and Non-Operating Revenues



Source: The chart data is supported by NDSU’s 2022 Annual Financial Report.

ndsuhq.com/fileadmin/vpfa/reports/accounting/NDSU_Annual_Financial_Report_FY22.pdf

The photo of NDSU’s campus is publicly available on NDSU’s website.

ndsuhq.com/experience/why_students_love_ndsu

AUDIT SCOPE

This performance audit—conducted under Order No. 140D0422F0881—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 NDSU’s award management environment; determine if costs claimed on NSF awards were allowable, allocable, reasonable, 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. [Appendix B](#) provides detailed information regarding the audit scope and methodology used for this engagement.

As illustrated in Figure 2, NDSU provided general ledger (GL) data to support the \$25.5 million in expenses it claimed on 92 NSF awards during our audit [period of performance \(POP\)](#) of November 1, 2019, to October 31, 2022.

Figure 2: Costs Claimed on NSF Awards from November 1, 2019, to October 31, 2022



Source: Auditor analysis of accounting data NDSU provided, illustrating the total costs (\$25,476,643) by expense type, using financial information to support costs claimed on NSF awards during the audit period. The Other Direct Costs category includes other direct costs, contract services, and publications.

We judgmentally selected 43 transactions totaling \$2,126,703¹ (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.

¹ The \$2,126,703 represents the total value of the 43 transactions selected for transaction-based testing. It does not represent the dollar base of the total costs reviewed during the audit.

Table 1: Summary of Selected Transactions

Budget Category	Transaction Count	Expense Amount ²
Computer Services	2	\$889,022
Subawards	6	885,279
Equipment	4	145,159
Other Direct Costs	8	75,097
Participant Support Costs	4	48,549
Salaries and Wages	10	31,933
Consultant Services	1	25,000
Materials and Supplies	4	14,456
Travel	3	9,893
Publications	1	2,315
Total	<u>43</u>	<u>\$2,126,703</u>

Source: Auditor summary of selected transactions.

AUDIT RESULTS

We identified and questioned \$7,870 in costs that NDSU charged to three NSF awards. We also identified expenses that NDSU charged to three NSF awards that did not result in **questioned costs** but did result in non-compliance with NDSU-specific policies. Finally, we identified one area in which NDSU should consider strengthening its controls to ensure it does not overcharge indirect costs to NSF awards in the future. 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

Finding Description	Questioned Costs
Unallowable Expenses	\$7,870
Non-Compliance with NDSU Effort Reporting Policy	-
Total	<u>\$7,870</u>

Source: Auditor summary of findings identified.

We made four recommendations and identified one consideration for NSF’s Director of the Division of Institution and Award Support related to resolving the \$7,870 in questioned costs and ensuring NDSU strengthens its administrative and management procedures for monitoring federal funds. We communicated the results of our audit and the related findings and recommendations to NDSU and NSF OIG. We included NDSU’s response to this report, in its entirety, in **Appendix A**.

² The expense amounts reported represent the total dollar value of the transactions selected for our sample; they do not include the total **fringe benefits** or **indirect costs** applied to the sampled transactions. However, we tested the fringe benefits and indirect costs for allowability.

FINDING 1: UNALLOWABLE EXPENSES

NDSU charged three NSF awards a total of \$7,870 in **participant support costs** and **travel expenses** that were unallowable under federal regulations³ and NSF **Proposal & Award Policies & Procedures Guides (PAPPGs)**.⁴

Unallowable Participant Support Costs

NDSU charged one NSF award for \$6,351 in participant lodging expenses that did not benefit the award charged, as required to be allowable per federal regulations, as illustrated in Table 3.

Table 3: Unallowable Participant Support Costs

Expense Date	NSF Award No.	Expense Total	Description of Unallowable Costs:	Notes
September 2022	██████████	\$6,351	Participant Lodging	a

Source: Auditor summary of identified exception.

- a) In September 2022, NDSU charged NSF Award No. ██████████ for \$6,351 in lodging expenses for four participants whose participation in the conference did not benefit the NSF award. NDSU confirmed it incorrectly charged the lodging expenses to this award.

Unallowable Travel Expenses

NDSU charged two NSF awards for \$1,519 in travel expenses that were neither reasonable nor benefitted the awards charged, and are therefore unallowable per federal regulations,⁵ as illustrated in Table 4.

