

Performance Audit of Incurred Costs – University of Mississippi

REPORT PREPARED BY COTTON & COMPANY ASSURANCE AND
ADVISORY, LLC

NATIONAL SCIENCE FOUNDATION
OFFICE OF INSPECTOR GENERAL

November 18, 2022
OIG 23-1-003





AT A GLANCE

Performance Audit of Incurred Costs – University of Mississippi

Report No. OIG 23-1-003

November 18, 2022

AUDIT OBJECTIVE

The National Science Foundation Office of Inspector General engaged Cotton & Company Assurance and Advisory, LLC (C&C) to conduct a performance audit of incurred costs at the University of Mississippi (UM) for the period June 1, 2018, to May 31, 2021. The auditors tested approximately \$660,000 of the more than \$10.3 million of costs claimed to NSF. The audit objective was to determine if costs claimed by UM on NSF awards were allowable, allocable, reasonable, and in compliance with NSF award terms and conditions and federal financial assistance requirements. A full description of the audit's objective, scope, and methodology is attached to the report as Appendix B.

AUDIT RESULTS

The report highlights concerns about UM's compliance with certain federal regulations, NSF policies and procedures, and UM's internal policies. The auditors questioned \$129,951 of costs claimed by UM during the audit period. Specifically, the auditors found \$69,775 of inadequately supported expenses, \$34,688 of inappropriately allocated expenses, and \$25,488 in unallowable expenses. The auditors also identified one additional finding related to non-compliance with UM policies, for which there were no questioned costs. In addition, the auditors identified one area for improvement for UM to consider related to applying proposed 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 4 findings and one area for improvement in the report with associated recommendations for NSF to resolve the questioned costs and to ensure UM strengthens administrative and management controls.

AUDITEE RESPONSE

UM agreed with the majority of the findings in the report. UM'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: November 18, 2022

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

Jamie French
Director
Division of Grants and Agreements
[REDACTED]

FROM: Mark Bell
Assistant Inspector General
Office of Audits

SUBJECT: Audit Report No. 23-1-003, University of Mississippi

This memorandum transmits the Cotton & Company Assurance and Advisory, LLC (C&C) report for the audit of costs charged by the University of Mississippi (UM) to its sponsored agreements with the National Science Foundation during the period June 1, 2018, to May 31, 2021. The audit encompassed approximately \$660,000 of the more than \$10.3 million of costs claimed to NSF during the period. The audit objective was to determine if costs claimed by UM on NSF awards were allowable, allocable, reasonable, and in compliance with NSF awards terms and conditions and federal financial assistance requirements. A full description of the audit's objective, scope, and methodology is attached to the report as Appendix B.

Please coordinate with our office during the 6-month resolution period, as specified by OMB Circular A-50, to develop a mutually agreeable resolution of the audit findings. The findings should not be closed until NSF determines that all recommendations have been adequately addressed and the proposed corrective actions have been satisfactorily implemented.

OIG Oversight of the Audit

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

- reviewed C&C's approach and planning of the audit;
- evaluated the qualifications and independence of the auditors;
- monitored the progress of the audit at key points;
- coordinated periodic meetings with C&C, as necessary, to discuss audit progress, findings, and recommendations;
- reviewed the audit report prepared by C&C; and
- coordinated issuance of the audit report.

We thank your staff for the assistance that was extended to the auditors during this audit. If you have any questions regarding this report, please contact Billy McCain at 703.292.7100 or OIGpublicaffairs@nsf.gov.

Attachment

cc:

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

EXECUTIVE SUMMARY

The Cotton & Company audit team determined that the University of Mississippi (UM) 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 regulations, NSF policies and procedures guides, and UM's internal policies. Specifically, the audit report includes five findings and a total of \$129,951 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 UM incurred for the period from June 1, 2018, to May 31, 2021. The audit objectives included evaluating UM'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 UM's compliance with relevant federal regulations (i.e., 2 Code of Federal Regulations [CFR] 200 and 2 CFR 220); NSF Proposal and Award Policies and Procedures Guides (PAPPGs) 11-1, 13-1, 14-1, 15-1, 16-1, 17-1, 18-1, and 19-1; NSF award terms and conditions; and UM 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 \$129,951 of direct and indirect costs that UM inappropriately claimed during the audit period, including:

- \$69,775 of inadequately supported expenses
- \$34,688 of inappropriately allocated expenses
- \$25,488 of unallowable expenses

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

- Non-compliance with UM policies

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

- Applying proposed indirect cost rates

RECOMMENDATIONS

The audit report includes 16 recommendations and one consideration for NSF's Director of the Division of Institution and Award Support related to resolving the \$129,951 in questioned costs and ensuring UM strengthens its award management environment, as summarized in [Appendix D](#).

AUDITEE RESPONSE

UM agreed with the majority of the findings included in the audit report, agreeing to reimburse NSF for \$116,201 in questioned costs, but disagreeing with the remaining \$13,750. UM'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 |
| EPSCoR | Established Program to Stimulate Competitive Research |
| FY | Fiscal Year |
| GAGAS | Generally Accepted Government Auditing Standards |
| GL | General Ledger |
| GSA | General Services Administration |
| GRFP | Graduate Research Fellowship Program |
| 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 |
| UM | University of Mississippi |

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 a contractor to provide these audit services.

NSF OIG engaged Cotton & Company Assurance and Advisory, LLC (referred to as “we”) to conduct a performance audit of costs incurred by the University of Mississippi (UM). UM is a public research university located in Oxford, Mississippi. In fiscal year (FY) 2020, UM reported more than \$94 million in grants and contracts revenue, with \$47.9 million received from federal sources—including NSF—as illustrated in Figure 1.

Figure 1: UM’s FY 2020 Grants and Contracts Revenue



Source: The chart data is supported by UM’s 2020 financial statements (<https://adminfinance.olemiss.edu/wp-content/uploads/sites/74/2022/06/58521-FinancialStatements-2021-4.19.22-A.pdf>). The photo of UM is publicly available on UM’s Twitter page (<https://twitter.com/UMchancellor>).

AUDIT SCOPE

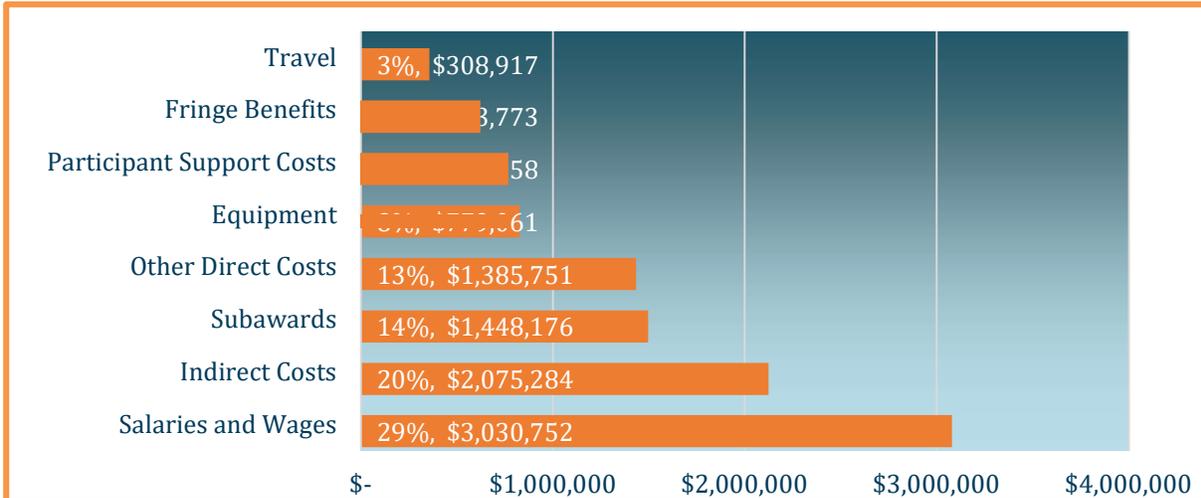
This performance audit—conducted under Order No. 140D0421F0364—was designed to meet the objectives identified in the Objectives, Scope, and Methodology section of this

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

As illustrated in Figure 2, UM provided general ledger (GL) data to support the \$10.3 million in expenses it claimed on 58 NSF awards during our audit [period of performance](#) (POP) of June 1, 2018, to May 31, 2021.

Figure 2: Costs Claimed on NSF Awards from June 1, 2018, to May 31, 2021¹



Source: Auditor analysis of accounting data UM provided, illustrating the total costs supported by UM’s GL (\$10,321,872) by expense type, using financial information to support costs incurred on NSF awards during the audit period. Please note that the “Other Direct Costs” in this table include computer services, [consultant services](#), [materials and supplies](#), [publications](#), and other [direct costs](#).

We judgmentally selected 86 transactions totaling \$659,703² (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](#), and whether they were in conformity with NSF award terms and conditions, organizational policies, and applicable federal financial assistance requirements.

¹ The total award-related expenses that UM reported in its GL reconciled to the \$10,321,872 reported in NSF’s Award Cash Management Service (ACM\$). As such, we determined that the GL data was appropriate for the purposes of this engagement.

² The \$659,703 represents the total value of the 86 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 ³ |
|------------------------|-------------------|-----------------------------|
| Equipment | 5 | \$169,780 |
| Subawards | 3 | 112,370 |
| Salaries and Wages | 22 | 101,349 |
| Materials and Supplies | 27 | 89,974 |
| Participant Support | 6 | 79,979 |
| Consultant Services | 8 | 66,112 |
| Publications | 8 | 21,508 |
| Travel | 5 | 12,385 |
| Indirect Costs | 2 | 6,246 |
| Total | <u>86</u> | <u>\$659,703</u> |

Source: Auditor summary of selected transactions.

Additionally, we performed non-transaction-based cluster testing in four areas to evaluate whether UM appropriately: (1) executed consultant agreements; (2) spent **participant support cost** funding; (3) charged idle salary expenses in compliance with **Office of Management and Budget (OMB) Memorandum M-20-26**; and (4) claimed reimbursement for lodging expenses in a manner consistent with UM policies.

AUDIT RESULTS

We identified and questioned \$129,951 in costs that UM charged to 17 NSF awards. We also identified expenses UM charged to five NSF awards that did not result in questioned costs, but resulted in non-compliance with UM-specific policies and procedures. Finally, we identified one area in which UM 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 |
|------------------------------------|-------------------------|
| Inadequately Supported Expenses | \$69,775 |
| Inappropriately Allocated Expenses | 34,688 |
| Unallowable Expenses | 25,488 |
| Non-Compliance with UM Policies | - |
| Total | <u>\$129,951</u> |

Source: Auditor summary of findings identified.

