

Performance Audit of Incurred Costs – Incorporated Research Institutions for Seismology

REPORT PREPARED BY COTTON & COMPANY ASSURANCE AND ADVISORY, LLC

NATIONAL SCIENCE FOUNDATION
OFFICE OF INSPECTOR GENERAL

February 7, 2023
OIG 23-1-005





AT A GLANCE

Performance Audit of Incurred Costs – Incorporated Research Institutions for Seismology

Report No. OIG 23-1-005

February 7, 2023

AUDIT OBJECTIVE

The National Science Foundation Office of Inspector General engaged Cotton & Company Assurance and Advisory, LLC (C&C) to conduct a performance audit of incurred costs at the Incorporated Research Institutions for Seismology (IRIS) for the period November 1, 2018, to October 31, 2021. The auditors tested approximately \$4.3 million of the more than \$56.6 million of expenses allocated to NSF awards. The audit objective was to determine if costs claimed on 11 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 IRIS' compliance with certain federal regulations, NSF policies and procedures, and IRIS' internal policies. The auditors questioned \$470 of costs claimed by IRIS during the audit period. Specifically, the auditors found \$470 of unallowable expenses. The auditors also identified three additional findings related to non-compliance, for which there were no questioned costs: fringe benefits not treated consistent with NICRAs; indirect costs not applied using NICRA rates; and participant support costs not accurately identified. C&C is responsible for the attached report and the conclusions expressed in it. NSF OIG does not express any opinion on the conclusions presented in C&C's audit report.

RECOMMENDATIONS

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

AUDITEE RESPONSE

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

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



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

MEMORANDUM

DATE: February 7, 2023

TO: Alex Wynnyk
Acting Director
Division of Institution and Award Support

Jamie French
Director
Division of Grants and Agreements



FROM: for Mark Bell
Assistant Inspector General
Office of Audits

SUBJECT: Audit Report No. 23-1-005, Incorporated Research Institutions for Seismology

This memorandum transmits the Cotton & Company Assurance and Advisory, LLC (C&C) report for the audit of expenditures allocated by the Incorporated Research Institutions for Seismology (IRIS) to its sponsored agreements with the National Science Foundation during the period November 1, 2018, to October 31, 2021. The audit encompassed approximately \$4.3 million of the more than \$56.6 million of costs claimed to NSF during the period. The audit objective was to determine if costs claimed on 11 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 Keith Nackerud 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, Rochelle Ray, Shaun Minick, Charlotte Grant-Cobb, Allison Lerner, Lisa Vonder Haar, Ken Chason, Ken Lish, Keith Nackerud, Jennifer Kendrick, Louise Nelson, Karen Scott

EXECUTIVE SUMMARY

The Cotton & Company Assurance and Advisory, LLC audit team determined that the Incorporated Research Institutions for Seismology (IRIS) could improve its oversight of expenses charged to NSF awards to ensure costs are allowable and allocated to NSF awards in accordance with all federal regulations, NSF policies and procedures, and IRIS Negotiated Indirect Cost Rate Agreements (NICRAs). Specifically, the audit report includes four findings and a total of \$470 in questioned costs.

AUDIT OBJECTIVES

The National Science Foundation Office of Inspector General engaged Cotton & Company Assurance and Advisory, LLC to conduct a performance audit of costs that IRIS incurred for the period from November 1, 2018, to October 31, 2021. The audit objectives included evaluating IRIS' 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 IRIS' compliance with relevant federal regulations (i.e., 2 Code of Federal Regulations [CFR] 200 and 2 CFR 230), NSF Proposal and Award Policies and Procedures Guides (PAPPGs) (specifically, NSF 16-1, 17-1, 18-1, 19-1, and 20-1), NSF award terms and conditions, and IRIS 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 \$470 of direct and indirect unallowable expenses that IRIS inappropriately claimed during the audit period.

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

- Fringe benefits not treated consistent with NICRAs
- Indirect costs not applied using NICRA rates
- Participant support costs not accurately identified

RECOMMENDATIONS

The audit report includes five recommendations for NSF's Director of the Division of Institution and Award Support related to resolving the \$470 in questioned costs and ensuring IRIS strengthens its award management environment, as summarized in [Appendix D](#).

AUDITEE RESPONSE

IRIS agreed to reimburse NSF for the \$470 in questioned costs and to consider the recommendations in the audit report when drafting future procedures. IRIS' 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
DC	District of Columbia
DMC	Data Management Center
FY	Fiscal Year
GAGAS	Generally Accepted Government Auditing Standards
G&A	General and Administrative
GL	General Ledger
IRIS	Incorporated Research Institutions for Seismology
MTDC	Modified Total Direct Costs
NICRA	Negotiated Indirect Cost Rate Agreement
NSF	National Science Foundation
OIG	Office of Inspector General
OH	Overhead
PAPPG	Proposal and Award Policies and Procedures Guide
PI	Principal Investigator
POP	Period of Performance

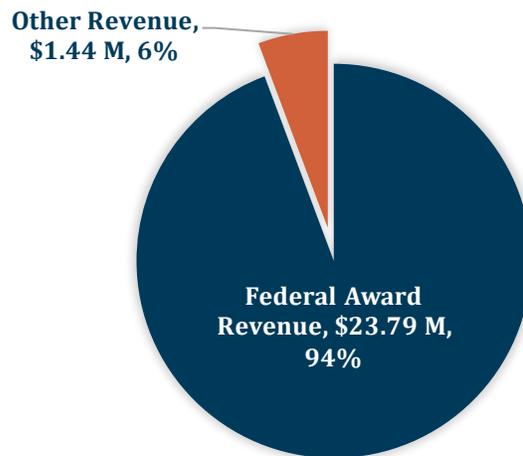
BACKGROUND

The National Science Foundation is an independent federal agency created “to promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense; and for other purposes” (Pub. L. No. 81-507). NSF funds research and education in science and engineering by awarding grants and contracts to educational and research institutions throughout the United States.

