Performance Audit of Incurred Costs – University of Vermont and State Agricultural College

REPORT PREPARED BY COTTON & COMPANY ASSURANCE AND ADVISORY, LLC

October 24, 2023
OIG 24-1-001
AUDIT OBJECTIVE

The National Science Foundation Office of Inspector General engaged Cotton & Company Assurance and Advisory, LLC (C&C) to conduct a performance audit of costs that the University of Vermont and State Agricultural College (UVM) incurred on 49 NSF awards during the period of October 1, 2019, to September 30, 2022. The auditors tested approximately $1.3 million of the more than $27.7 million of costs claimed during the period. The audit objective was to determine if costs claimed by UVM on NSF awards were allowable, allocable, reasonable, and in compliance with NSF award terms and conditions and federal financial assistance requirements. A description of the audit’s objective, scope, and methodology is attached to the report as Appendix B.

AUDIT RESULTS

The report highlights concerns about UVM’s compliance with certain federal and NSF award requirements, NSF award terms and conditions, and UVM policies. The auditors questioned $30,717 of costs claimed by UVM during the audit period. Specifically, the auditors found $19,422 of inadequately supported internal service expenses, $7,596 of inappropriately allocated equipment expenses, and $3,699 of unallowable participant support costs. The auditors also identified one finding related to non-compliance with UVM’s cost transfer policy for which there were no questioned costs. In addition to the four findings, the audit report includes one area for improvement for UVM to consider related to insufficient controls over the application of indirect cost rates. C&C is responsible for the attached report and the conclusions expressed in it. NSF OIG does not express any opinion on the conclusions presented in C&C’s audit report.

RECOMMENDATIONS

The auditors included four findings and one area for improvement in the report with associated recommendations for NSF to direct UVM to provide documentation supporting that it repaid or otherwise credited the questioned costs and to ensure UVM strengthens administrative and management controls.

AUDITEE RESPONSE

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

DATE: October 24, 2023

TO: Quadira Dantro
   Director
   Division of Institution and Award Support

   Jamie French
   Director
   Division of Grants and Agreements

FROM: Theresa S. Hull
   Assistant Inspector General for Audits

SUBJECT: Report No. 24-1-001, University of Vermont and State Agricultural College

This memorandum transmits the Cotton & Company Assurance and Advisory, LLC (C&C) report for the audit of costs charged by the University of Vermont and State Agricultural College (UVM) to 49 NSF awards during the period of October 1, 2019, to September 30, 2022. The audit encompassed approximately $1.3 million of the more than $27.7 million of costs claimed to NSF during the period. The audit objective was to determine if costs claimed by UVM on NSF awards were allowable, allocable, reasonable, and in compliance with NSF award terms and conditions and federal financial assistance requirements. A full description of the audit's objective, scope, and methodology is attached to the report as Appendix B.

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

OIG Oversight of the Audit

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

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

We thank your staff for the assistance that was extended to the auditors during this audit. If you have any questions regarding this report, please contact Jae Kim at 703-292-7100 or OIGpublicaffairs@nsf.gov.

Attachment

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

The Cotton & Company Assurance and Advisory, LLC audit team determined that the University of Vermont and State Agricultural College (UVM) needs improved oversight of the allocation and documentation of expenses charged to NSF awards to ensure costs claimed are reasonable, allocable, and allowable in accordance with all federal and NSF regulations, NSF award terms and conditions, and UVM policies and procedures. Specifically, the audit report includes four findings, one area for improvement, and a total of $30,717 in questioned costs.

AUDIT OBJECTIVES

The National Science Foundation Office of Inspector General engaged Cotton & Company Assurance and Advisory, LLC (herein referred to as “we”), to conduct a performance audit of costs UVM claimed during the period of October 1, 2019, to September 30, 2022. The audit objectives included evaluating UVM’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 UVM’s compliance with 2 Code of Federal Regulations (CFR) 200 (versions effective 12/26/2014 and 11/12/2020); NSF Proposal and Award Policies and Procedures Guides (PAPPGs) 15-1, 16-1, 17-1, 18-1, 19-1, 20-1, and 22-1; NSF award terms and conditions; and UVM 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 $30,717 of direct and indirect costs UVM inappropriately claimed during the audit period, including:

- $19,422 of inadequately supported internal service expenses
- $7,596 of inappropriately allocated equipment expenses
- $3,699 of unallowable participant support costs

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

- Non-compliance with UVM’s cost transfer policy

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

- Insufficient controls related to the application of indirect cost rates

RECOMMENDATIONS

The audit report includes nine recommendations and one consideration for NSF’s Director of the Division of Institution and Award Support related to resolving the $30,717 in questioned costs and ensuring UVM strengthens its award management environment, as summarized in Appendix D.

AUDITEE RESPONSE

UVM generally agreed with the findings in the audit report and agreed to reimburse NSF for $30,717 in questioned costs. UVM’s response is attached, in its entirety, to the report as Appendix A.
BACKGROUND

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

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

NSF OIG engaged Cotton & Company Assurance and Advisory, LLC (herein referred to as “we”), to conduct a performance audit of costs claimed by the University of Vermont and State Agricultural College (UVM). UVM is a public, nonprofit, comprehensive research institution of higher education located in Burlington, Vermont. In fiscal year (FY) 2022, UVM reported approximately $223.3 million in government grants and contracts, with $158.1 million received from federal sources—including NSF—as illustrated in Figure 1.