We made 16 recommendations and one consideration for NSF's Director of the Division of Institution and Award Support related to resolving the \$129,951 in questioned costs and ensuring UM strengthens its administrative and management procedures for monitoring federal funds. We communicated the results of our audit and the related findings and

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**.

recommendations to UM and NSF OIG. We included UM’s response to this report, in its entirety, in [Appendix A](#).

FINDING 1: INADEQUATELY SUPPORTED EXPENSES

UM did not provide adequate documentation to support the allocability, allowability, and reasonableness of \$69,775 in expenses charged to nine NSF awards during the audit period, as required for the costs to be allowable, per federal regulations⁴ and [NSF Proposal and Award Policies and Procedures Guides \(PAPPGs\)](#).⁵

Inadequately Supported Service Expenses

UM did not provide adequate documentation to support that \$63,288 in service expenses charged to seven NSF awards were supported by executed service agreements, as required by federal regulations,⁶ NSF PAPPGs,⁷ and UM’s *Payment for Personal Services as a Consultant or Independent Contractor Policy*,⁸ as illustrated in Table 3.

Table 3: Inadequately Supported Service Expenses

| Expense Date | NSF Award No. | Inadequately Supported Expenses | Insufficient Documentation to Support | Notes |
|---------------------|----------------------|--|--|--------------|
| June 2018 | | \$5,000 | Service Scope, POP, or Rate | a |
| September 2018 | | 6,552 | Service Scope, POP, or Rate | b |
| May 2019 | | 3,761 | Service Scope, POP, or Rate | c |
| January 2020 | | 8,640 | Service Rate | d |
| June 2020 | | 6,658 | Service Scope, POP, or Rate | e |

⁴ According to 2 Code of Federal Regulations (CFR) § 200.403, *Factors affecting allowability of costs*, for a cost to be allowable, it must be allocable and reasonable for the performance of the federal award. Further, according to 2 CFR § 200.403, *Factors affecting allowability of costs*, (g), in order for a cost to be allowable, it must be adequately documented.

⁵ According to NSF PAPPG 16-1, Part II, Chapter V, Section A, *Basic Considerations*, and PAPPGs 17-1, 18-1, and 19-1, Part II, Chapter X, Section A, *Basic Considerations*, grantees should ensure that costs claimed under NSF grants are necessary, reasonable, allocable, and allowable under the applicable cost principles, NSF policy, and the program solicitation. Additionally, the grantee organization is responsible for ensuring that all costs charged to NSF awards meet the requirements of the grant terms and conditions.

⁶ According to 2 CFR §200.459, *Professional service costs*, (b)(8), entities should consider the adequacy of the contractual agreement for the service (e.g., description of the service, estimate of time required, rate of compensation, and termination provisions) when determining the allowability of professional service costs.

⁷ NSF PAPPGs 17-1, 18-1, and 19-1, Part I, Chapter II, Section C.2.g.(vi)(c), *Consultant Services*, state that proposers must justify anticipated services and furnish information on each individual’s expertise, primary organizational affiliation, normal daily compensation rate, and number of days of expected service. If requested, the proposer must be able to justify that the proposed rate of pay is reasonable.

⁸ According to UM’s *Payment for Personal Services as a Consultant or Independent Contractor Policy*, departments are encouraged to have on file a Letter of Agreement or similar written agreement detailing the services the consultant or independent contractor is responsible for performing if the fee for services exceeds \$5,000. Further, the policy states that consulting relationships with a scope of work related to a sponsored research project, regardless of the amount, must be conducted under a Consulting Agreement negotiated and approved by the Office of Research and Sponsored Programs.

| Expense Date | NSF Award No. | Inadequately Supported Expenses | Insufficient Documentation to Support | Notes |
|--------------|---------------|---------------------------------|---------------------------------------|-------|
| | | | | f |
| July 2020 | | 28,127 | Service Scope, POP, or Rate | g |

Source: Auditor summary of identified exceptions.

- a) In June 2018, UM charged NSF Award No. [REDACTED] for \$5,000 in recruiting services that were not supported by an executed agreement that identified the scope of the services to be provided, the POP for the services, and/or the consultant’s compensation rate.
- b) In September 2018, UM charged NSF Award No. [REDACTED] for \$6,552 in laboratory testing services provided by the University of [REDACTED] that were not supported by an executed agreement that identified the scope of the services to be provided, the POP for the services, and/or the lab testing rate(s).
- c) In May 2019, UM charged NSF Award No. [REDACTED] for \$3,761 in sample analysis services provided by the University of [REDACTED] that were not supported by an executed agreement that identified the scope of the services to be provided, the POP for the services, and/or the sample analyses rate(s).
- d) In January 2020, UM charged NSF Award No. [REDACTED] for \$8,640 in services provided by the [REDACTED] that were not supported by an executed agreement that identified the service rate(s).
- e) In June 2020, UM charged NSF Award No. [REDACTED] for \$6,658 in genotyping services provided by [REDACTED] that were not supported by an executed agreement that identified the scope of the services to be provided, the POP for the services, and/or the genotyping service rate(s).
- f) In June 2020, UM charged NSF Award No. [REDACTED] for \$4,550 in workshop facilitation services that were not supported by an executed agreement that identified the scope of the services to be provided, the POP for the services, and/or the consultant’s compensation rate.
- g) In July 2020, UM charged NSF Award No. [REDACTED] for \$28,127 in services provided by [REDACTED] that were not supported by an executed agreement that identified the scope of the services to be provided, the POP for the services, and/or the rate(s) charged for the services provided.

Inadequately Supported Other Direct Costs

UM did not provide sufficient documentation to support \$6,487 in other direct cost expenses charged to two NSF awards, as illustrated in Table 4.

Table 4: Inadequately Supported Other Direct Costs

| August 2018 | ██████████ | \$720 | Return of Refundable Deposit | a |
|-------------|------------|-------|------------------------------|---|
| | ██████████ | | | |

Source: Auditor summary of identified exceptions.

- a) In August 2018, UM charged NSF Award No. ██████████ for \$720 in expenses incurred for a refundable damage deposit that travelers paid to a lodging provider while conducting fieldwork in the ██████████. Although the travelers completed their fieldwork, UM did not provide documentation to support that it returned the deposit to NSF.
- b) In November 2019, UM charged NSF Award No. ██████████ for \$5,767 in expenses incurred to purchase gas cylinders. However, UM did not provide documentation to support the cost or the number of cylinders purchased.

Conclusion

UM did not have sufficient policies and procedures or internal controls in place to ensure that it received and maintained adequate documentation to support the allowability of all costs charged to federal awards. Specifically, UM’s policies, procedures, and internal controls did not ensure that it appropriately executed consulting service agreements, or that it obtained sufficient and legible documentation for other direct costs and lodging expenses.

We are therefore questioning \$69,775 in inadequately supported expenses charged to nine NSF awards. UM concurred with \$64,775 of the questioned costs but disagreed with the remaining \$5,000, as illustrated in Table 5.

Table 5: Finding 1 Summary: Inadequately Supported Expenses

| ██████████ | June 2018 Recruiting Services | 2018 | \$5,000 | \$0 | \$5,000 | \$0 |
|------------|--|------|---------|-------|---------|-------|
| ██████████ | | | | | | |
| ██████████ | May 2019 Sample Analysis Services | 2019 | 2,612 | 1,149 | 3,761 | 3,761 |
| ██████████ | | | | | | |
| ██████████ | June 2020 Genotyping Services | 2020 | 4,560 | 2,098 | 6,658 | 6,658 |
| ██████████ | June 2020 Workshop Facilitation Services | 2020 | 3,500 | 1,050 | 4,550 | 4,550 |

| NSF Award No. | Description | Fiscal Year(s) | Questioned Costs | | | UM Agreed to Reimburse |
|---------------|--------------------------------------|----------------|------------------------|------------------------|------------------------|------------------------|
| | | | Direct | Indirect | Total | |
| | July 2020 Services | 2021 | 19,265 | 8,862 | 28,127 | 28,127 |
| | August 2018 Lodging Deposit | 2019 | 500 | 220 | 720 | 720 |
| | November 2019 Materials and Supplies | 2020 | 3,950 | 1,817 | 5,767 | 5,767 |
| Total | | | <u>\$49,875</u> | <u>\$19,900</u> | <u>\$69,775</u> | <u>\$64,775</u> |

Source: Auditor summary of identified exceptions.

Recommendations

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

- 1.1. Resolve the \$5,000 in questioned inadequately supported service expenses for which UM has not agreed to reimburse NSF and direct UM to repay or otherwise remove the sustained questioned costs from its NSF awards.
- 1.2. Direct UM to provide documentation supporting that it has repaid or otherwise credited the \$64,775 in questioned service, materials and supplies, and lodging expenses for which it has agreed to reimburse NSF.
- 1.3. Direct UM to strengthen its policies and procedures related to creating and retaining documentation, including introducing additional internal controls to help ensure that it appropriately creates and maintains all documentation necessary to support the allowability of expenses charged to sponsored programs. These additional internal controls could include:
 - Updating its current external service provider procedures to require that UM establishes formal agreements with external service providers which identify the period of performance, scope of work, compensation rate(s), and applicable terms and conditions when providing services that are greater than \$5,000.
 - Updating its current purchasing policies and procedures to ensure appropriate personnel review service and materials and supplies invoices to verify expenses are invoiced at approved rate(s) prior to charging the expenses to federally-sponsored awards.
 - Providing additional training regarding requirements for travel documentation, including training regarding how to ensure deposits are refunded to federal awards.

University of Mississippi Response: UM agreed to reimburse NSF for \$64,775 in inadequately supported service expenses and other direct costs but disagreed with the \$5,000 in questioned recruiting service expenses. Specifically:

- With regard to the \$5,000 in questioned June 2018 recruiting services charged to NSF Award No. [REDACTED] UM noted that it understands the reasoning for the questioned costs, but disagrees with the finding. Specifically, UM stated that, although the electronic form used for the payment was entitled “Payment for Services of Consultant/Contractor”, because this expense was for a stipend payment to an undergraduate participant in the NSF Research Opportunities for Undergraduate Students program, the cost should be allowable. Additionally, UM noted that it will consider renaming the form to delineate payment classification options more clearly in the future.