Table 4: Unallowable Travel Expenses

Expense Date	NSF Award No.	Unallowable Amount	Description of Unallowable Costs:	Notes
February 2022	██████████	\$579	Airfare	a
July 2022	██████████	940	Principal Investigator Lodging	b

Source: Auditor summary of identified exceptions.

³ According to 2 Code of Federal Regulations (CFR) § 200.403 (12/26/2014) and 2 CFR § 200.403 (Revised 11/12/2020), **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.

⁴ According to NSF PAPPGs 18-1, 19-1, and 20-1, Part II, Chapter X, Section A, *Basic Considerations*, grantees should ensure that 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 § 200.474 (12/26/2014) and 2 CFR § 200.475 (revised 11/12/2020), *Travel costs*, costs are allowable only to the extent that such costs do not exceed charges normally allowed by the non-federal entity in its regular operations in accordance with the non-federal entity's written travel policy. Further, the regulations note that if the non-federal entity charges these costs directly to the federal award, documentation must justify that the individual's participation is necessary to the federal award and that the costs are reasonable and consistent with the non-federal entity's established travel policy.

- a) In February 2022, NDSU charged NSF Award No. [REDACTED] for \$1,525 in airfare expenses for a student to travel to [REDACTED] from March to June 2022. Although the student’s travel benefited the NSF award, the student took personal travel at the end of the trip. NDSU did not provide a cost comparison or other documentation to support that it did not incur additional costs for the student’s airfare as a result of the extended travel date, as required by NDSU’s *Completing the Expense Report* policy.⁶ Because NDSU did not provide a cost comparison, it does not appear reasonable for NDSU to have charged the NSF award for the full \$1,525 in airfare costs when the traveler appears to have incurred approximately \$579 of this amount as a result of booking the flight to accommodate personal travel.⁷

- b) In July 2022, NDSU charged NSF Award No. [REDACTED] for \$940⁸ in lodging expenses to enable the Principal Investigator (PI) to stay for one additional day after a conference. Although six of the PI’s seven travel days benefited the NSF award, the PI stayed this additional day to collaborate with industry partners on projects that did not benefit the NSF award.

Conclusion

NDSU did not have sufficient internal controls in place to ensure it only charged allowable costs to NSF awards. Specifically, NDSU’s internal controls did not always ensure that it only charged NSF awards for participant support costs and travel expenses that were incurred solely to benefit the NSF award(s) charged. We are therefore questioning \$7,870 of unallowable expenses charged to three NSF awards. NDSU agreed to reimburse NSF for the \$7,870 in questioned costs, as illustrated in Table 5.

Table 5: Finding 1 Summary: Unallowable Travel Expenses

NSF Award No.	Description	Fiscal Year	Questioned Costs			NDSU Agreed to Reimburse
			Direct	Indirect	Total	
[REDACTED]	September 2022 Participant Lodging	2023	\$6,351	\$0	\$6,351	\$6,351
[REDACTED]	February 2022 Airfare	2022	399	180	579	579
[REDACTED]	July 2022 PI Lodging	2023	648	292	940	940

⁶ NDSU’s *Completing the Expense Report* policy states that when travelers combining personal and business travel must clearly document the travel expenses. The policy also states airfare reimbursement cannot exceed the lowest available cost of a direct or uninterrupted route. If the traveler uses an indirect route or interrupts travel for personal convenience, the additional expenses are the traveler’s responsibility.

⁷ Because no historical data was available, we identified a reasonable price for the airfare by reviewing the price for flights from Fargo, North Dakota, to [REDACTED] from March to June 2024. Based on our review, we determined that a reasonable price for the flight would have been \$1,126. We calculated the additional cost incurred as follows: \$1,525 charged to NSF award - \$1,126 flight cost = \$399 in additional airfare * 1.45 (indirect cost rate application) = \$579.

⁸ We calculated this amount as follows: \$4,535 direct lodging costs / 7 travel days = \$648 lodging cost per day. \$648 in direct costs for travel day that did not benefit NSF Award No. [REDACTED] * 1.45 percent (indirect cost rate application) = \$940.