Figure 1: UVM’s FY 2022 Government Grants and Contracts

Source: The chart data is supported by UVM’s 2022 Independent Auditors’ Report. (https://www.uvm.edu/sites/default/files/Division-of-Finance-Administration/Publications/FY22_Fin_Rpt.pdf)
The photo of UVM’s campus is publicly available on UVM’s website. (https://www.uvm.edu/reslife)
AUDIT SCOPE

This performance audit—conducted under Order No. 140D0422F0887—was designed to meet the objectives identified in the Objectives, Scope, and Methodology section of this report (Appendix B) and was conducted in accordance with Generally Accepted Government Auditing Standards (GAGAS), issued by the Comptroller General of the United States.

The objectives of this performance audit were to evaluate UVM’s award management environment; determine if costs claimed on NSF awards were allowable, allocable, reasonable, and in compliance with relevant federal and NSF regulations; determine whether any further audit work was warranted; and perform any additional audit work, as determined appropriate. Appendix B provides detailed information regarding the audit scope and methodology used for this engagement.

As illustrated in Figure 2, UVM provided general ledger (GL) data to support the $27.7 million in expenses it claimed on 101 NSF awards during our audit period of performance (POP) of October 1, 2019, to September 30, 2022.

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

<table>
<thead>
<tr>
<th>Consultant Services</th>
<th>$217,430</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel</td>
<td>$315,047</td>
</tr>
<tr>
<td>Participant Support Costs</td>
<td>$482,687</td>
</tr>
<tr>
<td>Materials and Supplies</td>
<td>$1,082,051</td>
</tr>
<tr>
<td>Other Direct Costs</td>
<td>$1,347,507</td>
</tr>
<tr>
<td>Equipment</td>
<td>$1,446,288</td>
</tr>
<tr>
<td>Fringe Benefits</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>Subawards</td>
<td>$3,000,000</td>
</tr>
<tr>
<td>Indirect Costs</td>
<td>$4,000,000</td>
</tr>
<tr>
<td>Salaries and Wages</td>
<td>$5,000,000</td>
</tr>
</tbody>
</table>

Source: Auditor analysis of accounting data UVM provided, illustrating the total costs ($27,748,502) by expense type, using financial information to support costs claimed on NSF awards during the audit period. The Other Direct Costs category includes other direct costs, computer services, and publications.

1 The total award-related expenses that UVM reported in its GL exceeded the $27,737,058 UVM claimed in NSF’s Award Cash Management Service (ACM$); however, because the GL data materially reconciled to NSF’s ACM$ records, we determined that the GL data was appropriate for the purposes of this engagement.
We judgmentally selected 49 transactions totaling $1,269,418\(^2\) (see Table 1) and evaluated supporting documentation to determine whether the costs claimed on the NSF awards were allocable, allowable, and reasonable, and whether they were in conformity with NSF award terms and conditions, organizational policies, and applicable federal financial assistance requirements.

Table 1: Summary of Selected Transactions

<table>
<thead>
<tr>
<th>Budget Category</th>
<th>Transaction Count</th>
<th>Expense Amount(^3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment</td>
<td>6</td>
<td>$684,098</td>
</tr>
<tr>
<td>Subawards</td>
<td>3</td>
<td>187,318</td>
</tr>
<tr>
<td>Other Direct Costs</td>
<td>8</td>
<td>155,631</td>
</tr>
<tr>
<td>Consultant Services</td>
<td>7</td>
<td>85,133</td>
</tr>
<tr>
<td>Salaries and Wages</td>
<td>11</td>
<td>70,297</td>
</tr>
<tr>
<td>Participant Support Costs</td>
<td>3</td>
<td>28,470</td>
</tr>
<tr>
<td>Computer Services</td>
<td>4</td>
<td>24,245</td>
</tr>
<tr>
<td>Indirect Costs</td>
<td>2</td>
<td>21,303</td>
</tr>
<tr>
<td>Travel</td>
<td>3</td>
<td>7,986</td>
</tr>
<tr>
<td>Publications</td>
<td>1</td>
<td>2,950</td>
</tr>
<tr>
<td>Fringe Benefits</td>
<td>1</td>
<td>1,987</td>
</tr>
<tr>
<td>Total</td>
<td><strong>49</strong></td>
<td><strong>$1,269,418</strong></td>
</tr>
</tbody>
</table>

Source: Auditor summary of selected transactions.

AUDIT RESULTS

We identified and questioned $30,717 in costs UVM charged to four NSF awards. We also identified expenses UVM charged to two NSF awards that did not result in questioned costs, but did result in non-compliance with federal, NSF, and/or UVM-specific policies and procedures. Finally, we identified one area in which UVM 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

<table>
<thead>
<tr>
<th>Finding Description</th>
<th>Questioned Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequately Supported Internal Service Expenses</td>
<td>$19,422</td>
</tr>
<tr>
<td>Inappropriately Allocated Equipment Expenses</td>
<td>7,596</td>
</tr>
<tr>
<td>Unallowable Participant Support Costs</td>
<td>3,699</td>
</tr>
<tr>
<td>Non-Compliance with UVM’s Cost Transfer Policy</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td><strong>$30,717</strong></td>
</tr>
</tbody>
</table>

Source: Auditor summary of findings identified.