Auditors’ Additional Comments: Although UM believes that the \$5,000 in questioned service expenses should be allowable, our position regarding this finding has not changed. Specifically:

- With regard to the \$5,000 in questioned June 2018 recruiting services charged to NSF Award No. [REDACTED] because UM did not provide documentation to support the purpose of, or amount of, the payment, our position regarding this finding has not changed.

FINDING 2: INAPPROPRIATELY ALLOCATED EXPENSES

UM did not always allocate expenses to NSF awards based on the relative benefits the awards received, as required by both federal regulations⁹ and NSF PAPPGs.¹⁰ As a result, UM inappropriately charged two NSF awards for a total of \$34,688 in inappropriately allocated purchases near grant expiration date and publication costs.

Inappropriately Allocated Purchases Near Grant Expiration

UM charged one NSF award for \$18,000 in purchases made near the award’s expiration date, when UM had little or no time to use the purchases to benefit the award, as illustrated in Table 6.

⁹ According to 2 CFR 220 Appendix A, Section C.4, and 2 CFR § 200.405, *Allocable costs*, (a), a cost is allocable to a particular cost objective (i.e., a specific function, project, sponsored agreement, department, or the like) if the goods or services involved are chargeable or assignable to such cost objective in accordance with relative benefits received (or other equitable relationship).

¹⁰ NSF PAPPGs 13-1, Part II, Chapter V, Section A, *Basic Considerations*, and 18-1, Part II, Chapter X, Section A, *Basic Considerations*, state that grantees should ensure all costs charged to NSF awards meet the requirements of the applicable federal cost principles, grant terms and conditions, and any other specific requirements of both the award notice and the applicable program solicitation.

Table 6: Inappropriately Allocated Purchases Near Grant Expiration

| Expense Date | NSF Award No. | Amount Charged | Percent Allocable | Amount Inappropriately Allocated | Notes |
|----------------|---------------|----------------|---------------------|----------------------------------|-------|
| July 2019 | ██████████ | \$6,624 | Unable to Determine | \$6,624 | a |
| September 2019 | ██████████ | 11,376 | Unable to Determine | 11,376 | b |

Source: Auditor summary of identified exceptions.

- a) In July 2019, UM charged NSF Award No. ██████████ for \$6,624 in expenses incurred to purchase a rotary evaporator. Although UM claimed the evaporator was used to benefit this award, because the equipment was not received until 89 days before the grant’s greater than 6-year POP expired, it does not appear reasonable that 100 percent of this expense was allocable to this NSF award.
- b) In September 2019, UM charged NSF Award No. ██████████ for \$11,376 in expenses incurred to purchase chemicals. Although UM claimed the chemicals were used to perform grant related experiments, because the chemicals were not received until 13 days before the grant expired, it does not appear reasonable that 100 percent of this expense was allocable to this award.

Inappropriately Allocated Publication Costs

UM charged one NSF award for \$16,688 in publication costs that UM did not allocate based on the relative benefits received by each project that sponsored the published research,¹¹ as illustrated in Table 7.

Table 7: Inappropriately Allocated Publication Costs

| Expense Date | Amount Charged | NSF Award No. | Funding Sources Referenced/ Acknowledged | Percent Allocable | Amount Inappropriately Allocated | Notes |
|---------------|----------------|---------------|---|---------------------|----------------------------------|-------|
| June 2019 | \$12,308 | ██████████ | NSF Award No. ██████████ NSF Award No. ██████████ | Unable to Determine | \$12,308 | a |
| November 2019 | 4,380 | ██████████ | NSF Award No. ██████████ NSF Award No. ██████████ ██████████ Grant | Unable to Determine | 4,380 | b |

Source: Auditor summary of identified exceptions.

- a) In June 2019, UM charged NSF Award No. ██████████ for \$12,308 in expenses incurred for 100 percent of the publication costs UM paid to publish three research

¹¹ According to 2 CFR § 200.461, *Publication and printing costs*, (b), charges for professional journal publications are allowable where: (1) the publications report work supported by the federal government; and (2) the charges are levied impartially on all items published by the journal, regardless of whether they are under a federal award.

articles that each acknowledged two sources of funding as having contributed to the published research.

- b) In November 2019, UM charged NSF Award No. [REDACTED] for \$4,380 in expenses incurred for 100 percent of the publication costs UM paid to publish a research article that acknowledged three sources of funding as having contributed to the published research.

Conclusion

UM did not have sufficient policies and procedures or internal controls in place to ensure that it reasonably allocated costs incurred based on the relative benefits each NSF award received. Specifically, UM did not require personnel to verify and/or justify that costs associated with equipment/materials purchased near a grant’s expiration date and costs incurred to publish research articles were appropriately allocated to all funding sources that benefitted from the costs incurred.

We are therefore questioning \$34,688 of inappropriately allocated expenses charged to two NSF awards which UM agreed to reimburse to NSF, as illustrated in Table 8.

Table 8: Finding 2 Summary: Inappropriately Allocated Expenses

| NSF Award No. | Description | Fiscal Year(s) | Questioned Costs | | | UM Agreed to Reimburse |
|---------------|-----------------------------|----------------|------------------------|------------------------|------------------------|------------------------|
| | | | Direct | Indirect | Total | |
| [REDACTED] | July 2019 Rotary Evaporator | 2020 | \$4,600 | \$2,024 | \$6,624 | \$6,624 |
| [REDACTED] | September 2019 Chemicals | 2020 | 7,900 | 3,476 | 11,376 | 11,376 |
| [REDACTED] | June 2019 Publication | 2019 | 8,430 | 3,878 | 12,308 | 12,308 |
| [REDACTED] | November 2019 Publication | 2020 | 3,000 | 1,380 | 4,380 | 4,380 |
| Total | | | <u>\$23,930</u> | <u>\$10,758</u> | <u>\$34,688</u> | <u>\$34,688</u> |

Source: Auditor summary of identified exceptions.

Recommendations

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

- 2.1 Direct UM to provide documentation supporting that it has repaid or otherwise credited the \$34,688 in questioned material and publication costs for which UM has agreed to reimburse NSF.
- 2.2 Direct UM to strengthen its administrative and management controls and processes for supporting the allocation of expenses to sponsored projects. Updated processes could include:

- Requiring Principal Investigators or other designated staff to both document and justify the allocation methodologies used when charging expenses to sponsored projects near their grant expiration dates.
- Implementing a standard documentation and retention process to support the allocation of costs that benefit multiple awards.

2.3 Direct UM to provide training on how to assess and document the methodology used to allocate publication costs across each sponsored award acknowledged in the publication.

University of Mississippi Response: UM agreed to reimburse NSF for the \$34,688 in costs questioned within this finding and noted that it will strengthen its directives and reviews of purchases, specifically those that occur at the end of an award period, for allocability.

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

FINDING 3: UNALLOWABLE EXPENSES

UM charged nine NSF awards a total of \$25,488 in expenses incurred for materials and supplies, lodging, publication, and participant support expenses that are unallowable per federal regulations¹² and NSF PAPPGs.¹³

Unallowable Materials and Supplies

UM charged three NSF awards for \$13,941 in expenses incurred for unallowable materials and supplies, as illustrated in Table 9.

Table 9: Unallowable Materials and Supplies

| Expense Date | NSF Award No. | Unallowable Amount | Unallowable Expenses Associated With | Notes |
|---------------------|---------------|--------------------|--------------------------------------|----------|
| May 2019 | ██████ | \$1,622 | Unallowable Office Supplies | a |
| February-March 2020 | ██████ | 9,043 | Purchase Made After the Award's POP | b |
| February 2021 | ██████ | 3,276 | General Purpose Supplies | c |

Source: Auditor summary of identified exceptions.

¹² According to 2 CFR 220, Appendix A, Sections C.2., C.3., and C.4.d.(4), and 2 CFR § 200.403, *Factors affecting allowability of costs*, for a cost to be allowable, it must be adequately documented, necessary, and reasonable for the performance of the federal award. See [Appendix E](#) of this report for additional factors affecting the allowability of costs.

¹³ NSF PAPPGs 11-1 and 13-1, Part II, Chapter V, Section A, *Basic Considerations*, and 17-1 and 19-1, Part II, Chapter X, Section A, *Basic Considerations*, state grantees should ensure all costs charged to NSF awards meet the requirements of the applicable federal cost principles, grant terms and conditions, and any other specific requirements of both the award notice and the applicable program solicitation.

- a) In May 2019, UM charged NSF Award No. [REDACTED] for \$1,622 in expenses incurred to purchase office supplies that it deemed unallowable upon further review as a result of this audit.
- b) Between February and March 2020, UM charged NSF Award No. [REDACTED] for \$9,043 in expenses incurred to purchase chemicals after the award's POP expired on January 31, 2020.¹⁴
- c) In February 2021, UM charged NSF Award No. [REDACTED] for \$3,276 in expenses incurred to purchase replacement batteries for uninterruptible power supplies that were not purchased to support this award but rather to benefit the general network/infrastructure of the PI's lab, which is used for sponsored and non-sponsored activities.

Unallowable Lodging Expenses

UM did not limit lodging reimbursements to the lodging rates identified by the General Services Administration (GSA) as required by UM's *Lodging Travel Policy*.¹⁵ As a result, UM charged six NSF awards for \$7,377 in expenses incurred for unallowable lodging as illustrated in Table 10.

Table 10: Unallowable Lodging Expenses

| Expense Date | NSF Award No. | Lodging Rate Utilized | GSA Lodging Rate | Unallowable Lodging | Notes |
|---------------|---------------|-----------------------|------------------|---------------------|-------|
| May 2018 | [REDACTED] | \$189 | \$119 | \$480 | a |
| May 2018 | [REDACTED] | 389 | 253 | 436 | b |
| May 2018 | [REDACTED] | 329 | 119 | 1,536 | c |
| June 2018 | [REDACTED] | 263 | 186 | 337 | d |
| February 2019 | [REDACTED] | 319 | 105 | 2,685 | e |
| | | 170 | 105 | | |
| April 2019 | [REDACTED] | 332 | 122 | 1023 | f |
| October 2020 | [REDACTED] | 169 | 96 | 880 | g |
| | | 179 | 96 | | |
| | | 189 | 96 | | |

Source: Auditor summary of identified exceptions.