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

NSF OIG engaged Cotton & Company Assurance and Advisory, LLC (referred to as “we”) to conduct a performance audit of costs directly **allocated** by the Incorporated Research Institutions for Seismology (IRIS). IRIS is a nonprofit consortium of research institutions incorporated in Delaware, with its primary headquarters office located in Washington, DC. In fiscal year (FY) 2020, IRIS reported more than \$25.23 million in revenue, with \$23.79 million received from federal awards—including \$23.14 million from NSF—as illustrated in Figure 1.

Figure 1: IRIS’ FY 2020 Revenue



Source: The chart data is from the FY 2019-2020 IRIS Financial Statements and Reports as of June 30, 2022.

AUDIT SCOPE

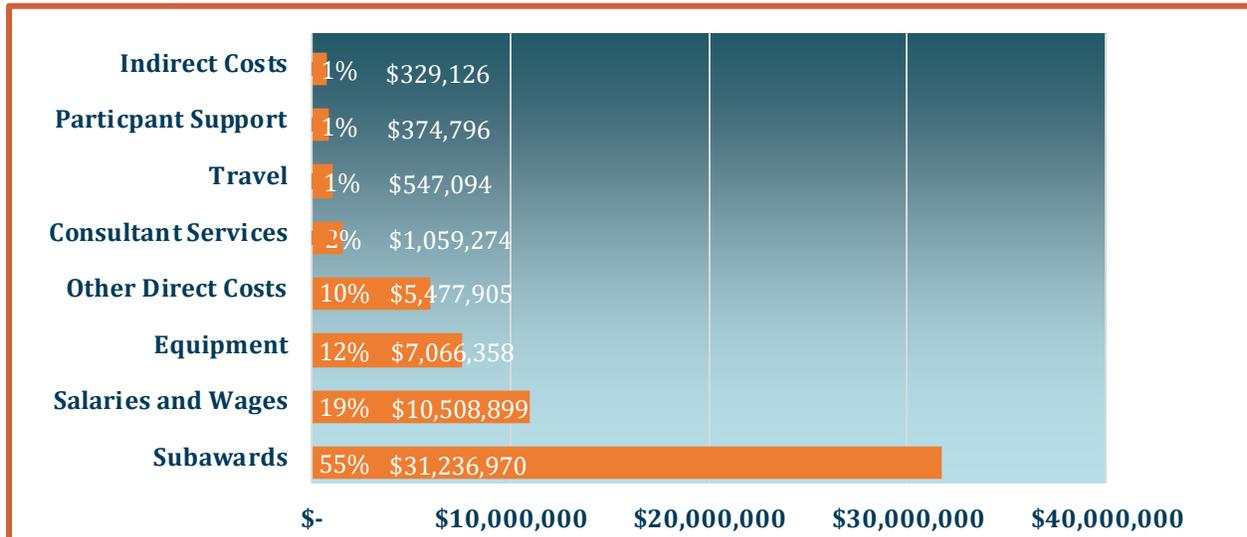
This performance audit—conducted under Order No. 140D0421F0602—was designed to meet the objectives identified in the Objectives, Scope, and Methodology section of this

report ([Appendix B](#)) and was conducted in accordance with *Generally Accepted Government Auditing Standards*, issued by the Comptroller General of the United States.

The objectives of this performance audit were to evaluate IRIS’ award management environment; to determine if costs allocated to NSF awards were allowable, allocable, reasonable, and in compliance with relevant federal and NSF regulations; to determine whether any further audit work was warranted; and to perform any additional audit work, as determined appropriate. [Appendix B](#) provides detailed information regarding the two phases in which we conducted this engagement: the Audit Survey Phase and the Expanded Testing Audit Phase.

As illustrated in Figure 2, IRIS provided general ledger (GL) data to support the \$56.6 million in net expenses it directly allocated to 11 NSF awards during our audit [period of performance](#) (POP) of November 1, 2018, to October 31, 2021.

Figure 2: Costs Directly Allocated to NSF Awards From November 1, 2018, Through October 31, 2021



Source: Auditor analysis of accounting data that IRIS provided, illustrating the total costs supported by IRIS’ GL (\$56,600,422)¹ by expense type, using financial information to support costs allocated directly to NSF awards during the audit period. Please note that the “Other Direct Costs” line in this table includes publications, materials and supplies, and other [direct costs](#). Additionally, the “Other Direct Costs” line in this table includes \$1,433,062 in program income that offsets expenses.

We judgmentally selected 50 transactions with an absolute value of \$4,297,934² (see Table 1) for transaction-based testing and evaluated supporting documentation to determine whether the costs claimed on the NSF awards were [allocable](#), [allowable](#), and [reasonable](#).

¹ Our audit population included all the expenses recorded in IRIS’ accounting system that (1) IRIS allocated to NSF awards and (2) had transaction dates within the audit period (i.e., November 1, 2018, to October 31, 2021). See the Objectives, Scope, and Methodology section of this report for further details.

² The \$4,297,934 represents the total absolute value of the 50 transactions selected for transaction-based testing. It does not represent the dollar base of the total costs reviewed during the audit.

and whether they were in conformity with NSF award terms and conditions, organizational policies, and applicable federal financial assistance requirements.

Table 1: Summary of Selected Transactions

Budget Category	Transaction Count	Expense Amount ³
Equipment	4	\$1,727,306
Program Income ⁴	1	1,075,000
Subawards	5	717,331
Other Direct Costs	11	378,014
Materials and Supplies	6	197,480
Consultant Services	4	65,320
Participant Support Costs	4	41,439
Salaries & Wages	7	40,598
Computer Services	2	24,656
Travel	4	14,632
Indirect Costs	1	12,868
Publications	1	3,290
Total	<u>50</u>	<u>\$4,297,934</u>

Source: Auditor summary of selected transactions.