\(^2\) The $1,269,418 represents the total value of the 49 transactions selected for transaction-based testing; it does not represent the dollar base of the total costs reviewed during the audit.

\(^3\) The expense amounts reported represent the total dollar value of the transactions selected for our sample; they do not include the total fringe benefits or indirect costs applied to the sampled transactions. However, we tested the fringe benefits and indirect costs for allowability.
We made nine recommendations and identified one consideration for NSF’s Director of the Division of Institution and Award Support related to resolving the $30,717 in questioned costs and ensuring UVM strengthens its administrative and management procedures for monitoring federal funds. We communicated our audit results and the related findings, area for improvement, recommendations, and consideration to UVM and NSF OIG. We included UVM’s response to this report, in its entirety, as Appendix A.

**FINDING 1: INADEQUATELY SUPPORTED INTERNAL SERVICE EXPENSES**

UVM did not provide adequate documentation to support the allocability, allowability, and reasonableness of $19,422 in internal service expenses charged to two NSF awards during the audit period, as required for the costs to be allowable, per federal regulations and NSF Proposal and Award Policies and Procedures Guides (PAPPGs), as illustrated in Table 3.

<table>
<thead>
<tr>
<th>Expense Date</th>
<th>NSF Award No.</th>
<th>Expense Total</th>
<th>Amount Supported</th>
<th>Amount Inadequately Supported</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 2020</td>
<td></td>
<td>$18,720</td>
<td>$0</td>
<td>$18,720</td>
<td>a</td>
</tr>
<tr>
<td>August 2022</td>
<td></td>
<td>5,850</td>
<td>5,148</td>
<td>702</td>
<td>b</td>
</tr>
</tbody>
</table>

*Source: Auditor summary of identified exceptions.*

a) In February 2020, UVM charged NSF Award No. [redacted] for $18,720 for internal microscope services. The UVM lab managing the microscope charged the award using estimated and unsupported rates. Additionally, UVM did not maintain a log or other documentation to support the number of days and hours the microscope was in use, and UVM noted the costs represented a reasonable usage fee, rather than the actual hours and number of days the microscope was used. Further, the microscope was not a shared instrument at the time of use and did not have a standard usage fee; therefore, UVM calculated the expense using a daily rate that was established for a different microscope in a different lab, rather than an established rate specific to the microscope used for the services.

b) In August 2022, UVM charged NSF Award No. [redacted] for $5,850 for internal laboratory services to produce 15 lab samples in support of the award objectives. Although the sample services benefited the award, the laboratory’s rate sheet

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4 According to 2 Code of Federal Regulations (CFR) § 200.403 (12/26/2014) and 2 CFR § 200.403 (Revised 11/12/2020), *Factors affecting allowability of costs*, (a), for a cost to be allowable, it must be allocable and reasonable for the performance of the federal award. Further, section (g) states that, in order for a cost to be allowable, it must be adequately documented. Additionally, according to 2 CFR § 200.468 (12/26/2014) and 2 CFR § 200.468 (Revised 11/12/2020), *Specialized Service Facilities*, (b), the costs of such services, when material, must be charged directly to applicable awards based on actual usage of the services on the basis of a schedule of rates or established methodology.

5 According to NSF PAPPGs 17-1 and 20-1, Part II, Chapter X, Section A, *Basic Considerations*, grantees should ensure that all costs charged to NSF awards meet the requirements of the cost principles contained in 2 CFR § 200, Subpart E, grant terms and conditions, and the program solicitation.
supported that only $5,148 should have been charged. We are therefore questioning $702 in costs that were not supported based on the internal laboratory’s service rate sheet. 6

Conclusion

UVM did not have sufficient policies, procedures, or internal controls in place to ensure that it created and maintained adequate documentation to support the allowability of all costs charged to federal awards. Specifically, UVM’s policies, procedures, and internal controls did not ensure that its internal service providers maintained a log or other documentation to support the number of days and hours equipment was used, and that all rates used to bill for shared services were verified against approved rate sheets prior to expenses being charged. We are therefore questioning $19,422 charged to two NSF awards because UVM did not support that these costs represented reasonable, allocable, or allowable expenses. UVM agreed to reimburse NSF for the $19,422 in questioned costs, as illustrated in Table 4.

Table 4: Finding 1 Summary: Inadequately Supported Internal Service Expenses

<table>
<thead>
<tr>
<th>NSF Award No.</th>
<th>Description</th>
<th>Fiscal Year</th>
<th>Questioned Costs</th>
<th>Direct</th>
<th>Indirect</th>
<th>Total</th>
<th>UVM Agreed to Reimburse</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>February 2020 Microscope Services</td>
<td>2020</td>
<td>$12,000</td>
<td>$6,720</td>
<td>$18,720</td>
<td></td>
<td>$18,720</td>
</tr>
<tr>
<td></td>
<td>August 2022 Laboratory Services</td>
<td>2023</td>
<td>450</td>
<td>252</td>
<td>702</td>
<td></td>
<td>702</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>$12,450</td>
<td>$6,972</td>
<td>$19,422</td>
<td></td>
<td>$19,422</td>
</tr>
</tbody>
</table>

Source: Auditor summary of identified exceptions.