- a) In May 2018, UM charged NSF Award No. [REDACTED] for \$480 in unallowable lodging expenses claimed by the award's PI while attending a conference in [REDACTED] [REDACTED] as a result of reimbursing lodging at a rate of \$189 per night, rather than the \$119 GSA rate for the 4-night stay.¹⁶

¹⁴ According to NSF PAPPG 17-1, Part II, Chapter X, Section A.2.c, *Post-End Date Costs*, NSF funds may not be expended after the end date of the grant.

¹⁵ According to UM's *Lodging Travel Policy*, travelers traveling out of state on official business always request the government rate.

¹⁶ Lodging was reimbursed at a rate of \$222.08 per night [\$189 (nightly rate) + \$14.18 (sales tax) + \$18.90 (occupancy tax)], which was \$82.25 higher than the allowable rate of \$139.83 per night [\$119 (nightly rate) + \$8.93 (sales tax) + \$11.90 (occupancy tax)] for 4 nights. As such, \$480 [\$82.25 * 4 nights * 1.46 (to apply indirect costs)] of the amount charged to the award was unallowable.

- b) In May 2018, UM charged NSF Award No. [REDACTED] for \$436 in unallowable lodging expenses claimed by one of the award's consultants while traveling to [REDACTED] as a result of reimbursing lodging at a rate of \$389 per night, rather than the \$253 GSA rate for the 3-night stay.¹⁷
- c) In May 2018, UM charged NSF Award No. [REDACTED] for \$1,536 in unallowable lodging expenses claimed by a traveler to [REDACTED] as a result of reimbursing lodging at a rate of \$329 per night, rather than the \$119 GSA rate for the 5-night stay.¹⁸
- d) In June 2018, UM charged NSF Award No. [REDACTED] for \$337 in unallowable lodging expenses claimed by the award's PI while traveling to [REDACTED] as a result of reimbursing lodging at a rate of \$263 per night, rather than the \$186 GSA rate for the 3-night stay.¹⁹
- e) In February 2019, UM charged NSF Award No. [REDACTED] for \$2,685 in unallowable lodging expenses claimed by the PI and a participant traveling to [REDACTED] as a result of reimbursing lodging at a rate of \$319²⁰ and \$170²¹ per night, respectively, rather than the \$105 GSA rate for the 6-night stay.
- f) In April 2019, UM charged NSF Award No. [REDACTED] for \$1,023 in unallowable lodging expenses claimed by the award's PI while traveling to [REDACTED] as a

¹⁷ Lodging was reimbursed at a rate of \$415.45/night [\$389.10 (nightly rate) + \$22.95 (facility fee) + \$3.40 (facility tax)], which was \$145.32 higher than the allowable rate of \$270.13/night [\$253 (nightly rate) + \$14.92 (facility fee) + \$2.21 (facility tax)] for 3 nights. As such, \$436 (\$145.32 * 3 nights) of the amount charged to the award was unallowable.

¹⁸ Lodging was reimbursed at a rate of \$463.20/night [\$329.40 (nightly rate) + \$133.80 (various fees)] which was \$210.40 higher than the allowable rate of \$252.80/night [\$119 (nightly rate) + \$133.80 (various fees)] for 5 nights. As such, \$1,536 [\$210.40 * 5 nights * 1.46 (to apply indirect costs)] of the amount charged to the award was unallowable.

¹⁹ Lodging was reimbursed at a rate of \$316.20/night [\$263.12 (nightly rate) + \$53.08 (various fees)] which was \$77.12 higher than the allowable rate of \$239.08/night [\$186 (nightly rate) + \$53.08 (various fees)] for 3 nights. As such, \$337 [\$77.12 * 3 nights * 1.46 (to apply indirect costs)] of the amount charged to the award was unallowable.

²⁰ Lodging was reimbursed at a rate of \$352.41/night [\$318.54 (nightly rate) + \$13.11 (state tax) + \$20.76 (city tax)] which was \$236.25 higher than the allowable rate of \$116.16/night [\$105 (nightly rate) + \$4.32 (state tax) + \$6.84 (city tax)] for 6 nights. As such, \$2,041[\$236.25 * 6 nights * 1.44 (to apply indirect costs)] of the amount charged to the award was unallowable.

²¹ Lodging was reimbursed at a rate of \$195.82/night [\$169.54 (nightly rate) + \$10.17 (state tax) + \$16.11 (city tax)] which was \$74.54 higher than the allowable rate of \$121.28/night [\$105 (nightly rate) + \$6.30 (state tax) + \$9.98 (city tax)] for 6 nights. As such, \$644 [\$74.54 * 6 nights * 1.44 (to apply indirect costs)] of the amount charged to the award was unallowable.

result of reimbursing lodging at a rate of \$332 per night, rather than the \$122 GSA rate for the 3-night stay.²²

- g) In October 2020, UM charged NSF Award No. [REDACTED] for \$880 in unallowable lodging expenses incurred by participants traveling to [REDACTED] [REDACTED] as a result of reimbursing lodging at a rate of \$169-\$189 per night, rather than the \$96 GSA rate for the 10-night stay.²³

Unallowable Publication Costs

UM charged one NSF award for \$4,015 in expenses incurred to publish an article that did not acknowledge the NSF award charged, as required for the publication expense to be allowable per federal regulations²⁴ and the NSF PAPPG,²⁵ as illustrated in Table 11.

Table 11: Unallowable Publication Costs

| Expense Date | Publication Expense | Funding Sources Acknowledged in Publication | Funding Sources Charged for Expense | Notes |
|---------------|---------------------|--|-------------------------------------|-------|
| February 2020 | \$4,015 | NSF Award No. [REDACTED] NSF Award No. [REDACTED] | NSF Award No. [REDACTED] | a |

Source: Auditor summary of identified exception.

- a) In February 2020, UM charged NSF Award No. [REDACTED] for \$4,015 in expenses incurred for 100 percent of the publication costs UM incurred to publish a research article that only acknowledged funding received under NSF Award Nos. [REDACTED] and [REDACTED]

Unallowable Rebudgeting of Participant Support Cost Funding

UM rebudgeted \$155 of participant support funding on one NSF Award without obtaining prior NSF approval, as required for the rebudgeting to be allowable per the NSF PAPPG,²⁶ as illustrated in Table 12.

²² Lodging was reimbursed at a rate of \$415.63/night [\$332.44 (nightly rate) + \$35 (resort charge) + \$4.38 (room tax) + \$2 (destination marketing fee) + \$41.81 (room tax)] which was \$236.75 higher than the allowable rate of \$178.88/night [\$122 (nightly rate) + \$35 (resort charge) + \$4.38 (room tax) + \$2 (destination marketing fee) + \$15.50 (room tax)] for 3 nights. As such, \$1,023 [\$236.75 * 3 nights * 1.44 (to apply indirect costs)] of the amount charged to the award was unallowable.

²³ Lodging was reimbursed at rates of \$195.66/night [\$169 (nightly rate) + \$26.66 (various fees)] for 8 nights, \$207.06/night [\$179 (nightly rate) + \$28.06 (various fees)] for 1 night, and \$218.46/night [\$189 (nightly rate) + \$29.46 (various fees)] for 1 night which was \$84.61, \$96.01, and \$107.41, respectively, higher than the allowable rate of \$111.05/night [\$96 (nightly rate) + \$15.05 (various fees)] for 10 nights. As such, \$880 [(\$84.61 * 8 nights) + \$96.01 + \$107.41] of the amount charged to the award was unallowable.

²⁴ According to 2 CFR § 200.461, *Publication and printing costs*, (b), charges for professional journal publications are allowable where the publications report work supported by the federal government.

²⁵ NSF PAPPG 19-1, Part II, Chapter XI, Section E.4.a, *Grantee Obligations*, states that the grantee is responsible for assuring that an acknowledgement of NSF support is made in any publication of any materials developed under an NSF project.

²⁶ NSF PAPPG 11-1, Part II, Chapter V, Section B.8.a.(ii), *Participant Support Costs*, states that funds provided for participant support may not be used by grantees for other categories of expense without specific prior written approval of the cognizant NSF Program Officer.

Table 12: Unallowable Rebudgeting of Participant Support Cost Funding

| NSF Award No. | Participant Support Funds Awarded | Participant Support Costs Incurred | Rebudgeted Participant Funds | Notes |
|---------------|-----------------------------------|------------------------------------|------------------------------|-------|
| ██████████ | \$68,655 | \$68,500 | \$155 | a |

Source: Auditor summary of identified exception.

- a) Although the original budget for NSF Award No. ██████████ included \$68,655 in funding to support NSF award participants, UM only charged \$68,500 to the account it established to track participant support costs. Accordingly, UM inappropriately used \$155 in participant support cost funding to support non-participant expenses.

Conclusion

UM did not have sufficient policies and procedures or internal controls in place to ensure it only charged allowable costs to NSF awards. Specifically, UM's procedures did not always ensure that it charged NSF awards for materials and supplies, lodging, publication, and participant support costs in a manner consistent with federal guidance, NSF award terms and conditions, and UM policies and procedures.

We are therefore questioning \$25,488 of unallowable expenses charged to nine NSF awards. UM concurred with \$16,738 of the questioned costs but disagreed with the remaining \$8,750, as illustrated in Table 13.

Table 13: Finding 3 Summary: Unallowable Expenses

| NSF Award No. | Description | Fiscal Year(s) | Questioned Costs | | | UM Agreed to Reimburse |
|---------------|--------------------------------|----------------|------------------------|-----------------------|------------------------|------------------------|
| | | | Direct | Indirect | Total | |
| ██████████ | May 2019 Supplies | 2019 | 1,126 | 496 | 1,622 | 1,622 |
| ██████████ | February 2020 Chemicals | 2020 | 3,675 | 955 | 4,630 | 4,630 |
| ██████████ | March 2020 Chemicals | 2020 | 3,502 | 911 | 4,413 | 4,413 |
| ██████████ | February 2021 Batteries | 2021 | 2,244 | 1,032 | 3,276 | - |
| ██████████ | May 2018 Lodging | 2018 | 329 | 151 | 480 | - |
| ██████████ | May 2018 Lodging | 2018 | 436 | - | 436 | - |
| ██████████ | May 2018 Lodging | 2018 | 1,052 | 484 | 1,536 | - |
| ██████████ | June 2018 Lodging | 2018 | 231 | 106 | 337 | - |
| ██████████ | February 2019 Lodging | 2019 | 1,865 | 820 | 2,685 | - |
| ██████████ | April 2019 Lodging | 2019 | 710 | 313 | 1,023 | 1,023 |
| ██████████ | October 2020 Lodging | 2021 | 880 | - | 880 | 880 |
| ██████████ | February 2020 Publication | 2020 | 2,750 | 1,265 | 4,015 | 4,015 |
| ██████████ | Rebudgeted Participant Support | N/A | 155 | - | 155 | 155 |
| Total | | | <u>\$18,955</u> | <u>\$6,533</u> | <u>\$25,488</u> | <u>\$16,738</u> |

Source: Auditor summary of identified exceptions.