AUDIT RESULTS

We identified and questioned \$470 in costs that IRIS charged to an NSF award. We also identified expenses that IRIS directly allocated to nine NSF awards that did not result in questioned costs, but resulted in non-compliance with federal, NSF, and/or IRIS-specific policies and procedures. 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	\$470
Fringe Benefits Not Treated Consistent with Negotiated Indirect Cost Rate Agreements (NICRAs)	-
Indirect Costs Not Applied Using NICRA Rates	-
Participant Support Costs Not Accurately Identified	-
Total	<u>\$470</u>

Source: Auditor summary of findings identified.

We made five recommendations for NSF's Director of the Division of Institution and Award Support related to resolving the \$470 in questioned costs and ensuring IRIS strengthens its

³ 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.

⁴ The audit population included **program income** that IRIS used to offset the expenses incurred on NSF awards. The program income sample included in Table 1 is reflected as an absolute value rather than as an offsetting credit balance within the audit population.

administrative and management procedures for monitoring federal funds. We communicated the results of our audit and the related findings and recommendations to IRIS and NSF OIG. We included IRIS' response to this report, in its entirety, in [Appendix A](#).

FINDING 1: UNALLOWABLE EXPENSES

In November 2019, IRIS charged NSF Award No. [REDACTED] for \$470 in bartender service expenses it incurred to provide a cash bar for participants attending an NSF-sponsored workshop in [REDACTED] [REDACTED]. As costs associated with alcoholic beverages are not allowable per federal regulations⁵ and [NSF Proposal and Award Policies and Procedures Guides \(PAPPGs\)](#),⁶ the costs incurred to provide the cash bar are unallowable expenses.

Conclusion

IRIS did not have sufficient policies and procedures or internal controls in place to ensure it only charged allowable conference costs to NSF awards. Specifically, IRIS' procedures did not ensure that it did not charge costs associated with unallowable alcohol expenses to NSF awards, consistent with federal guidance and NSF award terms and conditions. We are therefore questioning \$470 of unallowable expenses charged to one NSF award. IRIS agreed to reimburse NSF for the \$470 in questioned costs, as illustrated in Table 3.

Table 3: Finding 1 Summary: Unallowable Expenses

NSF Award No.	Description	Fiscal Year(s)	Questioned Costs			
			Direct	Indirect	Total	IRIS Agreed to Reimburse
[REDACTED]	November 2019 Bartender Services	2020	\$350	\$120	\$470	\$470
Total			<u>\$350</u>	<u>\$120</u>	<u>\$470</u>	<u>\$470</u>

Source: Auditor summary of identified exception.

Recommendations

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

- 1.1 Direct IRIS to provide documentation supporting that it has repaid or otherwise credited the \$470 in questioned alcohol-related expenses for which it has agreed to reimburse NSF.
- 1.2 Direct IRIS to update its procedures for reviewing conference costs to verify that it does not charge NSF awards for alcohol-related expenses, including bartender services. Updated processes should require IRIS to review invoices for hosted events and charge any expenses related to the serving of alcohol to an account that IRIS does not charge to sponsored projects, either directly or indirectly.

⁵ Per 2 CFR § 200.423, *Alcoholic Beverages*, costs of alcoholic beverages are unallowable.

⁶ Per NSF PAPPG 19-1, Part I, Chapter II, Section C.2.g.xiii(c), grantees may not request or spend NSF funds for alcohol.

Incorporated Research Institutions for Seismology Response: IRIS agreed to reimburse NSF for the \$470 in questioned costs. Specifically, IRIS noted that, although there was a difference in interpretation regarding the reasonableness and necessity of the costs associated with the bartender services, it accepted the auditor’s opinion that the bartender fees could be associated with the cash bar and agreed to remove these costs from the award.

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

FINDING 2: FRINGE BENEFITS NOT TREATED CONSISTENT WITH NICRAS

IRIS did not treat **fringe benefits** as direct costs, nor did it apply fringe benefits using the provisional rates identified within its **Negotiated Indirect Cost Rate** Agreements (NICRAs).⁷ Specifically, rather than charging fringe benefits to NSF awards consistent with its NICRAs, IRIS allocated fringe benefit costs to NSF awards based on the actual fringe benefit costs it incurred during the FY per its accounting system.

Conclusion

IRIS’ election to allocate its actual fringe benefit costs to NSF awards did not cause the fringe benefit costs it applied to NSF awards in FYs 2020 and 2021 to be inconsistent with the final fringe benefit rates approved by NSF.⁸ Further, the methodology IRIS used to calculate its actual fringe benefit costs was consistent with the methodology it used in FY 2019. As a result, we are not questioning any costs associated with this exception. However, we are noting a compliance exception, as IRIS did not treat fringe benefits consistent with its NICRAs, as illustrated in Table 4.

Table 4: Finding 2 Summary: Fringe Benefits Not Treated Consistent with NICRAs

NSF Award No.	Description	Fiscal Year(s)	Questioned Costs			
			Direct	Indirect	Total	IRIS Agreed to Reimburse
██████	Fringe Benefits Not Treated Consistent with NICRAs	2019, 2020	\$0	\$0	\$0	\$0
██████	Fringe Benefits Not Treated Consistent with NICRAs	2019, 2020, 2021	-	-	-	-
██████	Fringe Benefits Not Treated Consistent with NICRAs	2019, 2020, 2021				
██████	Fringe Benefits Not Treated Consistent with NICRAs	2019, 2020	-	-	-	-

⁷ According to IRIS’ NICRAs dated June 9, 2021; January 27, 2022; and February 10, 2022, fringe benefits associated with direct salaries and wages are treated as direct costs. Additionally, these NICRAs include provisional fringe benefit rates for FYs 2020, 2021, and 2022.

⁸ IRIS’ January 27, 2022, and February 10, 2022, NICRAs include final fringe benefit rates of 50.03 percent for FY 2020 and 49.40 percent for FY 2021, which are consistent with the fringe benefit rates IRIS calculated based on the actual fringe benefit costs it allocated to NSF awards during those FYs.