Recommendations

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

1.1. Direct UVM to provide documentation supporting that it repaid or otherwise credited the $19,422 in questioned internal service expenses for which it has agreed to reimburse NSF.

1.2. Direct UVM to strengthen its policies and procedures to ensure all costs charged as internal services are supported by actual, rather than estimated, usage.

1.3. Direct UVM to strengthen its policies and procedures to ensure all costs charged as internal services are supported by a calculated and approved internal service rate,

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6 The original invoice included a $250 rate for 15 samples for a total cost of $5,850 ($250 * 15 samples = $3,750 * 1.56 indirect cost rate application = $5,850); however, the internal laboratory’s approved rate sheet included a rate of $220, which should have resulted in a cost of $5,148 for 15 samples ($220 * 15 samples = $3,300 * 1.56 indirect cost rate application = $5,148). $5,850 charged – $5,148 supported = $702 in questioned costs.
prior to being charged to NSF awards. This includes only using the approved rates of the specific services being used.

1.4. Direct UVM to implement additional procedures to ensure rates included in internal service invoices are consistent with the internal service rate sheet in effect at the time the cost was incurred.

**University of Vermont Response:** UVM agreed to reimburse NSF for the $19,422 in inadequately supported internal service expenses. Additionally, UVM noted that while it believes it has policies and procedures in place to prevent inappropriate internal service expenses, it intends to further enhance these policies and procedures to avoid similar situations in the future.

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

**FINDING 2: INAPPROPRIATEALLY ALLOCATED EQUIPMENT EXPENSES**

UVM did not always allocate expenses to NSF awards based on the relative benefits the awards received, as required by both federal regulations\(^7\) and the NSF PAPPG.\(^8\) As a result, UVM inappropriately charged one NSF award a total of $7,596 in inappropriately allocated equipment expenses, as illustrated in Table 5.

**Table 5: Inappropriately Allocated Equipment Expenses**

<table>
<thead>
<tr>
<th>Expense Date</th>
<th>NSF Award No.</th>
<th>Amount Charged</th>
<th>Amount Allocable</th>
<th>Amount Inappropriately Allocated</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 2022</td>
<td></td>
<td>$72,481</td>
<td>$64,885</td>
<td>$7,596</td>
<td>a</td>
</tr>
</tbody>
</table>

*Source: Auditor summary of identified exception.*

\(a\) In May 2022, UVM charged NSF Award No. [redacted] for $72,481 in equipment expenses. UVM identified the need to allocate the cost between the NSF award charged and one non-NSF award, as $7,596 of the total $72,481 cost was not allocable to the NSF award charged. However, UVM did not process the adjustment to appropriately allocate the costs to this award until after this transaction was selected as part of our audit.

**Conclusion**

UVM did not have sufficient policies, procedures, or internal controls in place to ensure that it allocated costs incurred based on the relative benefits the NSF award received. Specifically, UVM did not ensure equipment costs were allocated consistent with the

\(^7\) According to 2 CFR § 200.405 (Revised 11/12/2020), *Allocate costs,* (d), if a cost benefits two or more projects or activities by determinable proportions, the cost must be allocated to the projects based on the proportional benefits.

\(^8\) NSF PAPPG 20-1, Part II, Chapter X, Section A, *Basic Considerations,* states that grantees should ensure all costs charged to NSF awards meet the requirements of the cost principles contained in 2 CFR § 200, Subpart E, grant terms and conditions, and any other specific requirements of both the award notice and the applicable program solicitation.
allocation methodology identified at the time the equipment was purchased. We are therefore questioning $7,596 of equipment expenses that UVM inappropriately allocated to one NSF award. UVM agreed to reimburse NSF for the $7,596 in questioned costs, as illustrated in Table 6.

### Table 6: Finding 2 Summary: Inappropriately Allocated Equipment Expenses

<table>
<thead>
<tr>
<th>NSF Award No.</th>
<th>Description</th>
<th>Fiscal Year</th>
<th>Questioned Costs</th>
<th>UVM Agreed to Reimburse</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>May 2022 Equipment</td>
<td>2022</td>
<td>$7,596</td>
<td>$0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>$7,596</td>
<td>$7,596</td>
</tr>
</tbody>
</table>

*Source: Auditor summary of identified exception.*

### Recommendations

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

2.1. Direct UVM to provide documentation supporting that it repaid or otherwise credited the $7,596 in questioned equipment expenses for which it has agreed to reimburse NSF.

2.2. Direct UVM to strengthen its policies and procedures and internal controls for the allocation of equipment expenses charged to sponsored projects. Updated processes could include requiring the Principal Investigators to review and certify that the equipment is charged based on the documented allocation at the time of payment.

### University of Vermont Response

UVM agreed to reimburse NSF for the $7,596 in inappropriately allocated equipment expenses, but disagreed with the finding conclusion that it processed the adjustment to reallocate the questioned costs only when the expense was selected as part of the audit. Specifically, UVM noted that it identified the inappropriately allocated costs during its standard annual financial review, which coincided with the audit. As the NSF award remains open until June 30, 2025, UVM intends to internally review the award costs two more times before closeout and final drawdown of the funds, in order to provide additional opportunities to educate staff on the allowability of costs.