Recommendations

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

- 3.1. Resolve the \$8,750 in questioned materials and supplies and lodging expenses for which UM has not agreed to reimburse NSF and direct UM to repay or otherwise remove the sustained questioned costs from its NSF awards.
- 3.2. Direct UM to provide documentation supporting that it has repaid or otherwise credited the \$16,738 in questioned materials and supplies, lodging, publication, and participant support costs for which it has agreed to reimburse NSF.
- 3.3. Direct UM to implement additional controls or procedures that ensure costs incurred after an award's period of performance has expired are not charged to NSF awards.
- 3.4. Direct UM to strengthen its administrative and management processes and procedures surrounding lodging reservations. Specifically, UM should implement additional pre-travel requirements that ensure travelers are reserving rooms at lodging rates that are at or below the General Services Administration rates, as required by UM's *Lodging Travel Policy*.
- 3.5. Direct UM to establish clear guidance regarding the allowability of publication expenses on sponsored projects, including the requirement to acknowledge NSF funding sources.
- 3.6. Direct UM to update its grant close out procedures to require that appropriate personnel verify all participant support cost funds were used to cover participant support cost expenses.

University of Mississippi Response: UM agreed to reimburse NSF for \$16,738 in unallowable expenses but disagreed with the remaining \$8,750 in questioned costs. Specifically:

- With regard to the \$3,276 in questioned February 2021 batteries charged to NSF Award No. [REDACTED] UM disagreed with the finding as it does not believe the batteries should be considered general purpose expenses. Specifically, UM stated that the university does not consider these batteries a general purpose expenditure as they are a working part of a piece of equipment necessary for project completion. Additionally, UM stated that this expense consisted of replacement batteries that were necessary for continuity within the lab and that they were used to replace batteries that were purchased with departmental funds.
- With regard to the \$5,474 in questioned lodging expenses charged to NSF Award Nos. [REDACTED] [REDACTED] [REDACTED] [REDACTED] and [REDACTED] UM did not state whether it agreed or disagreed with the finding. Rather, UM stated that while no

formal documentation exists to confirm whether a government rate was requested, because it believes the amount charged appears to be a reasonable, it would like consideration to approve the expenses.

Auditors' Additional Comments: Although UM believes that the \$8,750 in questioned materials and lodging expenses should be allowable, our position regarding this finding has not changed. Specifically:

- With regard to the \$3,276 in questioned February 2021 batteries charged to NSF Award No. [REDACTED] as the purchase and installation of the batteries were not made specifically to benefit the NSF award, but to benefit the PI's lab which does not solely support NSF Award No. [REDACTED] activities, our position regarding this finding has not changed.
- With regard to the \$5,474 in questioned lodging expenses charged to NSF Award Nos. [REDACTED] [REDACTED] [REDACTED] [REDACTED] and [REDACTED] because UM charged lodging costs to NSF awards that did not comply with its internal policies, our position regarding this finding has not changed.

FINDING 4: NON-COMPLIANCE WITH UM POLICIES

UM did not always comply with—or did not always document its compliance with—its equipment, travel, subaward, and consultant policies and procedures when incurring expenses charged to NSF awards.

Non-Compliance with UM Equipment Policy

UM did not maintain a UM Non-Availability of Equipment Form to support that it appropriately performed an equipment screening prior to purchasing new equipment as requirement by its *Equipment Screening Policy*,²⁷ as illustrated in Table 14.

Table 14: Non-Compliance with UM Equipment Policy

| Expense Date | NSF Award No. | Equipment Screening Policy Compliance Exception | Notes |
|---------------|---------------|---|----------|
| February 2021 | [REDACTED] | Internal Screening Not Maintained | a |

Source: Auditor summary of identified exception.

- UM did not provide documentation to support appropriate performance of an internal equipment screening to ensure that light scattering equipment was not otherwise available on-campus prior to purchasing \$5,203 in light scattering equipment charged to NSF Award No. [REDACTED] in February 2021.

Non-Compliance with UM Travel Policy

²⁷ According to UM's *Equipment Screening Policy* Section 4, *Equipment Screening*, if the equipment is not available either within the department or within the University, evidence of internal screening should be documented on the University of Mississippi Non-Availability of Equipment Form.

UM did not comply with its internal travel policies and procedures, which require that Waiver Request Forms be completed prior to incurring non-standard travel costs²⁸ and that travel advances be reconciled within 10 days after the end of month the trip was taken in,²⁹ as illustrated in Table 15.

Table 15: Non-Compliance with UM Travel Policy

| Expense Date | NSF Award No. | Travel Policy Compliance Exception | Notes |
|----------------|---------------|------------------------------------|-------|
| January 2020 | ██████████ | Untimely Waiver Request Form | a |
| September 2020 | ██████████ | Late Travel Advance Reconciliation | b |

Source: Auditor summary of identified exceptions.

- a) UM charged NSF Award No. ██████████ for the award’s PI to travel and work with an offsite collaborator in January 2020. However, the traveler did not complete a Waiver Request Form for forgoing standard airfare booking procedures until April 2020.
- b) Although the PI of NSF Award No. ██████████ received a travel advance prior to performing fieldwork that concluded in January 2020, UM did not reconcile the PI’s travel advance until the PI submitted their expense report in September 2020.

Non-Compliance with UM Subaward Policy

UM did not always comply with its internal subaward policies and procedures, which require the PI to submit a Request to Issue Subcontract Form before UM approves a subaward,³⁰ and complete a certification when closing out a subcontract,³¹ as illustrated in Table 16.

Table 16: Non-Compliance with UM Subaward Policy

| NSF Award No. | Subaward Policy Compliance Exception | Notes |
|---------------|---|-------|
| ██████████ | Request to Issue Subcontract Not Completed | a |
| ██████████ | Subcontract Close-Out Certification Not Completed | b |
| ██████████ | Subcontract Close-Out Certification Not Completed | c |

Source: Auditor summary of identified exceptions.

- a) The PI of NSF Award No. ██████████ did not complete a Request to Issue Subcontract/Subcontract Modification Form to support a subaward agreement UM

²⁸ Per UM’s *Waiver Request Policy*, the Waiver Request Form is required to request a waiver from any standard travel procedures and should be done prior to making any reservations or commitments.

²⁹ UM’s *Travel Advances Policy* stipulates that travel advances are to be reconciled within 10 days after the end of the month in which the travel was completed.

³⁰ Per UM’s *Subaward Processes and Procedures Handbook* Section 4, *Issuing the Subaward*, after the awarding agency has approved the selection of a subrecipient, the PI initiates the issuance of a subaward by completing a UM Request to Issue Subcontract/Subcontract Modification Form.

³¹ Per UM’s *Subaward Processes and Procedures Handbook* Section 7, *Subcontract Close-out Procedure*, when the PI determines that the subcontractor has met all subcontract requirements (i.e., all reports have been received), personnel must submit the Subcontract Close-Out Certification Form to the Office of Research and Sponsored Programs accountant.

executed with the University of [REDACTED] in March 2019 prior to performing work under NSF Award No. [REDACTED]

- b) UM did not complete a Subcontract Close-Out Certification Form to support appropriate close-out of a subaward agreement executed with [REDACTED] University in August 2015 that ended in July 2020 under NSF Award No. [REDACTED]
- c) UM did not complete a Subcontract Close-Out Certification Form to support appropriate close-out of a subaward agreement executed with [REDACTED] University beginning in October 2015 that ended in July 2020 under NSF Award No. [REDACTED]

Non-Compliance with UM Consultant Policy

UM did not appropriately extend the POP for a 5th year of service with one of its consultants, as required by UM’s *Payment for Personal Services as a Consultant or Independent Contractor Policy*,³² as illustrated in Table 17.

Table 17: Non-Compliance with UM Consultant Policy

| Expense Date | NSF Award No. | Consultant Policy Compliance Exception | Notes |
|---------------|---------------|--|-------|
| December 2019 | [REDACTED] | Extension Not Executed | a |

Source: Auditor summary of identified exception.

- a) UM charged NSF Award No. [REDACTED] for \$18,000 in expenses incurred for services provided by [REDACTED] from August 2019 through July 2020 related to UM’s Established Program to Stimulate Competitive Research (EPSCoR) program in its 5th year. Although an agreement was executed for the first 4 years of the program, a modification was not enacted to extend the consultant’s services for the 5th year.

Conclusion

UM did not have sufficient policies and procedures or internal controls in place to ensure that it consistently complied with its equipment, travel, and subaward policies and procedures.

Because these instances of non-compliance did not directly result in UM charging unallowable costs to NSF awards, we are not questioning any costs for these exceptions; however, we are noting seven instances of non-compliance with UM policies when charging costs to five NSF awards, as illustrated in Table 18.

Table 18: Finding 4 Summary: Non-Compliance with UM Policies

| NSF Award No. | Compliance Exception Identified | Fiscal Year(s) |
|---------------|-----------------------------------|----------------|
| [REDACTED] | Internal Screening Not Maintained | 2020 |

³² According to UM’s *Payment for Personal Services as a Consultant or Independent Contractor Policy*, a consulting relationship must be conducted under a Consulting Agreement negotiated and approved by the Office of Research and Sponsored Programs.

| NSF Award No. | Compliance Exception Identified | Fiscal Year(s) |
|---------------|---|----------------|
| | | 2018 |
| | Late Travel Advance Reconciliation | 2021 |
| | | 2019 |
| | Subcontract Close-Out Certification Not Completed | 2021 |
| | | 2021 |
| | Extension Not Executed | 2020 |

Source: Auditor summary of identified exceptions.

Recommendations

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

- 4.1 Direct UM to strengthen its administrative and management procedures regarding its equipment purchase process to ensure personnel verify, and document that they verified, that equipment is not otherwise available on-campus prior to purchasing new equipment.
- 4.2 Direct UM to provide annual training for employees on travel requirements and compliance to ensure travelers timely complete any applicable Waiver Request Forms reconcile travel advances as appropriate.
- 4.3 Direct UM to require annual trainings for Principal Investigators who execute and monitor subawardees to ensure that UM appropriately completes the Request to Issue Subcontract Form prior to charging subawardee costs to NSF awards and, at the end of the subaward's period of performance, appropriately completes and certifies to close-out of active subawards.
- 4.4 Direct UM to implement internal controls to flag invoices submitted by consultants with expired agreements post-expiration of the executed agreement.