NSF Award No.	Description	Fiscal Year(s)	Questioned Costs			
			Direct	Indirect	Total	IRIS Agreed to Reimburse
██████	Fringe Benefits Not Treated Consistent with NICRAs	2019	-	-	-	-
██████	Fringe Benefits Not Treated Consistent with NICRAs	2019, 2020, 2021	-	-	-	-
██████	Fringe Benefits Not Treated Consistent with NICRAs	2019, 2020, 2021	-	-	-	-
██████	Fringe Benefits Not Treated Consistent with NICRAs	2019, 2020, 2021	-	-	-	-
██████	Fringe Benefits Not Treated Consistent with NICRAs	2019	-	-	-	-
██████	Fringe Benefits Not Treated Consistent with NICRAs	2020, 2021	-	-	-	-
Total			<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>

Source: Auditor summary of identified exceptions.

Recommendation

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

- 2.1 Direct IRIS to meet with the National Science Foundation Cost Analysis and Pre-Award Branch, its cognizant federal agency, to either (a) establish policies and procedures to charge fringe benefit expenses as direct costs and/or apply fringe benefits based on approved provisional rates, as outlined within its Negotiated Indirect Cost Rate Agreement, or (b) update its Negotiated Indirect Cost Rate Agreement to reflect its actual treatment of fringe benefits.

Incorporated Research Institutions for Seismology Response: IRIS did not state whether it agreed or disagreed with this finding. It simply noted that it has historically pooled its fringe benefit expenses and applied those expenses to its budgets based on an organizational fringe benefits rate that it applied to salaries and wages. IRIS further stated that NSF's Cost Analysis and Pre-Award Branch modified IRIS' NICRA to formally recognize its fringe benefit rates in 2021.

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

FINDING 3: INDIRECT COSTS NOT APPLIED USING NICRA RATES

IRIS did not apply **indirect costs** to NSF awards using the provisional indirect cost rates included within its NICRAs, as required per federal regulations.⁹ Specifically, rather than charging indirect costs to NSF awards by applying the provisional indirect cost rates that NSF established,¹⁰ IRIS allocated indirect costs to NSF awards based on the actual indirect costs it incurred during the FY per its accounting system. As a result, the indirect costs IRIS allocated to NSF awards were not consistent with the indirect costs that it would have charged to the awards if it had applied its approved provisional indirect cost rates to NSF award expenses in FYs 2019, 2020, and 2021.

Conclusion

Because IRIS’ election to allocate its actual indirect costs to NSF awards resulted in it charging indirect costs at the amounts IRIS would have claimed after receiving its final NSF-approved indirect cost rates in each FY,¹¹ we are not questioning any costs associated with these exceptions. However, we are noting compliance exceptions, as IRIS did not apply indirect costs to nine NSF awards consistent with its NICRA, as illustrated in Table 5.

Table 5: Finding 3 Summary: Indirect Costs Not Applied Using NICRA Rates

NSF Award No.	Description	Fiscal Year(s)	Questioned Costs			IRIS Agreed to Reimburse
			Direct	Indirect	Total	
██████	Indirect Costs Not Applied Using NICRA Rates	2019, 2020	\$0	\$0	\$0	\$0
██████	Indirect Costs Not Applied Using NICRA Rates	2019, 2020, 2021	-	-	-	-
██████	Indirect Costs Not Applied Using NICRA Rates	2019, 2020	-	-	-	-
██████	Indirect Costs Not Applied Using NICRA Rates	2019	-	-	-	-
██████	Indirect Costs Not Applied Using NICRA Rates	2019, 2020, 2021	-	-	-	-

⁹ According to 2 CFR 230, Appendix A, Section E.1.e, *Negotiation and Approval of Indirect Cost Rates*, and 2 CFR § 200, Appendix III, Section C.6, *Provisional and Final Rates for Indirect (F&A) Costs*, provisional rates may be replaced by fixed or predetermined rates at any time during the year. Once a final rate is established, the entity must make an upward or downward adjustment to the allowable cost for the period incurred.

Additionally, 2 CFR § 200, Appendix III, Section C.7, *Fixed Rates for the Life of the Sponsored Agreement*, states that “negotiated rates” include final, fixed, and predetermined rates. Negotiated rates are not provisional rates.

¹⁰ NSF is IRIS’ **cognizant federal agency** and is therefore responsible for negotiating IRIS’ NICRAs.

¹¹ IRIS’ NICRA dated June 9, 2021, includes final indirect cost rates of 23.60 percent for general and administrative (G&A) costs, 34.00 percent for District of Columbia (DC) overhead (OH), and 15.82 percent for data management center (DMC) OH. These rates cover the period from July 1, 2018, to June 30, 2019. IRIS’ NICRA dated January 27, 2022, includes final indirect cost rates of 26.58 percent for G&A, 28.75 percent for DC OH, and 27.01 percent for DMC OH. These rates cover the period from July 1, 2019, to June 30, 2020. IRIS’ NICRA dated February 10, 2022, includes final indirect cost rates of 34.31 percent for G&A, 30.26 percent for DC OH, and 22.03 percent for DMC OH. These rates cover the period from July 1, 2020, to June 30, 2021.

NSF Award No.	Description	Fiscal Year(s)	Questioned Costs			
			Direct	Indirect	Total	IRIS Agreed to Reimburse
██████	Indirect Costs Not Applied Using NICRA Rates	2019, 2020, 2021	-	-	-	-
██████	Indirect Costs Not Applied Using NICRA Rates	2019, 2020, 2021	-	-	-	-
██████	Indirect Costs Not Applied Using NICRA Rates	2019, 2020	-	-	-	-
██████	Indirect Costs Not Applied Using NICRA Rates	2020, 2021	-	-	-	-
Total			<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>

Source: Auditor summary of identified exceptions.

Recommendation

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

- 3.1. Direct IRIS to meet with the National Science Foundation Cost Analysis and Pre-Award Branch, its cognizant federal agency, to either (a) establish policies and procedures to apply provisional indirect cost rates, as outlined within its Negotiated Indirect Cost Rate Agreement, or (b) update its Negotiated Indirect Cost Rate Agreement to reflect its actual treatment of indirect costs.