NSF Award No.	Description	Fiscal Year	Questioned Costs			
			Direct	Indirect	Total	NDSU Agreed to Reimburse
Total			<u>\$7,398</u>	<u>\$472</u>	<u>\$7,870</u>	<u>\$7,870</u>

Source: Auditor summary of identified exceptions.

Recommendations

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

- 1.1. Direct NDSU to provide documentation supporting that it has repaid or otherwise credited the \$7,870 in questioned participant and travel expenses for which it has agreed to reimburse NSF.
- 1.2. Direct NDSU to strengthen its monitoring controls for participant lodging expenses. Updated controls could include requiring Principal Investigators to document the names of participants whose involvement benefits the award to ensure NDSU appropriately allocates lodging costs across funding sources.
- 1.3. Direct NDSU to strengthen its internal controls surrounding travel booking and approval. Updated internal controls could include:
 - Requiring travelers to (a) identify any personal travel they are combining with business travel, and (b) document and maintain travel cost comparisons performed before the travel takes place to support that the traveler’s airfare costs did not increase as a result of the personal travel.
 - Requiring travelers to provide an agenda or other documentation supporting the business purpose of each day of a trip before the traveler receives reimbursement for lodging to ensure NDSU only charges NSF for lodging that benefits NSF awards.
 - Requiring periodic training for travelers and personnel responsible for preparing and approving travel authorizations and expense reports that includes documentation requirements for when travel dates do not align with conference or research-related travel dates.

North Dakota State University Fargo Response: NDSU agreed to reimburse NSF for the \$7,870 in questioned costs. NDSU stated that it intends to strengthen its internal controls over booking and approving travel and provide periodic training to travelers and personnel who are responsible for preparing and approving travel documentation.

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

FINDING 2: NON-COMPLIANCE WITH NDSU EFFORT REPORTING POLICY

NDSU did not always comply with its effort reporting policy when certifying costs charged to three NSF awards. During three effort reporting periods, NDSU charged **salary** expenses to three NSF awards without obtaining certified Personnel Activity Confirmation forms to support the expenses, as required by NDSU policy.⁹ Specifically, the PI and/or the Department Chair did not always sign Personnel Activity Confirmation forms when NDSU made the forms available and only signed the forms in March 2023 as a result of the audit, as shown in Table 6.

Table 6: Personnel Activity Confirmations Performed in Response to the Audit

NSF Award Number	Activity Confirmation Reporting Period	Activity Report Confirmation Date
	8/16/2019 – 12/31/2019	3/13/2023
	1/1/2020 – 5/15/2020	3/10/2023
	5/16/2022 – 8/15/2022	3/11/2023

Source: Auditor summary of identified exceptions.

Conclusion

NDSU did not have adequate procedures in place to ensure that personnel certified their effort in a timely manner. Because NDSU was able to provide documentation to support the salary charged during these three effort reporting periods related to effort that benefitted the awards charged, we are not questioning any costs. However, we are noting compliance exceptions for the three instances in which NDSU did not comply with its policies, as illustrated in Table 7.

Table 7: Finding 2 Summary: Non-Compliance with NDSU Effort Reporting Policy

NSF Award No.	Compliance Exception Identified	Fiscal Year(s)
	Non-Compliance with Effort Reporting Policy	2020
	Non-Compliance with Effort Reporting Policy	2020
	Non-Compliance with Effort Reporting Policy	2022/2023

Source: Auditor summary of identified exceptions.

Recommendations

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

- 2.1 Direct NDSU to strengthen its procedures to ensure that appropriate personnel timely certify all effort upon receiving the Personnel Activity Confirmation forms.

North Dakota State University Fargo Response: NDSU agreed with the finding and stated that it is transitioning to a new payroll certification software to ensure that personnel complete certifications timely.

⁹ NDSU’s Policy Manual, *Section 821, Effort Reporting/Personnel Activity Confirmation*, states that each report will be signed by the employee or by a responsible official having first-hand knowledge of the work performed.

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

AREA FOR IMPROVEMENT: INSUFFICIENT CONTROLS RELATED TO THE APPLICATION OF INDIRECT COST RATES

NDSU does not have a formally documented policy or procedure in place to ensure that its subawardees consistently charge indirect costs using a rate no greater than the **Negotiated Indirect Cost Rate** Agreement (NICRA) rate(s) in effect as of the **subaward** date. Specifically, NDSU does not have a formal process for documenting its decision 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 subaward.