University of Mississippi Response: UM noted that it agreed with the exceptions related to non-compliance with its internal travel policies; however, it did not state whether it agreed or disagreed with the exceptions related to non-compliance with its internal equipment, subaward, and consultant policies. Specifically:

- With regard to the exception with its internal equipment policy, UM stated that the Equipment Availability Form was completed after the equipment purchase had been made rather than prior to purchase a result of remote work being performed during the Coronavirus Disease 2019 (COVID-19) pandemic.
- With regard to the internal subaward policy exception identified for NSF Award No. [REDACTED] UM stated that due to remote work during the COVID-19 pandemic, the subaward agreement was completed via email correspondence rather than UM's normal request. With regard to the exceptions surrounding its internal subaward policy related to NSF Award No. [REDACTED] UM stated that due to remote work

during the COVID-19 pandemic, the subaward closeout forms were not completed in a timely manner.

- With regard to the exception surrounding its internal consultant policy, UM stated that on August 5, 2019, NSF provided the PI with a directive to continue the utilization of the vendor as a sole source, therefore a formal agreement was not considered necessary or required.

Auditors' Additional Comments: While UM did not state whether it agreed or disagreed with the majority of this finding, our position regarding this finding has not changed. Specifically:

- With regard to the exception surrounding its internal equipment policy, as the Equipment Availability Form was not completed until after the equipment purchase had been made, as required by UM policy, our position regarding this finding has not changed.
- With regard to the exceptions surrounding its internal subaward policy, as the PI did not complete a Request to Issue Subcontract/Subcontract Modification Form to initiate the issuance of the subaward, and as the Subcontract Close-Out Certification Form was not submitted to the Office of Research and Sponsored Programs accountant in a timely manner, our position regarding this finding has not changed.
- With regard to the exception surrounding its internal consultant policy, although NSF may have directed the PI to continue the utilization of the vendor as a sole source, because a consulting agreement should have been negotiated and approved by the Office of Research and Sponsored Programs to comply with UM policy, our position regarding this finding has not changed.

AREA FOR IMPROVEMENT: APPLYING PROPOSED INDIRECT COST RATES

UM does not have a formal policy or procedure in place to ensure it consistently applies indirect costs using the NICRA rate(s) in effect as of the NSF award date or documents its determination to apply its proposed indirect cost rate.

As a result, UM applied the 44 percent indirect cost rate³³ effective at the time six NSF grants were proposed without documenting that it verified its use of the proposed indirect cost rates would not result in indirect costs being overcharged to the NSF award, as illustrated in Table 20.

³³ UM's NICRA dated September 12, 2011, established a predetermined indirect cost rate of 44 percent for on-campus organized research from July 1, 2012, to June 30, 2015. The provisional rate was in place from July 1, 2015, to until amended. Subsequently, UM's NICRA dated June 30, 2016, established a final indirect cost rate of 44 percent for on-campus organized research from July 1, 2015, to June 30, 2016; and 46 percent for on-campus organized research from July 1, 2016, to June 30, 2020.

Table 19: Proposed Indirect Cost Rates Applied

| NSF Award Number | Award Date | Fiscal Year(s) | Rate Applied (%) | Appropriate Rate (%) |
|------------------|------------|----------------|------------------|----------------------|
| | 7/31/2015 | 2017-2020 | 44 | 46 |
| | | | | 46 |
| | 8/11/2015 | 2017-2020 | 44 | 46 |
| | | | | 46 |
| | 7/5/2016 | 2017-2020 | 44 | 46 |
| | 9/9/2016 | 2017-2020 | 44 | 46 |

Source: Auditor summary of UM’s application of proposed indirect cost rates.

Conclusion

Because UM was able to demonstrate its leadership made the decision to not apply its newly negotiated higher rates, and because these instances of UM applying indirect costs at proposed rates did not directly result in charging unallowable costs to NSF awards, we are not noting a finding. However, we are noting an area for improvement as UM’s lack of a formal process and/or procedure for applying proposed indirect cost rates could cause it to charge unallowable costs to NSF awards if rates were to decrease in the future.

Consideration

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

- Directing UM to develop formal policies/procedures regarding how to verify—and how to document verification of—its election to use proposed indirect cost rates will not result in NSF being overcharged for indirect costs when negotiated rates decrease between the date an NSF award is proposed and the date it is awarded.

University of Mississippi Response: UM did not state whether it agreed or disagreed with the area for improvement related to applying proposed indirect cost rates. UM stated that it provided an email directive when a new NICRA went into effect. Additionally, UM stated that it plans to develop a formal policy related to the application of indirect cost rates.

Auditors’ Additional Comments: Our position regarding this area for improvement has not changed.

COTTON & COMPANY ASSURANCE AND ADVISORY, LLC



Megan Mesko, CPA, CFE
 Partner
 November 10, 2022

APPENDIX A: UNIVERSITY OF MISSISSIPPI'S RESPONSE



October 27, 2022

Cotton & Company LLC
333 John Carlyle Street, Suite 200
Alexandria, VA 22314

Attention: Megan Mesko, CPA, CFE

Ms. Mesko,

The University of Mississippi (UM) appreciated the opportunity to work with you on behalf of the National Science Foundation (NSF) Office of Inspector General to examine the university's NSF award administration and compliance. UM feels all external reviews are an opportunity for continued improvement that can positively impact all research activities within our realm of responsibility. Through this effort, we are in the process of working diligently to not only find resolutions to the current findings but to assure improvements in future compliance.

UM is in the process of reimbursing NSF for \$116,200.16 of award costs, however, we do not agree with \$13,750.24 of questioned costs as indicated within the following table of responses.

We have appreciated your professionalism and directives during this process.

Sincerely,


Josh Gladden, PhD
Vice Chancellor of Research and Sponsored Programs

cc: Melissa Hodge-Penn, EdD, Assistant Vice Chancellor of Research and Sponsored Programs
Joy T. Shideler, EdD, CPA, CRA, Controller
Russell D. Shaw, CPA, Director of Accounting
Renita L. Gray, CRA, Manager of Sponsored Programs Accounting

OFFICE OF THE VICE CHANCELLOR FOR RESEARCH

313 Lyceum | Post Office Box 1848 | University, MS 38677-1848 | (662) 915-7583 | Fax: (662) 915-5202 | www.olemiss.edu

**National Science Foundation (NSF) Audit Findings and Comment
University of Mississippi (UM) Responses, October 27, 2022**

Finding 1: Inadequately Supported Expenses

| NSF Award Number | Unallowable Total | UM Response |
|-------------------------|--------------------------|---|
| ██████████ | \$ 5,000. | UM Disagrees with this finding, yet understands the reasoning for the questioned cost. The electronic form used for this payment is entitled "Payment for Services of Consultant/Contractor", yet is used internally for other types of non-employee payments. This cost was for a stipend payment to an undergraduate participant in the NSF Research Opportunities for Undergraduate Students program. Since this is a student not enrolled within UM, the payment was for program participation and not for a consultant service. UM will consider renaming the form to more clearly delineate payment classification options. |
| ██████████ | \$ 6552. | UM Is currently processing reimbursement to NSF. UM will strengthen our controls on contractual payment requirements via additional directives regarding what constitutes contemporaneous documentation. |
| ██████████ | \$ 3,761. | UM Is currently processing reimbursement to NSF. UM will strengthen our controls on contractual payment requirements via additional directives regarding what constitutes contemporaneous documentation. |
| ██████████ | \$ 8,640. | UM Is currently processing reimbursement to NSF. UM will strengthen our controls on contractual payment requirements via additional directives regarding what constitutes contemporaneous documentation. |
| ██████████ | \$ 6,658. | UM Is currently processing reimbursement to NSF. UM will strengthen our controls on contractual payment requirements via additional directives regarding what constitutes contemporaneous documentation. |
| ██████████ | \$ 4,550. | UM Is currently processing reimbursement to NSF. UM will strengthen our controls on contractual payment requirements via additional directives regarding what constitutes contemporaneous documentation. |
| ██████████ | \$ 28,127. | UM Is currently processing reimbursement to NSF. UM will strengthen our controls on contractual payment requirements via additional directives regarding what constitutes contemporaneous documentation. |

| | | |
|------------|-----------|--|
| ██████████ | \$ 720. | UM is currently processing reimbursement to NSF. We cannot verify if a formal request for the damage deposit was requested or if the deposit was withheld due to sandy conditions within the ██████████ upon exit. |
| ██████████ | \$ 5,767. | UM is currently processing reimbursement to NSF. UM will strengthen our controls on contractual payment requirements via additional directives regarding what constitutes contemporaneous documentation. |

Finding 2: Inappropriately Allocated Purchases

| NSF Award Number | Unallowable Total | UM Response |
|------------------|-------------------|--|
| ██████████ | \$ 6,624 | UM is currently processing reimbursement to NSF. UM will strengthen our directives and reviews of allocable purchases at the end of an award period. |
| ██████████ | \$ 11,376. | UM is currently processing reimbursement to NSF. UM will strengthen our directives and reviews of allocable purchases at the end of an award period. |
| ██████████ | \$ 12,308. | UM is currently processing reimbursement to NSF. UM will strengthen our directives and reviews of allocable purchases. |
| ██████████ | \$ 4,380. | UM is currently processing reimbursement to NSF. UM will strengthen our directives and reviews of allocable purchases. |