Incorporated Research Institutions for Seismology Response: IRIS did not state whether it agreed or disagreed with this finding. It simply noted that it developed its procedures for drawing down funds from ACM\$ in such a way as to limit advances for immediate cash requirements, and that drawing down funds for indirect expenses based on the last approved provisional rates would have caused IRIS to draw funds in excess of its actual cash requirements in many years. However, IRIS noted that it will modify its procedures for ACM\$ drawdowns to reflect the recommendations in the audit report.

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

FINDING 4: PARTICIPANT SUPPORT COSTS NOT ACCURATELY IDENTIFIED

IRIS did not accurately identify **participant support cost** activities in its financial management system, as required by federal regulations¹² and NSF PAPPGs.¹³ Specifically,

¹² Per 2 CFR § 200.302, *Financial Management*, a grantee’s financial management system must provide records that accurately identify the source and application of federally funded activities.

¹³ Per NSF PAPPG 18-1, Part II, Chapter VII, Section A, *Financial Management System Standards*, NSF grantees are required to have financial management systems that meet the requirements of 2 CFR § 200.302.

IRIS charged \$5,070 in non-participant support costs to the account code it established to track participant support cost activity for NSF Award No. [REDACTED]

Further, because IRIS inappropriately classified staff and subawardee travel and audio-visual costs as participant support costs, it did not appropriately apply the related indirect costs to its total direct cost base, consistent with its NICRAs.¹⁵

Conclusion

Because IRIS was able to provide documentation to support that it did not inappropriately use participant support cost funds to cover the \$5,070 in non-participant expenses charged to its participant support cost account, and because IRIS did not over-charge indirect costs on the award, we are not questioning any costs associated with this finding. However, we are noting a compliance exception, as IRIS’s current process for reviewing vendor invoices does not ensure that it appropriately accounts for participant and non-participant support costs within its financial management system.

Table 6: Finding 4 Summary: Participant Support Costs Not Accurately Identified

NSF Award No.	Description	Fiscal Year(s)	Questioned Costs			IRIS Agreed to Reimburse
			Direct	Indirect	Total	
[REDACTED]	Participant Support Costs Not Accurately Identified	2012-2019	\$0	\$0	\$0	\$0

Source: Auditor summary of identified exception.

Recommendation

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

- 4.1 Direct IRIS to establish additional guidance regarding how to review invoices that include participant support costs. This guidance should address how to segregate and account for costs that IRIS is not allowed to cover using participant support cost funding, such as costs incurred for IRIS employees and expenses associated with other direct costs that IRIS did not specifically identify in the award budget.

Incorporated Research Institutions for Seismology Response: IRIS agreed with this finding, stating that, although IRIS procedures require multiple staff members to participate in the review and approval of invoices, IRIS had overlooked errors in the processing of the invoice voucher. IRIS further stated that it would work with staff to

¹⁴ Per 2 CFR § 200.75, *Participant Support Costs*, and NSF PAPPG 18-1, Part I, Chapter II, Section C.2.g(v), *Participant Support*, “participant support costs” are defined as 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.

¹⁵ Per IRIS’s NICRAs dated June 9, 2021; January 27, 2022; and February 10, 2022, IRIS should apply indirect costs to a total direct cost base that excludes participant support.

improve the preparation of summary vouchers and the review of meeting costs to prevent similar errors in the future.

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

Cotton & Company Assurance and Advisory, LLC



Megan Mesko, CPA, CFE
January 31, 2023

APPENDIX A: IRIS' RESPONSE



- Arizona State University
- Auburn University
- Baylor University
- Binghamton University, State University of New York
- Boise State University
- Boston College
- Boston University
- Brown University
- California Institute of Technology
- California State Polytechnic University, Pomona
- California State University, East Bay
- Carnegie Institution of Washington
- Central Washington University
- Colgate University
- Colorado School of Mines
- Colorado State University
- Columbia University
- Cornell University
- Drexel University
- Duke University
- Florida International University
- Georgia Institute of Technology
- Harvard University
- Idaho State University
- IGPP/Lawrence Livermore National Laboratory
- IGPP/Los Alamos National Laboratory
- Indiana University-Purdue University Fort Wayne
- Indiana University
- James Madison University
- Kansas State University
- Lamar University
- Lawrence Berkeley National Laboratory
- Lehigh University
- Louisiana State University
- Macalester College
- Massachusetts Institute of Technology
- Miami University of Ohio
- Michigan State University
- Michigan Technological University
- Missouri University of Science and Technology
- Mortana Tech/University of Montana
- New Mexico State University
- New Mexico Tech
- North Carolina State University
- Northern Arizona University
- Northern Illinois University
- Northwestern University
- Oklahoma State University
- Oregon State University
- Pennsylvania State University
- Princeton University
- Purdue University
- Rensselaer Polytechnic Institute
- Rice University
- Rutgers University
- Saint Louis University
- San Diego State University
- San Jose State University
- South Dakota School of Mines and Technology
- Southern Methodist University
- Stanford University
- Stony Brook University
- Syracuse University
- Texas A&M University
- Texas Tech University
- Tulane University
- Virginia Tech
- Washington University in St. Louis
- West Virginia University
- Western Washington University
- Woods Hole Oceanographic Institution
- Wright State University
- Yale University
- The University of Alabama
- The University of Arizona
- The University of Kansas
- The University of Oklahoma/Energy Center
- The University of Tennessee, Knoxville
- The University of Texas at Arlington
- The University of Texas at Austin
- The University of Texas at Dallas
- The University of Texas at El Paso
- The University of Tulsa
- The University of Utah
- University of Alaska Fairbanks
- University of Arkansas at Little Rock
- University of California, Berkeley
- University of California, Davis
- University of California, Los Angeles
- University of California, Riverside
- University of California, San Diego
- University of California, Santa Barbara
- University of California, Santa Cruz
- University of Colorado Boulder
- University of Connecticut
- University of Delaware
- University of Florida
- University of Georgia
- University of Hawaii at Manoa
- University of Houston
- University of Illinois, Urbana Champaign
- University of Kentucky
- University of Maryland, College Park
- University of Massachusetts, Amherst
- University of Memphis
- University of Miami
- University of Michigan
- University of Minnesota
- University of Missouri, Columbia
- University of Nevada, Las Vegas
- University of Nevada, Reno
- University of New Mexico
- University of New Orleans
- University of North Carolina at Chapel Hill
- University of Oregon
- University of Pittsburgh
- University of Puerto Rico
- University of Rochester
- University of South Carolina
- University of South Florida
- University of Southern California
- University of Washington
- University of Wisconsin-Madison
- University of Wisconsin-Milwaukee
- University of Wisconsin-Oshkosh
- University of Wyoming

December 28, 2022

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

Attention: Megan Mesko, CPA, CFE

Dear Ms. Mesko,

The Incorporated Research Institutions for Seismology (IRIS) appreciates the support of the National Science Foundation and recognizes the responsibilities of managing our awards in compliance with all applicable terms and conditions.