As a result, NDSU did not document that it verified its subawardee's use of its proposed indirect cost rate would not cause NDSU to overcharge NSF for indirect costs, as illustrated in Table 8.

Table 8: Proposed Indirect Cost Rate Applied

NSF Award Number	Subaward Date	Transaction Date	Rate Applied (%)	Appropriate Rate (%) ¹⁰
[REDACTED]	7/1/2020 ¹¹	10/17/2021	39.00	41.00

Source: Auditor summary of identified exception.

Conclusion

Because this instance of an NDSU subawardee charging indirect costs using a proposed rate did not directly result in NDSU charging unallowable costs to NSF awards, we are not noting a finding. However, we are noting an **area for improvement**, as NDSU's lack of a formal process and/or procedure for allowing subawardees to apply proposed indirect cost rates could cause NDSU to charge unallowable costs to NSF awards if its subawardees' indirect cost rates were to decrease in the future.

Consideration

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

- Directing NDSU to develop formal policies and/or procedures regarding how to verify—and how to document verification of— its subawardees' election to use proposed indirect cost rates. This should address how NDSU will ensure the decision to use proposed indirect cost rates will not result in NSF being overcharged for indirect costs in cases when negotiated rates decrease within a single Negotiated

¹⁰ The subawardee's NICRA dated April 16, 2020, established a predetermined indirect cost rate of 39.00 percent for on-campus research from July 1, 2018, to June 30, 2019, and 41.00 percent for on-campus research from July 1, 2019, to June 30, 2023.

¹¹ This date represents the effective date of the subaward agreement used to determine the appropriate rate in effect per the subawardee's NICRA.

Indirect Cost Rate Agreement or between the date the subaward is proposed and the date the subaward is awarded.

COTTON & COMPANY ASSURANCE AND ADVISORY, LLC



Erin Mooney Meredith, CPA, CFE, CGFM

Partner

November 2, 2023

APPENDIX A: NDSU'S RESPONSE



10/13/2023

Cotton & Company Assurance and advisory, LLC
330 John Carlyle Street, Suite 500
Alexandria, Virginia 22314

Attention: Erin Meredith, CPA, CFE, CGFM

North Dakota State University worked diligently with Cotton & Company Assurance & 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 university reviewed the audit report and has already reimbursed or credited the appropriate NSF awards a total of \$7,870. In addition, we have identified and will implement new processes to strengthen our effort reporting to ensure compliance with federal requirements.

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,



Courtney Peterson
Director Grants & Contract Accounting



Lisa Ripplinger
Controller

NDSU NORTH DAKOTA STATE UNIVERSITY

FINDING 1: UNALLOWABLE EXPENSES

NSF Award No.	Expense Total	NDSU Response
██████	\$6,351	NDSU has credited the award as it was an active award through 3/31/2024. The University will strengthen internal controls surrounding travel booking and approval and provide periodic training to travelers and personnel responsible for preparing and approving the travel.
██████	\$579	NDSU has credited the award as it was an active award through 6/30/2024. The University will strengthen internal controls surrounding travel booking and approval and provide periodic training to travelers and personnel responsible for preparing and approving the travel.
██████	\$940	NDSU has credited the award as it was an active award through 12/31/2023. The University will strengthen internal controls surrounding travel booking and approval and provide periodic training to travelers and personnel responsible for preparing and approving the travel.

FINDING 2: NON-COMPLIANCE WITH NDSU EFFORT REPORTING POLICY

NSF Award No.	Expense Total	NDSU Response
██████ ██████ ██████	\$-	NDSU is in the transition to payroll certification and utilizing a new software to ensure timely completion.

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 of the costs that North Dakota State University Fargo (NDSU) claimed on NSF awards during our audit period of performance (POP) of November 1, 2019, through October 31, 2022. The objectives of the audit were to evaluate NDSU’s award management environment; to determine if costs claimed were allowable, allocable, reasonable, and in compliance with NSF award terms and conditions and applicable federal financial assistance requirements; and to determine whether any extraordinary circumstances existed that would justify further audit work beyond the original sample of 40 to 50 transactions.

SCOPE

The audit population included approximately \$25.5 million in expenses that NDSU claimed on 92 NSF awards during our audit POP of November 1, 2019, through October 31, 2022.