### Auditors’ Additional Comments

Our position regarding this finding has not changed. Regarding UVM’s disagreement that it processed the allocation adjustment due to the expense being selected during the audit, although we agree that UVM originally identified the error in May 2022, because the cost allocation was not corrected until January 2023, after the expense was selected in our audit sample, our position regarding this finding has not changed.
FINDING 3: UNALLOWABLE PARTICIPANT SUPPORT COSTS

UVM charged one NSF award for $3,699 in participant support expenses that did not benefit the award and were therefore unallowable under federal regulations\(^9\) and the NSF PAPPG,\(^10\) as illustrated in Table 7.

Table 7: Unallowable Participant Support Costs

<table>
<thead>
<tr>
<th>Expense Date</th>
<th>NSF Award No.</th>
<th>Expense Total</th>
<th>Allowability of:</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 2019</td>
<td></td>
<td>$3,699</td>
<td>Participant Computer</td>
<td>a</td>
</tr>
</tbody>
</table>

Source: Auditor summary of identified exception.

\(a\) In October 2019, UVM charged NSF Award No. [redacted] for $3,699 in costs incurred to cover the cost of a participant’s computer that UVM noted was incorrectly charged as the computer was not used to benefit the award.

Conclusion

UVM did not have sufficient policies, procedures, or internal controls in place to ensure it only charged allowable costs to NSF awards. Specifically, UVM’s procedures did not always ensure that it only charged NSF awards for expenses that were necessary and benefited the awards. We are therefore questioning $3,699 of unallowable expenses charged to one NSF award. UVM agreed to reimburse NSF for the $3,699 in questioned costs, as illustrated in Table 8.

Table 8: Finding 3 Summary: Unallowable Participant Support Costs

<table>
<thead>
<tr>
<th>NSF Award No.</th>
<th>Description</th>
<th>Fiscal Year</th>
<th>Questioned Costs</th>
<th>UVM Agreed to Reimburse</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>$3,699</strong></td>
<td><strong>$0</strong></td>
</tr>
</tbody>
</table>

Source: Auditor summary of identified exception.

\(^9\) According to 2 CFR § 200.403, Factors affecting allowability of costs, for a cost to be allowable, it must be adequately documented, necessary, and reasonable for the performance of the federal award. See Appendix E of this report for additional factors affecting the allowability of costs.

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

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

3.1 Direct UVM to provide documentation supporting that it repaid or otherwise credited the $3,699 in questioned participant support costs for which it has agreed to reimburse NSF.

3.2 Direct UVM to strengthen its administrative and management processes for ensuring that it only charges participant support expenses to the award(s) that benefit from the purchase.

University of Vermont Response: UVM agreed to reimburse NSF for the $3,699 in unallowable participant support costs. Additionally, UVM noted that the charge resulted from an administrative error and that, going forward, it will provide additional training and outreach to the staff responsible for processing participant expenditures.

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

FINDING 4: NON-COMPLIANCE WITH UVM’S COST TRANSFER POLICY

UVM did not always comply with its cost transfer policy, which requires it to promptly remove all unallowable expenditures once they are identified, when it identified unallowable costs charged to two NSF awards, as illustrated in Table 9.

Table 9: Non-Compliance with UVM’s Cost Transfer Policy

<table>
<thead>
<tr>
<th>NSF Award No.</th>
<th>Fiscal Year</th>
<th>Date Unallowable Expense Was Identified</th>
<th>Date Unallowable Expense Was Removed from Award</th>
<th>Days Between</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2022</td>
<td>10/21/2021</td>
<td>06/01/2023</td>
<td>223</td>
<td>a</td>
</tr>
<tr>
<td></td>
<td>2022</td>
<td>05/27/2022</td>
<td>01/23/2023</td>
<td>241</td>
<td>b</td>
</tr>
</tbody>
</table>

Source: Auditor summary of identified exceptions.

a) In October 2021, UVM identified the need to charge NSF Award No. for $9,714 in legal fees for patent filing services; however, UVM did not process the cost transfer to charge the NSF award until June 2022—or 223 days after it determined the expense should be moved to the award.

b) In May 2022, UVM identified the need for a cost transfer to allocate $72,481 in equipment costs charged to NSF Award No. between the NSF award charged and a non-NSF award; however, UVM did not process the cost transfer to

11 According to UVM’s Policy for Cost Transfers Involving Sponsored Agreements, Identifying Costing Errors, it is the responsibility of Principal Investigators to ensure that verification of financial transactions on their sponsored agreements occurs on a timely basis (at least monthly). A cost transfer for any identified errors shall be processed promptly after an error is discovered. Further, departments must promptly remove all unallowable expenditures once they are identified, regardless of timeframe.
reallocate the costs until January 2023—or 241 days after the cost allocation error was identified, after the transaction was sampled as part out of our audit.

Conclusion

UVM did not have sufficient procedures in place to ensure that cost transfers were appropriately prepared and submitted at the time the need for the cost transfer was identified. We are questioning a portion of the cost charged to NSF Award No. [redacted] as identified in Finding 2. Because one instance of non-compliance did not directly result in UVM charging unallowable costs to NSF awards, we are not questioning any costs related to NSF Award No. [redacted]. We are, however, noting compliance exceptions for the two instances in which UVM did not comply with its internal cost transfer policy when identifying the need to transfer costs between funding sources, as illustrated in Table 10.