We thank Cotton & Company and the NSF Office of Inspector General staff for their communications throughout the audit process and the opportunities they gave us to respond to questions and clarify issues encountered during the engagement.

We agree to work with the relevant parties to strengthen our policies and procedures, and commit to effectively meeting NSF's standards for federal awards and program performance.

Sincerely,

Candy Shin Digitally signed
by Candy Shin
Date: 2022.12.27
12:04:51 -05'00'

Candy Shin
Chief Financial Officer

DocuSigned by:
Robert Woodward
76A615FF0E8040A...

Robert Woodward
IRIS President

**Incorporated Research Institutions for Seismology (IRIS)
NSF Audit Report Response**

Finding 1: Unallowable Expenses

IRIS has internal controls in place that reasonably assure that expenses charged to sponsored awards are allowable, allocable, reasonable and necessary.

Invoices for the 2019 [REDACTED] Facility Workshop included several work orders and banquet checks from the meeting venue for meeting and catering costs associated with a three-day, 300-person event.

The agenda for the facility workshop included an educational group dinner on Thursday, October [REDACTED] 2019, with a guest speaker from the [REDACTED] talking on the topic of [REDACTED]

Participant registration fees were used to offset the costs of the meeting, which included food and beverages for two lunches, the group dinner, and various coffee breaks.

The banquet check for the plated dinner during the Thursday science talk included service charges for the meal and fees for 2 banquet bartenders, who were hired to provide beverages for guests. If guests requested an alcoholic beverage, they were required to pay for their drink. No alcohol beverage costs were charged to the federal award supporting this workshop.

IRIS procedures entailed a staff accountant reviewing the vendor invoices with the meeting planner to break down and confirm all the costs invoiced by the vendor were correct and to identify the applicable budgets or projects to which the costs were charged. Due to the size and complexity of the vendor invoice, additional reviews were conducted by senior accounting staff to check the allocation and allowability of the expenses. In this instance, there was a difference in interpretation of the reasonableness and necessity of the costs associated with the banquet bartenders service that was not limited wholly to providing a cash bar, but distributing other non-alcoholic beverage options for this group dinner.

IRIS accepts the auditor's opinion that the bartender fees could be associated with the cash bar and agrees to reimburse NSF or remove these costs from the award charges.

Due to stricter guidelines since issued by NSF, similar workshops in the future will no longer include a cash bar or permit the serving of alcohol at such sponsored events.

Finding 2: Fringe Benefits Not Treated Consistent with NICRAs

IRIS historically has pooled its fringe benefits expenses and applied them to budgets based on an organizational fringe benefits rate applied to salaries and wages.

In 2021, NSF's Cost-Analysis and Pre-Award Branch modified the negotiated indirect cost rate agreement (NICRA) issued to IRIS to formally recognize the fringe benefits rate.

Finding 3: Indirect Costs Not Applied Using NICRA Rates

IRIS is predominantly funded by the National Science Foundation under a five-year cooperative agreement for its major programs. Since NSF determined that the establishment of an indirect cost structure was appropriate for IRIS in 2001, the negotiations for and approvals of provisional and actual rates has, at times, been significantly delayed.

IRIS procedures for the drawdown of funds from the Award Cash Management System were developed to limit advances to immediate cash requirements and were based on actual weekly invoices or projected disbursements. Drawdowns for paying actual indirect expenses were usually allocated to the primary cooperative agreement, and adjustments were made to reallocate ACM\$ drawdowns against NSF awards based on monthly reconciliations of award revenues and award receivable balances. Drawdowns for paying actual indirect expenses tracked the accounting system-calculated cumulative year-to-date indirect rates, which became the final actual indirect rates submitted to NSF for approval annually after audit.

In many years, the drawdown of funds for indirect expenses based on the last approved provisional rates would have resulted in drawing funds in excess of actual cash requirements.

With the merger of IRIS and UNAVCO Inc., effective January 1, 2023, the procedures for the ACM\$ drawdowns will be modified to reflect the recommendations of the audit report, and apply the provisional indirect cost rates.

Finding 4: Participant Support Costs Not Accurately Identified

In 2018 IRIS contracted with a hotel for lodging and meeting arrangements in association with a technical meeting called the [REDACTED]. The symposium was a forum to share and discuss instruments and technologies for making seismological and complementary geophysical observations, including magnetotelluric, geodetic, atmospheric, and meteorologic. Federal funds supported reimbursement of travel and lodging expenses for a limited number of attendees who requested support.

Although IRIS procedures require review and approval of invoices by multiple staff (project lead, staff accountant, senior accountant) to reasonably assure that expenses charged to sponsored awards are allowable, allocable, reasonable and necessary, there were errors in the processing of this invoice voucher that were overlooked.

Cotton and Co. auditors identified that the voucher worksheet used to summarize and allocate the venue charges included an amount for audiovisual meeting costs in a subtotal of participant support costs and catered meal expenses associated with staff had not been appropriately broken out from participant support costs.

Although the meeting costs were allowable expenses, IRIS agrees with the finding that the posted amount of participant support on the tested voucher was incorrect, and will work with staff to improve the preparation of summary vouchers and the review of meeting costs to prevent similar errors.