METHODOLOGY

After obtaining NSF OIG’s approval for our audit plan, we performed each of the approved audit steps. Generally, these steps included:

- Assessing the reliability of the general ledger (GL) data that NDSU provided by comparing the costs charged to NSF awards per NDSU’s accounting records to the reported net expenditures reflected in the Award Cash Management Service (ACM\$) drawdown requests.
 - Our work required us to rely on computer-processed data obtained from NDSU and NSF OIG. NSF OIG provided award data that NDSU reported through NSF’s ACM\$ during our audit period.
 - We assessed the reliability of the GL data that NDSU provided by (1) comparing the costs charged to NSF awards per NDSU’s accounting records to the reported net expenditures reflected in the ACM\$ drawdown requests that NDSU submitted to NSF during the audit POP; and (2) reviewing the parameters that NDSU used to extract transaction data from its accounting systems. We found NDSU’s computer-processed data to be sufficiently reliable for the purposes of the audit. We did not identify any exceptions with the parameters that NDSU 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) 2021 found no reportable instances in which NSF’s financial

management systems did not substantially comply with applicable requirements.

- NDSU provided detailed transaction-level data to support \$25,476,643 in costs charged to NSF awards during the period, which exceeded the \$25,476,601 that NDSU claimed in ACM\$ for the 92 awards. This data resulted in a total audit universe of \$25,476,643 in expenses claimed on 92 NSF awards.
- Obtaining and reviewing all available accounting and administrative policies and procedures, external audit reports, desk review reports, and other relevant information that NDSU and NSF OIG provided, as well as any other relevant information that was available online.
- Summarizing our understanding of federal, NSF, and NDSU-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 NDSU's internal controls within the audit's scope solely to understand the directives or policies and procedures NDSU has in place to ensure that charges against NSF awards complied with relevant federal regulations, NSF award terms and conditions, and NDSU policies.
- Providing NDSU with a list of 43 transactions that we selected based on the results of our data analytics and requesting that NDSU provide documentation to support each transaction.
- Reviewing the supporting documentation NDSU 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,¹² NSF,¹³ and NDSU policies.¹⁴
- Holding virtual interviews and walkthroughs with NDSU in March 2023 to discuss payroll (including fringe benefits and effort reporting), travel, participant support

¹² We assessed NDSU's compliance with 2 CFR Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (versions effective 12/26/2014 and 11/20/2020), 2 CFR Part 215, *Uniform Administration Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-profit Organizations* (Office of Management and Budget [OMB] Circular A-110), and 2 CFR Part 220, *Cost Principles for Educational Institutions* (OMB Circular A-21), as appropriate.

¹³ We assessed NDSU's compliance with NSF Proposal and Award Policies and Procedures Guides (PAPPGs) 14-1, 15-1, 17-1, 18-1, 19-1, 20-1, and 22-1 and with NSF award-specific terms and conditions, as appropriate.

¹⁴ We assessed NDSU's compliance with internal NDSU policies and procedures surrounding costs budgeted for or charged to NSF awards.

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, whistle-blower information, research misconduct, and conflict of interest policies).

- Summarizing the results of our fieldwork and confirming that we did not identify any extraordinary circumstances that justified the need for a second audit phase.¹⁵

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 NDSU personnel to ensure that NDSU 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.

¹⁵ Based on the areas of elevated risk of non-compliance identified during the initial phase, we determined that there was no need for an expanded audit phase.

APPENDIX C: SUMMARY OF QUESTIONED COSTS

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

Finding	Description	Questioned Costs		Total
		<i>Unsupported</i>	<i>Unallowable</i>	
1	Unallowable Expenses	\$0	\$7,870	\$7,870
2	Non-Compliance with NDSU Effort Reporting Policy	-	-	-
Total		<u>\$0</u>	<u>\$7,870</u>	<u>\$7,870</u>

Source: Auditor summary of questioned costs by finding.