Table 10: Finding 4 Summary: Non-Compliance with UVM’s Cost Transfer Policy

<table>
<thead>
<tr>
<th>NSF Award No.</th>
<th>Compliance Exception Identified</th>
<th>Fiscal Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-Compliance with UVM’s Cost Transfer Policy</td>
<td>2022</td>
</tr>
<tr>
<td></td>
<td>Non-Compliance with UVM’s Cost Transfer Policy</td>
<td>2022</td>
</tr>
</tbody>
</table>

Source: Auditor summary of identified exceptions.

Recommendation

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

4.1. Direct UVM to implement procedures or internal controls to track all expenses that require a cost transfer to ensure that expenses are appropriately transferred in a timely manner or when identified as an error.

University of Vermont Response: UVM agreed with this finding; however, it noted that both costs were identified and transferred prior to the auditors’ documentation request—thus demonstrating efficient safeguards to ensure errors are caught and corrected within the project’s POP. Additionally, UVM stated that although it believes it has current internal controls, training, and policies and procedures to oversee federal funds and meet the expectations identified in federal and NSF guidance, it intends to strengthen regulatory compliance through further integration of departmental research administration personnel with the central Sponsored Project Administration office.

Auditors’ Additional Comments: Our position regarding this finding has not changed. Although UVM noted that it identified and transferred these costs prior to when we submitted our audit documentation requests; because the transfers were not processed promptly after the errors were initially discovered, as required by its policy, our position regarding these exceptions has not changed.
Area for Improvement: Insufficient Controls Related to the Application of Indirect Cost Rates

UVM does not have a formally documented policy or procedure in place to ensure it—or its subawardees—consistently charge indirect costs using a rate no greater than the Negotiated Indirect Cost Rate Agreement (NICRA) rate(s) in effect as of the NSF award date. Specifically, UVM does not have a formal process for documenting its decision to apply a proposed indirect cost rate when the proposed rate is different than the NICRA rate(s) effective at the time of award.

As a result, UVM and one of its subawardees did not document that they verified their use of the proposed indirect cost rates would not result in indirect costs being overcharged to the NSF awards, as illustrated in Table 11.

Table 11: Proposed Indirect Cost Rates Applied

<table>
<thead>
<tr>
<th>NSF Award Number</th>
<th>Award Date</th>
<th>Transaction Date</th>
<th>Rate Applied (%)</th>
<th>Appropriate Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1/6/2015\textsuperscript{12}</td>
<td>8/13/2021</td>
<td>52.50</td>
<td>56.00</td>
</tr>
<tr>
<td></td>
<td>2/7/2018\textsuperscript{13}</td>
<td>5/29/2020</td>
<td>38.00</td>
<td>56.00</td>
</tr>
<tr>
<td></td>
<td>9/1/2018\textsuperscript{14}</td>
<td>5/11/2020</td>
<td>38.00</td>
<td>39.00</td>
</tr>
</tbody>
</table>

Source: Auditor summary of identified exceptions.

Conclusion

Because these instances of UVM and a subawardee charging indirect costs using 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 UVM’s lack of a formal process and/or procedure for applying—and allowing its subawardees to apply—proposed indirect cost rates could cause it to charge unallowable costs to NSF awards if UVM’s or its subawardees’ indirect cost rates were to decrease in the future.

Consideration

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

\textsuperscript{12} UVM’s NICRA dated April 21, 2014, did not have predetermined or final rates for a January 2015 award date. As such, the NICRA dated February 24, 2015, established a predetermined indirect cost rate of 52.50 percent for on-campus research from July 1, 2014, to June 30, 2015. Further, the same NICRA established a predetermined indirect cost rate of 56.00 percent for on-campus research from July 1, 2017, to June 30, 2018. The same rate was provisional from July 1, 2018, until amended.

\textsuperscript{13} UVM’s NICRA dated January 19, 2018, established a predetermined indirect cost rate of 56.00 percent for on-campus research from July 1, 2017, to June 30, 2021; and 38.00 percent for on-campus public service from July 1, 2017, to June 30, 2021. UVM switched its classification of the award from public service to research but did not update its indirect cost rate.

\textsuperscript{14} This date represents the effective date of the subaward agreement used to determine the appropriate indirect cost rate in effect per the subawardee’s NICRA. The subawardee’s NICRA dated May 17, 2019, established a predetermined indirect cost rate of 38.00 percent for all programs from July 1, 2018, to June 30, 2019. Further, the same NICRA established a predetermined indirect cost rate of 39.00 percent for all programs from July 1, 2019, to June 30, 2023.
• Directing UVM to develop formal policies and/or procedures regarding how to verify—and document verification of—its election, and its subawardees’ election, to use proposed indirect cost rates. This should address how UVM will ensure the decision 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.

COTTON & COMPANY ASSURANCE AND ADVISORY, LLC

Erin Mooney Meredith, CPA, CFE, CGFM
Partner
October 20, 2023
September 12, 2023

Andrew Holzer
COTTON, A SIKICH COMPANY
333 John Carlyle Street, Suite 500
Alexandria, VA 22314

Dear Mr. Holzer,

This letter is the University’s formal response to address the findings and recommendations outlined in the audit report prepared by Cotton, a Sikich Company, who, on behalf of the National Science Foundation Office of Inspector General, conducted a performance audit of costs incurred by the University of Vermont (UVM) over a three-year period, from October 1, 2019 to September 30, 2022.