Finding 3: Unallowable Expenses

| NSF Award Number | Unallowable Total | UM Response |
|------------------|-------------------|---|
| ██████████ | \$ 1,622 | UM reimbursed NSF on 06/06/2022. UM provided additional training to the PI on the allowability of grant-related purchases. |
| ██████████ | \$ 9,043. | UM is currently processing reimbursement to NSF. UM will strengthen our directives and reviews of post-award purchases. |
| ██████████ | \$ 3,276. | UM disagrees with the supposition of this finding. These are not considered general-purpose expenditures by the university as they are a working part of the piece of equipment. The replacement batteries were necessary for continuity within the lab and were used to replace those purchased with departmental funds. It is labor-intensive and not cost-effective to measure battery usage. The university attests to the fact the batteries were necessary for the completion of the scope of work. |

| | | |
|--------|-----------|--|
| ██████ | \$480. | No formal documentation exists to confirm whether a government rate was requested, however, the amount appears to be a reasonable conference rate. We respectfully request consideration to approve this expense. |
| ██████ | \$ 436. | No formal documentation exists to confirm whether a government rate was requested, however, the amount appears to be a reasonable conference rate. We respectfully request consideration to approve this expense. |
| ██████ | \$ 1,536. | No formal documentation exists to confirm whether a government rate was requested, however, the amount appears to be a reasonable conference rate. We respectfully request consideration to approve this expense. |
| ██████ | \$ 337 | No formal documentation exists to confirm whether a government rate was requested, however, the amount appears to be a reasonable conference rate. We respectfully request consideration to approve this expense. |
| ██████ | \$ 2,685 | No formal documentation exists to confirm whether a government rate was requested, however, the amount of student group rooms appears to be a reasonable conference rate. We respectfully request consideration to approve this expense. |
| ██████ | \$ 1,023. | No formal documentation exists to confirm whether a government rate was requested, however, UM agrees the non-student room was not a reasonable conference room rate and therefore is in the process of refunding NSF for this expense. |
| ██████ | \$ 880. | No formal documentation exists to confirm whether a government rate was requested. Since the travel was not part of a formal conference, we cannot determine if more reasonable accommodations were available. UM is in the process of refunding NSF for this expense. |
| ██████ | \$ 4,015. | UM is in the process of reimbursing NSF for this charge due to the publication acknowledgments failing to mention this award. |
| ██████ | \$ 155. | UM is in the process of reimbursing NSF for this charge and will provide a reminder to research administration staff to review budgets separately by direct support and participant support costs instead of in total. |

Finding 4: Non-compliance with UM Policies

| NSF Award Number | Compliance Exception | UM Response |
|------------------|----------------------|---|
| ██████ | Equipment Policy | Due to remote work during COVID-19 the equipment availability form was completed after the fact instead of prior to purchase. This is not a normal occurrence within the university. |
| ██████ | Travel Policy | UM agrees with this finding and will provide further reminders and directives to travel staff to request waiver request forms when required. |
| ██████ | Travel Policy | UM agrees with this finding and will provide further reminders and directives to travel staff to request a PI reconciliation of travel advance funds. |
| ██████ | Subaward Policy | Due to remote work during COVID-19 the agreement was completed via email correspondence instead of the normal request. This is not a normal occurrence within the university. |
| ██████ | Subaward Policy | Due to remote work during COVID-19 the closeout forms were not completed in a timely fashion. This is not a normal occurrence within the university. |
| ██████ | Subaward Policy | Due to remote work during COVID-19 the closeout forms were not completed in a timely fashion. This is not a normal occurrence within the university. |
| ██████ | Consultant Policy | On August 5, 2019, NSF provided the PI with a directive to continue the utilization of this vendor as a sole source as indicated by the statement, "to make it clear that you are required, per the Programmatic Terms and Conditions of your award, to use the ██████ for the entirety of the project term, including the NCE" (no cost extension), therefore a formal agreement was not considered necessary or required. |

Comment: Areas of Improvement

| Improvement Item | UM Response |
|------------------------------------|--|
| Application of Indirect Cost Rates | UM provided an email directive when a new NICRA went into effect. UM plans to develop a formal policy related to the application of indirect cost rates. |

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 UM’s award management environment; to determine if costs claimed on NSF awards are 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 \$10.3 million in expenses UM claimed on 58 NSF awards during our audit POP of June 1, 2018, to May 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 UM provided by comparing the costs charged to NSF awards per UM’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 UM and NSF OIG. NSF OIG provided the award data that UM reported through ACM\$ during our audit period.
 - We assessed the reliability of the GL data that UM provided by: (1) comparing the costs charged to NSF awards per UM’s accounting records to the reported net expenditures reflected in the ACM\$ drawdown requests that UM submitted to NSF during the audit survey POP; and (2) reviewing the parameters that UM used to extract transaction data from its accounting systems. As UM’s dataset was able to reconcile to the amounts claimed on its NSF awards, we found UM’s computer-processed data to be sufficiently reliable for the purposes of the audit survey and we did not identify any issues with the parameters that UM 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 FY 2020 found no reportable instances in which NSF's financial management systems did not substantially comply with applicable requirements.

- UM provided detailed transaction-level data to support \$10,321,872 in costs charged to NSF awards during the period, which reconciled to the \$10,321,872 UM claimed in ACM\$ during the audit period. This data resulted in a total audit universe of \$10,321,872 in expenses claimed on 58 NSF awards.
- Obtaining and reviewing all available accounting and administrative policies and procedures, external audit reports, desk review reports, and other relevant information UM and NSF OIG provided, as well as any other relevant information that was available online.
- Summarizing our understanding of federal, NSF, and UM-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 UM's internal controls, within the audit's scope, solely to understand the directives or policies and procedures UM has in place to ensure that charges against NSF awards complied with relevant federal regulations, NSF award terms, and UM policies.
- Evaluating the strengths and weaknesses of the policies and procedures that UM has in place to control the inherent, fraud, and control risks identified for each budget category.
- Providing UM with a list of 45 transactions that we selected based on the results of our data analytics and requesting that UM provide documentation to support each transaction.
- Reviewing the supporting documentation UM 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,³⁴

³⁴ We assessed UM's compliance with 2 Code of Federal Regulations (CFR) Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, and 2 CFR Part 220, Cost Principles for Educational Institutions (OMB Circular A-21), as appropriate.

NSF,³⁵ and UM policies.³⁶

- Holding virtual interviews and walkthroughs with UM in September 2021 to discuss payroll (including effort reporting), fringe benefits, travel, participant support costs, procurement, equipment (including an inventory check), Graduate Research Fellowship Program (GRFP), 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 audit survey phase, we determined that we should perform further audit procedures that included:

- Conducting additional data analytics, evaluating the results of the analytics, and re-running analytical tests, as necessary.
- Selecting an additional audit sample of 41 transactions.
- Conducting additional fieldwork, which included providing the list of 41 transactions to UM and requesting and reviewing supporting documentation until we had obtained sufficient, appropriate evidence to enable us to assess the allowability of each sampled transaction.
- Conducting additional audit work in four areas to evaluate whether UM: (1) appropriately executed consultant agreements; (2) appropriately spent participant support funding; (3) appropriately charged salary expenses related to idle salary supplied under Office of Management and Budget (OMB) Memorandum M-20-26; and (4) appropriately charged lodging expenses consistent with UM policies and under the appropriate threshold.

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 UM personnel to ensure that UM

³⁵ We assessed UM's compliance with NSF Proposal and Award Policies and Procedures Guides (PPAPPGs) 11-1, 13-1, 14-1, 15-1, 16-1, 17-1, 18-1, and 19-1 and with NSF award-specific terms and conditions, as appropriate.

³⁶ We assessed UM's compliance with internal UM policies and procedures surrounding costs budgeted for or charged to NSF awards.

was aware of each of our findings and that it did not have additional documentation to support the questioned costs.

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

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 | Inadequately Supported Expenses | \$0 | \$69,775 | \$69,775 |
| | | | | 34,688 |
| 3 | Unallowable Expenses | - | 25,488 | 25,488 |
| | | | | - |
| 5 | Insufficient Controls Related to the Application of Indirect Cost Rates | - | - | - |
| Total | | <u>\$0</u> | <u>\$129,951</u> | <u>\$129,951</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 | UM Agreed to Reimburse |
|---------------|-------------------------------|-------------------------|---------------------------|-------------------------|-------------------------|
| ██████████ | 2 | \$591 | \$0 | \$591 | \$155 |
| ██████████ | 3 | 13,626 | 5,996 | 19,622 | 19,622 |
| ██████████ | 1 | 3,950 | 1,817 | 5,767 | 5,767 |
| ██████████ | 5 | 2,575 | 1,133 | 3,708 | 1,023 |
| ██████████ | 1 | 2,612 | 1,149 | 3,761 | 3,761 |
| ██████████ | 1 | 880 | - | 880 | 880 |
| ██████████ | 1 | 6,000 | 2,640 | 8,640 | 8,640 |
| ██████████ | 1 | 500 | 220 | 720 | 720 |
| ██████████ | 2 | 4,488 | 2,064 | 6,552 | 6,552 |
| ██████████ | 3 | 7,475 | 1,138 | 8,613 | - |
| ██████████ | 1 | 1,052 | 484 | 1,536 | - |
| ██████████ | 1 | 329 | 151 | 480 | - |
| ██████████ | 1 | 3,500 | 1,050 | 4,550 | 4,550 |
| ██████████ | 2 | 7,177 | 1,866 | 9,043 | 9,043 |
| ██████████ | 2 | 11,430 | 5,258 | 16,688 | 16,688 |
| ██████████ | 1 | 2,750 | 1,265 | 4,015 | 4,015 |
| ██████████ | 1 | - | - | - | - |
| ██████████ | 1 | 4,560 | 2,098 | 6,658 | 6,658 |
| ██████████ | 2 | 19,265 | 8,862 | 28,127 | 28,127 |
| ██████████ | 1 | - | - | - | - |
| Total | <u>33</u> | <u>\$92,760</u> | <u>\$37,191</u> | <u>\$129,951</u> | <u>\$116,201</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 | UM Agreed to Reimburse |
|---------------------------------------|---------------------------|--|----------------|--------|----------|--------|------------------------|
| 1) Inadequately Supported Expenses | ██████ | June 2018 Recruiting Services | 2018 | 5,000 | - | 5,000 | - |
| | ██████ | September 2018 Lab Testing Services | 2019 | 4,488 | 2,064 | 6,552 | 6,552 |
| | ██████ | May 2019 Sample Analysis Services | 2019 | 2,612 | 1,149 | 3,761 | 3,761 |
| | ██████ | January 2020 Services | 2020 | 6,000 | 2,640 | 8,640 | 8,640 |
| | ██████ | June 2020 Genotyping Services | 2020 | 4,560 | 2,098 | 6,658 | 6,658 |
| | ██████ | June 2020 Workshop Facilitation Services | 2020 | 3,500 | 1,050 | 4,550 | 4,550 |
| | ██████ | July 2020 Services | 2021 | 19,265 | 8,862 | 28,127 | 28,127 |
| | ██████ | August 2018 Lodging | 2019 | 500 | 220 | 720 | 720 |
| | ██████ | November 2019 Materials and Supplies | 2020 | 3,950 | 1,817 | 5,767 | 5,767 |
| 2) Inappropriately Allocated Expenses | ██████ | July 2019 Rotary Evaporator | 2020 | 4,600 | 2,024 | 6,624 | 6,624 |
| | ██████ | September 2019 Chemicals | 2020 | 7,900 | 3,476 | 11,376 | 11,376 |
| | ██████ | June 2019 Publication | 2019 | 8,430 | 3,878 | 12,308 | 12,308 |
| | ██████ | November 2019 Publication | 2020 | 3,000 | 1,380 | 4,380 | 4,380 |
| 3) Unallowable Expenses | ██████ | May 2019 Supplies | 2019 | 1,126 | 496 | 1,622 | 1,622 |
| | ██████ | February 2020 Chemicals | 2020 | 3,675 | 955 | 4,630 | 4,630 |
| | ██████ | March 2020 Chemicals | 2020 | 3,502 | 911 | 4,413 | 4,413 |
| | ██████ | February 2021 Batteries | 2021 | 2,244 | 1,032 | 3,276 | - |
| | ██████ | May 2018 Lodging | 2018 | 329 | 151 | 480 | - |
| | ██████ | May 2018 Lodging | 2018 | 436 | - | 436 | - |
| | ██████ | May 2018 Lodging | 2018 | 1,052 | 484 | 1,536 | - |
| | ██████ | June 2018 Lodging | 2018 | 231 | 106 | 337 | - |
| | ██████ | February 2019 Lodging | 2019 | 1,865 | 820 | 2,685 | - |
| | ██████ | April 2019 Lodging | 2019 | 710 | 313 | 1,023 | 1,023 |
| | ██████ | October 2020 Lodging | 2021 | 880 | - | 880 | 880 |
| ██████ | February 2020 Publication | 2020 | 2,750 | 1,265 | 4,015 | 4,015 | |