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

NSF Award No.	No. of Transaction Exceptions	Questioned Direct Costs	Questioned Indirect Costs	Questioned Total	NDSU Agreed to Reimburse
	1	\$0	\$0	\$0	\$0
	1	399	180	579	579
	1	-	-	-	-
	1	-	-	-	-
	1	6,351	-	6,351	6,351
	1	648	292	940	940
Total	<u>6</u>	<u>\$7,398</u>	<u>\$472</u>	<u>\$7,870</u>	<u>\$7,870</u>

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

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	NDSU Agreed to Reimburse
1) Unallowable Expenses	██████	September 2022 Participant Lodging	2023	\$6,351	\$0	\$6,351	\$6,351
	██████	February 2022 Airfare	2022	399	180	579	579
	██████	July 2022 PI Lodging	2023	648	292	940	940
2) Non-Compliance with NDSU Effort Reporting Policy	██████	Non-Compliance with Effort Reporting Policy	2020	-	-	-	-
	██████	Non-Compliance with Effort Reporting Policy	2020	-	-	-	-
	██████	Non-Compliance with Effort Reporting Policy	2022/2023	-	-	-	-
Total				<u>\$7,398</u>	<u>\$472</u>	<u>\$7,870</u>	<u>\$7,870</u>

Source: Auditor summary of identified exceptions.

APPENDIX D: SUMMARY OF RECOMMENDATIONS AND CONSIDERATIONS

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

- 1.1. Direct NDSU to provide documentation supporting that it has repaid or otherwise credited the \$7,870 in questioned participant and travel expenses for which it has agreed to reimburse NSF.
- 1.2. Direct NDSU to strengthen its monitoring controls for participant lodging expenses. Updated controls could include requiring Principal Investigators to document the names of participants whose involvement benefits the award to ensure NDSU appropriately allocates lodging costs across funding sources.
- 1.3. Direct NDSU to strengthen its internal controls surrounding travel booking and approval. Updated internal controls could include:
 - Requiring travelers to (a) identify any personal travel they are combining with business travel, and (b) document and maintain travel cost comparisons performed before the travel takes place to support that the traveler's airfare costs did not increase as a result of the personal travel.
 - Requiring travelers to provide an agenda or other documentation supporting the business purpose of each day of a trip before the traveler receives reimbursement for lodging to ensure NDSU only charges NSF for lodging that benefits NSF awards.
 - Requiring periodic training for travelers and personnel responsible for preparing and approving travel authorizations and expense reports that includes documentation requirements for when travel dates do not align with conference or research-related travel dates.
- 2.1 Direct NDSU to strengthen its procedures to ensure that appropriate personnel timely certify all effort upon receiving the Personnel Activity Confirmation forms.

Additionally, we suggest that NSF's Director of the Division of Institution and Award Support consider:

- Directing NDSU to develop formal policies and/or procedures regarding how to verify—and how to document verification of— its subawardees' election to use proposed indirect cost rates. This should address how NDSU will ensure the decision to use proposed indirect cost rates will not result in NSF being overcharged for indirect costs in cases when negotiated rates decrease within a single Negotiated Indirect Cost Rate Agreement or between the date the subaward is proposed and the date the subaward is awarded.

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.](#)

Factors affecting allowability of costs. 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 and Revised 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 federally-financed and other activities of the non-federal entity. (2 CFR § 200.403)

[Return to the term's initial use.](#)

[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 and Revised 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.](#)

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 20-1)

[Return to the term's initial use.](#)

Questioned Cost. §5(f)(1) a cost that is questioned by the Office because of-(A) an alleged violation of a provision of a law, regulation, contract, grant, cooperative agreement, or

other agreement or document governing the expenditure of funds; (B) a finding that, at the time of the audit, such cost is not supported by adequate document; or (C) a finding that the expenditure of funds for the intended purpose is unnecessary or unreasonable.

[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.](#)

Subaward. 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 and Revised 2 CFR § 200.1)

[Return to the term's initial use.](#)

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. Notwithstanding the provisions of § 200.444 *General costs of government*, travel costs of officials covered by that section are allowable with the prior written approval of the federal awarding agency or pass-through entity when they are specifically related to the federal award. (2 CFR § 200.474 and Revised 2 CFR § 200.475)

[Return to the term's initial use.](#)

Unsupported Cost. §5(f)(2) a cost that is questioned by the Office because the Office found that, at the time of the audit, such cost is not supported by adequate documentation. Unsupported Cost is a subset of and included in Questioned Costs.

[Return to the term's initial use.](#)

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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 to OIGPL117-263@nsf.gov, no later than December 21, 2023. 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.