UVM would like to thank Cotton and NSF for the opportunity to work together to identify areas of improvement in the University’s sponsored project and fiscal management. UVM values the importance of regulatory, agency and award specific compliance; we are committed to maintaining our existing high standards of internal controls, and strengthening areas specified in the audit, to ensure responsible stewardship of all extramural grant funding awarded to the University.

UVM agrees with all findings listed in the audit report. The corrective plan of action for each is outlined in the next section.

Sincerely,

Lana Metayer, M.S., CFRA
Director, Sponsored Project Administration
Finding 1 Inadequately Supported Internal Service Expenses

<table>
<thead>
<tr>
<th>Expense Date</th>
<th>NSF Award No.</th>
<th>Expense Total</th>
<th>Insufficient Documentation to Support the Allowability of:</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 2020</td>
<td></td>
<td>$18,720</td>
<td>Internal Service Costs</td>
<td>a</td>
</tr>
<tr>
<td>August 2022</td>
<td></td>
<td>702</td>
<td>Internal Service Costs</td>
<td>b</td>
</tr>
</tbody>
</table>

UVM is in the process of removing questioned costs and refunding NSF. This finding does not represent a pattern and UVM believes that it does have appropriate policies and procedures but will further enhance those policies and procedures to avoid similar situations in the future.

UVM provides a variety of trainings to UVM campus to enhance users’ knowledge and understanding of policies and procedures. UVM also has a robust website where information about policies and procedures is made readily available. The chart of accounts training will be enhanced to include language about internal charging.

UVM requires that internal service providers complete a memorandum of understanding before they are allowed to start charging for services. The MOU requires that the units fill out the purpose of the activity, who is responsible for management of the activity, the type of expenses that will be incurred, who will be receiving services, listing of equipment, and rate calculation sheets. The MOUs are reviewed and approved by the Budget Manager, Department Chair, Dean or Director, Provost or VP of Finance and Administration, Budget Director, Controller, Associate Controller, and Tax Administrator. Each year the internal charging activity must submit new rates and justifications for budget building and recertify the MOU. In addition, the internal charging activity must certify their results of operations annually. To enhance this process in the future, language will be added to the MOU creation process to emphasize the importance that correct rates are used to charge grants. In addition, a statement will be added to the annual certification stating that the internal charging activity certifies that it used to correct rates to charge grants.

The University has two journal approval worklists. There is the General Accounting worklist and the Sponsored Project Administration worklist. Internal charge journals are reviewed by General Accounting, Sponsor Project Administration, or both depending on the makeup of the journal lines. General Accounting currently reviews all internal charge journals to ensure that the unit creating the charges is an approved internal charging unit on campus and has completed the MOU process. General Accounting will train Sponsored Project Administrators in this review process. Going forward Sponsored Project Administration will go through the same review process for internal charges as General Accounting and deny any internal charges that are not coming from an established internal charging unit.
Finding 2: Inappropriately Allocated Equipment Expenses

<table>
<thead>
<tr>
<th>Expense Date</th>
<th>NSF Award No.</th>
<th>Amount Charged</th>
<th>Percent Allocable</th>
<th>Amount Inappropriately Allocated</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 2022</td>
<td>[Redacted]</td>
<td>$72,481</td>
<td>89.52%</td>
<td>$7,596</td>
<td>a</td>
</tr>
</tbody>
</table>

UVM has removed the questioned cost from the NSF project and refunded NSF. UVM disagrees with the auditors’ conclusion that UVM processed the adjustment to reallocate the questioned cost only when it was selected as part of the audit. The cost was identified by UVM during the standard annual financial review, which coincided with the audit field work.

UVM has strong internal controls for sponsored expense monitoring that include conducting annual financial reviews of all sponsored projects. The NSF award remains active until 06/30/25 and will be reviewed internally two additional times before closeout and final drawdown of funds, which provides several opportunities to work and educate department administrative staff regarding allowability of costs, as well as identify and correct mistakes.

Finding 3: Unallowable Participant Support Costs

<table>
<thead>
<tr>
<th>Expense Date</th>
<th>NSF Award No.</th>
<th>Expense Total</th>
<th>Allowability of:</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 2019</td>
<td>[Redacted]</td>
<td>$3,699</td>
<td>Participant Computer</td>
<td>a</td>
</tr>
</tbody>
</table>

UVM has removed the questioned cost from the NSF award and refunded NSF. UVM has strong internal controls for managing participant support costs, which are tracked in projects separate from the main award. The questioned charge was the result of an administrative error. Going forward, UVM will provide additional training and outreach to the staff responsible for processing participant expenditures.

Finding 4: Non-Compliance with the UVM Cost Transfer Policy

<table>
<thead>
<tr>
<th>Expense Date</th>
<th>NSF Award No.</th>
<th>Fiscal Year</th>
<th>Policy Compliance Exception</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 2022</td>
<td>[Redacted]</td>
<td>2022</td>
<td>Untimely Cost Transfer Completion</td>
<td>a</td>
</tr>
<tr>
<td>June 2022</td>
<td>[Redacted]</td>
<td>2022</td>
<td>Untimely Cost Transfer Completion</td>
<td>b</td>
</tr>
</tbody>
</table>

SPONSORED PROJECT ADMINISTRATION
217 Waterman Building
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(802)656-3360 • fax: (802)656-9894
www.uvm.edu/spai

Equal Opportunity/Affirmative Action Employer
UVM agrees with the finding. However, the identified NSF awards were still active at the time of the audit review; both costs were identified and transferred by UVM prior to the auditors’ documentation request, thus demonstrating efficient safeguards to ensure errors are caught and corrected within project period of performance.