APPENDIX B: OBJECTIVES, SCOPE, AND METHODOLOGY

OBJECTIVES

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

SCOPE

The audit population included approximately \$56.6 million in expenses IRIS allocated directly to 11 NSF awards during our audit POP of November 1, 2018, to October 31, 2021.

METHODOLOGY

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

Audit Survey Phase

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

- Assessing the reliability of the GL data that IRIS provided by comparing the costs charged to NSF awards per IRIS’ accounting records to the reported net expenditures reflected in the ACM\$ drawdown requests.
 - Our work required us to rely on computer-processed data obtained from IRIS and NSF OIG. NSF OIG provided award data that IRIS reported through ACM\$ during our audit period.
 - We assessed the reliability of the GL data that IRIS provided by (1) comparing the costs charged to NSF awards per IRIS’ accounting records to the reported net expenditures reflected in the ACM\$ drawdown requests that IRIS submitted to NSF during the audit POP; and (2) reviewing the parameters that IRIS used to extract transaction data from its accounting systems. During this review, we determined that IRIS’ transaction-level data did not reconcile to the costs it claimed in ACM\$. Because IRIS calculates ACM\$ draws based on actual cash needs and does not post fringe benefits or indirect costs as direct costs to individual awards within its GL, we modified the initial audit scope to perform analytics and select our audit sample from only the expenditures directly allocated to NSF awards during the audit period. As a result, our audit scope included performing data analytics and selecting sample transactions from the \$56.6 million in expenditures

that IRIS directly allocated to 11 NSF awards during the audit period, rather than from the \$67.6 million in cash that IRIS drew down through ACM\$ across 11 NSF awards during our audit period.

To evaluate whether the GL data was sufficiently reliable for the modified scope and to determine whether IRIS' methodology for drawing down funds from ACM\$ was reasonable, we performed expanded testing, as summarized in the *Expanded Testing* section below.

- Because we determined the GL data provided for the modified scope was sufficiently reliable for the purposes of the audit survey, we selected our transaction samples from the population of expenses that IRIS directly allocated to NSF awards from November 1, 2018, to October 30, 2021.
- 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 FY 2020 found no reportable instances in which NSF's financial management systems did not substantially comply with applicable requirements.
 - o IRIS provided detailed transaction-level data to support all costs allocated directly to NSF awards during the period. This data resulted in a total audit universe of \$56,600,422 in expenses charged to 11 NSF awards.
- Obtaining and reviewing all available accounting and administrative policies and procedures, external audit reports, desk review reports, and other relevant information IRIS and NSF OIG provided, as well as any other relevant information that was available online.
- Summarizing our understanding of federal, NSF, and IRIS-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.
 - o In planning and performing this audit, we considered IRIS' internal controls, within the audit's scope, solely to understand the directives or policies and procedures IRIS has in place to ensure that charges against NSF awards complied with relevant federal regulations, NSF award terms, and IRIS policies.

- Evaluating the strengths and weaknesses of the policies and procedures that IRIS has in place to control the inherent, fraud, and control risks identified for each budget category.
- Providing IRIS with a list of 50 transactions that we selected based on the results of our data analytics and requesting that IRIS provide documentation to support each transaction.
- Reviewing the supporting documentation IRIS 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,¹⁶ NSF,¹⁷ and IRIS policies.¹⁸
- Holding virtual interviews and walkthroughs with IRIS in May 2022 to discuss payroll (including effort reporting), fringe benefits, 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), grant close-out procedures, subawards, ACM\$ processing, indirect costs, and other general policies (e.g., pre- and post-award costs, program income, whistle-blower information, research misconduct, and conflict of interest policies).
- Preparing an organizational risk assessment that (1) summarized the results of our planning/initial fieldwork, (2) included areas of elevated risk of noncompliance that we identified in the organization’s award management environment, and (3) contained our recommendations for expanded testing.

Expanded Testing Audit Phase

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

- Conducting additional audit work in two areas to evaluate whether IRIS’ GL was sufficiently reliable for the purpose of the audit. Specifically, this included performing an analysis of IRIS’ methodology for incurring and allocating fringe benefit and indirect costs to NSF awards to evaluate whether fringe and indirect costs were appropriately allocated and/or charged to NSF awards during the audit period.

¹⁶ We assessed IRIS’ compliance with 2 CFR Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*, and 2 CFR Part 230, *Cost Principles for Educational Institutions* (Office of Management and Budget [OMB] Circular A-21), as appropriate.

¹⁷ We assessed IRIS’ compliance with NSF PAPPGs 16-1, 17-1, 18-1, 19-1, and 20-1 and with NSF award-specific terms and conditions, as appropriate.

¹⁸ We assessed IRIS’ compliance with internal IRIS policies and procedures surrounding costs budgeted for or charged to NSF awards.

- To perform this analysis, we selected an additional audit sample of 38 transactions that IRIS did not directly charge to NSF awards. We provided the list of 38 transactions to IRIS and requested and reviewed supporting documentation until we obtained sufficient, appropriate evidence to enable us to assess the allowability of each sampled transaction.

At the conclusion of our fieldwork, we provided a summary of our results to NSF OIG personnel for review. We also provided the summary to IRIS personnel to ensure that IRIS 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 from September 2020 to August 2021 in accordance with *Generally Accepted Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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	\$470	\$470
2	Fringe Benefits Not Treated Consistent with NICRAs	-	-	-
3	Indirect Costs Not Applied Using NICRA Rates	-	-	-
4	Participant Support Costs Not Accurately Identified			
Total		<u>\$0</u>	<u>\$470</u>	<u>\$470</u>

Source: Auditor summary of identified exceptions.

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

NSF Award No.	No. of Exceptions	Questioned Direct Costs	Questioned Indirect Costs	Questioned Total	IRIS Agreed to Reimburse
██████	2	\$0	\$0	\$0	\$0
██████	3	-	-	-	-
██████	1	-	-	-	-
██████	2	-	-	-	-
██████	2	-	-	-	-
██████	2	-	-	-	-
██████	2	-	-	-	-
██████	3	350	120	470	470
██████	2	-	-	-	-
██████	2	-	-	-	-
Grand Total	<u>21</u>	<u>350</u>	<u>120</u>	<u>470</u>	<u>\$470</u>

Source: Auditor summary of identified exceptions.