| | | | | | | | |
|------------------------------------|--------------|---|------|-----|------------------------|------------------------|-------------------------|
| | ██████ | Rebudgeted Participant Support | N/A | 155 | - | 155 | 155 |
| 4) Non-Compliance with UM Policies | ██████ | Internal Screening Not Maintained | 2020 | - | - | - | - |
| | ██████ | Untimely Waiver Request Form | 2018 | - | - | - | - |
| | ██████ | Late Travel Advance Reconciliation | 2021 | - | - | - | - |
| | ██████ | Request to Issue Subcontract Not Completed | 2019 | - | - | - | - |
| | ██████ | Subcontract Close-Out Certification Not Completed | 2021 | - | - | - | - |
| | ██████ | Subcontract Close-Out Certification Not Completed | 2021 | - | - | - | - |
| | ██████ | Extension Not Executed | 2020 | - | - | - | - |
| | Total | | | | <u>\$92,760</u> | <u>\$37,191</u> | <u>\$129,951</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. Resolve the \$5,000 in questioned inadequately supported service expenses for which UM has not agreed to reimburse NSF and direct UM to repay or otherwise remove the sustained questioned costs from its NSF awards.
- 1.2. Direct UM to provide documentation supporting that it has repaid or otherwise credited the \$64,775 in questioned service, materials and supplies, and lodging expenses for which it has agreed to reimburse NSF.
- 1.3. Direct UM to strengthen its policies and procedures related to creating and retaining documentation, including introducing additional internal controls to help ensure that it appropriately creates and maintains all documentation necessary to support the allowability of expenses charged to sponsored programs. These additional internal controls could include:
 - Updating its current external service provider procedures to require that UM establishes formal agreements with external service providers which identify the period of performance, scope of work, compensation rate(s), and applicable terms and conditions when providing services that are greater than \$5,000.
 - Updating its current purchasing policies and procedures to ensure appropriate personnel review service and materials and supplies invoices to verify expenses are invoiced at approved rate(s) prior to charging the expenses to federally-sponsored awards.
 - Providing additional training regarding requirements for travel documentation, including training regarding how to ensure deposits are refunded to federal awards.
- 2.1 Direct UM to provide documentation supporting that it has repaid or otherwise credited the \$34,688 in questioned material and publication costs for which UM has agreed to reimburse NSF.
- 2.2 Direct UM to strengthen its administrative and management controls and processes for supporting the allocation of expenses to sponsored projects. Updated processes could include:
 - Requiring Principal Investigators or other designated staff to both document and justify the allocation methodologies used when charging expenses to sponsored projects near their grant expiration dates.
 - Implementing a standard documentation and retention process to support the allocation of costs that benefit multiple awards.

- 2.3 Direct UM to provide training on how to assess and document the methodology used to allocate publication costs across each sponsored award acknowledged in the publication.
- 3.1. Resolve the \$8,750 in questioned materials and supplies and lodging expenses for which UM has not agreed to reimburse NSF and direct UM to repay or otherwise remove the sustained questioned costs from its NSF awards.
- 3.2. Direct UM to provide documentation supporting that it has repaid or otherwise credited the \$16,738 in questioned materials and supplies, lodging, publication, and participant support costs for which it has agreed to reimburse NSF.
- 3.3. Direct UM to implement additional controls or procedures that ensure costs incurred after an award's period of performance has expired are not charged to NSF awards.
- 3.4. Direct UM to strengthen its administrative and management processes and procedures surrounding lodging reservations. Specifically, UM should implement additional pre-travel requirements that ensure travelers are reserving rooms at lodging rates that are at or below the General Services Administration rates, as required by UM's *Lodging Travel Policy*.
- 3.5. Direct UM to establish clear guidance regarding the allowability of publication expenses on sponsored projects, including the requirement to acknowledge NSF funding sources.
- 3.6. Direct UM to update its grant close out procedures to require that appropriate personnel verify all participant support cost funds were used to cover participant support cost expenses.
- 4.1 Direct UM to strengthen its administrative and management procedures regarding its equipment purchase process to ensure personnel verify, and document that they verified, that equipment is not otherwise available on-campus prior to purchasing new equipment.
- 4.2 Direct UM to provide annual training for employees on travel requirements and compliance to ensure travelers timely complete any applicable Waiver Request Forms reconcile travel advances as appropriate.
- 4.3 Direct UM to require annual trainings for Principal Investigators who execute and monitor subawardees to ensure that UM appropriately completes the Request to Issue Subcontract form prior to charging subawardee costs to NSF awards and, at the end of the subaward's period of performance, appropriately completes and certifies to close-out of active subawards.

4.4 Direct UM to implement internal controls to flag invoices submitted by consultants with expired agreements post-expiration of the executed agreement.

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

- Directing UM to develop formal policies/procedures regarding how to verify—and how to document verification of—its election to use proposed indirect cost rates will not result in NSF being overcharged for indirect costs when negotiated rates decrease between the date an NSF award is proposed and the date it 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.

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

Return to the term's initial use.

Factors affecting allowability of costs. The tests of allowability of costs under these principles are: they must be reasonable; they must be allocable to sponsored agreements under the principles and methods provided herein; they must be given consistent treatment through application of those generally accepted accounting principles (GAAP) appropriate to the circumstances; and they must conform to any limitations or exclusions set forth in these principles or in the sponsored agreement as to types or amounts of cost items. (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.

Consultant Services (Professional Service costs). This refers to costs of professional and consultant services rendered by persons who are members of a particular profession or possess a special skill, and who are not officers or employees of the non-federal entity, which are allowable, subject to paragraphs (b) and (c) when reasonable in relation to the

services rendered and when not contingent upon recovery of the costs from the federal government.

In determining the allowability of costs in a particular case, no single factor or any special combination of factors is necessarily determinative; however, the following factors are relevant:

- 1) The nature and scope of the service rendered in relation to the service required.
- 2) The necessity of contracting for the service, considering the non-federal entity's capability in the particular area.
- 3) The past pattern of such costs, particularly in the years prior to federal awards.
- 4) The impact of federal awards on the non-federal entity's business.
- 5) Whether the proportion of federal work to the non-federal entity's total business is such as to influence the non-federal entity in favor of incurring the cost, particularly where the services rendered are not of a continuing nature and have little relationship to work under federal awards.
- 6) Whether the service can be performed more economically by direct employment rather than contracting.
- 7) The qualifications of the individual or concern rendering the service and the customary fees charged, especially on non-federally funded activities.
- 8) Adequacy of the contractual agreement for the service (e.g., description of the service, estimate of time required, rate of compensation, and termination provisions). (2 CFR § 200.459).

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

Equipment. Tangible personal property—including information technology (IT) systems—having a useful life of more than 1 year and a per-unit acquisition cost which equals or exceeds the lesser of the capitalization level established by the non-federal entity for financial statement purposes, or \$5,000 (2 CFR § 200.33).

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

Fringe Benefits. Allowances and services provided by employers to their employees as compensation in addition to regular salaries and wages. Fringe benefits include, but are not limited to, the costs of leave (vacation, family-related, sick, or military), employee insurance, pensions, and unemployment benefit plans. Except as provided elsewhere in these principles, the costs of fringe benefits are allowable provided that the benefits are reasonable and are required by law, non-federal entity-employee agreement, or an establishment policy of the non-federal entity.

Leave is the cost of fringe benefits in the form of regular compensation paid to employees during periods of authorized absences from the job, such as for annual leave, family-related leave, sick leave, holidays, court leave, military leave, administrative leave, and other similar benefits, are allowable if all of the following criteria are met:

- 1) They are provided under established written leave policies.
- 2) The costs are equitably allocated to all related activities, including federal awards.
- 3) The accounting basis (cash or accrual) selected for costing each type of leave is consistently followed by the non-federal entity or specified grouping of employees. (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 19-1).

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

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

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

Salaries and Wages. Compensation for personal services includes all remuneration, paid currently, or accrued, for services of employees rendered during the POP under the federal award, including but not necessarily limited to wages and salaries. Costs of compensation are allowable to the extent that they satisfy the specific requirements of this Part, and that the total compensation for individual employees:

- (1) Is reasonable for the services rendered and conforms to the established written policy of the non-federal entity consistently applied to both federal and non-federal activities.
- (2) Follows an appointment made in accordance with a non-federal entity's laws or rules or written policies and meets the requirements of federal statute, where applicable.
- (3) Is determined and supported as provided in Standards for Documentation of Personnel Expenses, when applicable. (2 CFR § 200.430) and (2 CFR § 220, Appendix A, Section J.10).

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

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

[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).

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



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