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	IRIS Agreed to Reimburse
Finding 1: Unallowable Expenses	██████	November 2019 Bartender Services	2020	\$350	\$120	470	\$470
Finding 2: Fringe Benefits Not Treated Consistent with NICRAs	██████	Fringe Benefits Not Treated Consistent with NICRAs	2019, 2020	-	-	-	-
	██████	Fringe Benefits Not Treated Consistent with NICRAs	2019, 2020, 2021	-	-	-	-
	██████	Fringe Benefits Not Treated Consistent with NICRAs	2019, 2020, 2021	-	-	-	-
	██████	Fringe Benefits Not Treated Consistent with NICRAs	2019, 2020	-	-	-	-
	██████	Fringe Benefits Not Treated Consistent with NICRAs	2019	-	-	-	-
	██████	Fringe Benefits Not Treated Consistent with NICRAs	2019, 2020, 2021	-	-	-	-
	██████	Fringe Benefits Not Treated Consistent with NICRAs	2019, 2020, 2021	-	-	-	-
	██████	Fringe Benefits Not Treated Consistent with NICRAs	2019, 2020, 2021	-	-	-	-
	██████	Fringe Benefits Not Treated Consistent with NICRAs	2019	-	-	-	-
Finding 3: Indirect Costs Not Applied Using NICRA Rates	██████	Indirect Costs Not Applied Using NICRA Rates	2019, 2020	-	-	-	-
	██████	Indirect Costs Not Applied Using NICRA Rates	2019-2021	-	-	-	-
	██████	Indirect Costs Not Applied Using NICRA Rates	2019- 2020	-	-	-	-
	██████	Indirect Costs Not Applied Using NICRA Rates	2019	-	-	-	-
	██████	Indirect Costs Not Applied Using NICRA Rates	2019-2021	-	-	-	-
	██████	Indirect Costs Not Applied Using NICRA Rates	2019-2021	-	-	-	-
	██████	Indirect Costs Not Applied Using NICRA Rates	2019-2021	-	-	-	-
	██████	Indirect Costs Not Applied Using NICRA Rates	2019- 2020	-	-	-	-
Finding 4: Costs Not Accurately Identified	██████	Participant Support Costs Not Accurately Identified	2012-2019	-	-	-	-
Total				<u>\$350</u>	<u>\$120</u>	<u>\$470</u>	<u>\$470</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 IRIS to provide documentation supporting that it has repaid or otherwise credited the \$470 in questioned alcohol-related expenses for which it has agreed to reimburse NSF.
- 1.2 Direct IRIS to update its procedures for reviewing conference expenses to verify that it does not charge NSF awards for alcohol-related expenses, including bartender services. Updated processes should require IRIS to review invoices for hosted events and charge any expenses related to the serving of alcohol to an account that IRIS does not charge to sponsored projects, either directly or indirectly.
- 2.1 Direct IRIS to meet with the National Science Foundation Cost Analysis and Pre-Award Branch, its cognizant federal agency, to either (a) establish policies and procedures to charge fringe benefit expenses as direct costs and/or apply fringe benefits based on approved provisional rates, as outlined within its Negotiated Indirect Cost Rate Agreement, or (b) update its Negotiated Indirect Cost Rate Agreement to reflect its actual treatment of fringe benefits.
- 3.1. Direct IRIS to meet with the National Science Foundation Cost Analysis and Pre-Award Branch, its cognizant federal agency, to either (a) establish policies and procedures to apply provisional indirect cost rates, as outlined within its Negotiated Indirect Cost Rate Agreement, or (b) update its Negotiated Indirect Cost Rate Agreement to reflect its actual treatment of indirect costs.
- 4.1 Direct IRIS to establish additional guidance regarding how to review invoices that include participant support costs. This guidance should address how to segregate and account for costs that IRIS is not allowed to cover using participant support cost funding, such as costs incurred for IRIS employees and expenses associated with other direct costs that IRIS did not specifically identify in the award budget.

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.](#)

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.](#)

Cognizant agency for indirect costs refers to the federal agency responsible for reviewing, negotiating, and approving cost allocation plans or indirect cost proposals developed on behalf of all Federal agencies. (2 CFR § 200.19).

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

Direct Costs are those costs that can be identified specifically with a particular final cost objective, such as a federal award, or other internally or externally funded activity, or that can be directly assigned to such activities relatively easily with a high degree of accuracy. Costs incurred for the same purpose in like circumstances must be treated consistently as either direct or indirect (F&A) costs (2 CFR § 200.413).

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

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

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

Indirect (F&A) Costs refers to costs incurred for a common or joint purpose benefitting more than one cost objective, and not readily assignable to the cost objectives specifically benefitted, without effort disproportionate to the results achieved. (2 CFR § 230, Appendix A, Section C.), (2 CFR § 200.56) and (2 CFR Revision § 200.1).

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

Negotiated Indirect Cost Rate refers to the indirect cost rates charged to federal awards through the development and application of a negotiated indirect cost rate agreement (NICRA). 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. (NSF Office of Budget, Finance, and Award Management).

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

Participant Support Costs refers to the direct costs for items such as stipends or subsistence allowances, travel allowances, and registration fees paid to or on behalf of participants or trainees (but not employees) in connection with conferences or training projects. (2 CFR § 200.75).

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

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.](#)

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

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

Program Income means gross income earned by the non-Federal entity that is directly generated by a supported activity or earned as a result of the Federal award during the period of performance. Program income includes but is not limited to income from fees for services performed, the use of rental or real or personal property acquired under Federal awards, the sale of commodities or items fabricated under a Federal award, license fees, and royalties on patents and copyrights, and principal and interest on loans made with Federal award funds. (2 CFR § 200.80).

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

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

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



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