UVM’s current internal controls, policies, and procedures, coupled with the extensive pre- and post-award education and training programs provide the framework for proper oversight of federal funds and meet the expectations set forth by the Uniform Guidance, the NSF, and other sponsoring agencies.

However, to strengthen regulatory compliance, UVM is in the process of integrating departmental research administration as a component of SPA, the central sponsored project office. Under this model, all pre- and post-award administrators within participating academic units are hired, trained and supervised by central SPA, thus ensuring consistency in skill level, expertise, procedural compliance, and equity of resources across all departmental research administration functions. Among the various process improvement initiatives, as part of this program, is the implementation of quarterly PI/administrator meetings to review sponsored project budgets, effort, and expenditures. The frequency of the meetings will provide PIs and unit administrators multiple opportunities to identify issues and correct them in a timely manner.
APPENDIX B: OBJECTIVES, SCOPE, AND METHODOLOGY
OBJECTIVES

The NSF OIG Office of Audits engaged Cotton & Company Assurance and Advisory, LLC (herein referred to as “we”), to conduct an audit of the costs the University of Vermont and State Agricultural College (UVM) claimed on NSF awards during the audit period of performance (POP) of October 1, 2019, through September 30, 2022. The objectives of the audit were to evaluate UVM’s award management environment; to determine if costs claimed were allowable, allocable, reasonable, and in compliance with NSF award terms and conditions and applicable federal financial assistance requirements; and to determine whether any extraordinary circumstances existed that would justify further audit work beyond the original sample of 40 to 50 transactions.

SCOPE

The audit population included approximately $27.7 million in expenses UVM claimed on 101 NSF awards during our audit POP of October 1, 2019, through September 30, 2022.

METHODOLOGY

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

- Assessing the reliability of the general ledger (GL) data UVM provided by comparing the costs charged to NSF awards per UVM’s accounting records to the reported net expenditures reflected in the Award Cash Management Service (ACM$) drawdown requests.
  - Our work required us to rely on computer-processed data obtained from UVM and NSF OIG. NSF OIG provided award data UVM reported through NSF’s ACM$ during our audit period.
    - We assessed the reliability of the GL data UVM provided by: (1) comparing the costs charged to NSF awards per UVM’s accounting records to the reported net expenditures reflected in the ACM$ drawdown requests UVM submitted to NSF during the audit POP; and (2) reviewing the parameters that UVM used to extract transaction data from its accounting systems. We found UVM’s computer-processed data to be sufficiently reliable for the purposes of the audit. We did not identify any exceptions with the parameters UVM used to extract the accounting data.
    - We found NSF’s computer-processed data to be sufficiently reliable for the purposes of this audit. We did not review or test whether the data contained in NSF’s databases or the controls over NSF’s databases were accurate or reliable; however, the independent auditor’s report on NSF’s financial statements for fiscal year (FY) 2021 found no reportable instances in which NSF’s financial
management systems did not substantially comply with applicable requirements.

- UVM provided detailed transaction-level data to support $27,748,502 in claimed costs charged to NSF awards during the audit period, which was greater than the $27,737,058 UVM claimed in ACM$ for the 101 awards. This data resulted in a total audit universe of $27,748,502 in expenses claimed on 101 NSF awards.

- Obtaining and reviewing all available accounting and administrative policies and procedures, external audit reports, desk review reports, and other relevant information UVM and NSF OIG provided, as well as any other relevant information that was available online.

- Summarizing our understanding of federal, NSF, and UVM-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 UVM’s internal controls within the audit’s scope solely to understand the directives or policies and procedures UVM has in place to ensure that charges against NSF awards complied with relevant federal regulations, NSF award terms and conditions, and UVM policies.

- Providing UVM with a list of 49 transactions that we selected based on the results of our data analytics and requesting that UVM provide documentation to support each transaction.

- Reviewing the supporting documentation UVM 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,\(^\text{15}\) NSF,\(^\text{16}\) and UVM policies.\(^\text{17}\)

- Holding virtual interviews and walkthroughs with UVM in April 2023 to discuss payroll (including fringe benefits and effort reporting), travel, participant support costs, procurement, equipment (including an inventory check), other direct costs (e.g., patent, relocation, recruiting, interest, advertising/public relations, entertainment, fundraising, lobbying, selling/marketing, and training costs),

\(^{15}\) We assessed UVM’s compliance with 2 CFR Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards.

\(^{16}\) We assessed UVM’s compliance with NSF Proposal and Award Policies and Procedures Guides (PAPPGs) 15-1, 16-1, 17-1, 18-1, 19-1, 20-1, and 22-1 and with NSF award-specific terms and conditions, as appropriate.

\(^{17}\) We assessed UVM’s compliance with its own internal policies and procedures surrounding costs budgeted for or charged to NSF awards.
subawards, ACM$ processing, indirect costs, and other general policies (e.g., pre-
and post-award costs, program income, whistle-blower information, research
misconduct, and conflict of interest policies).

- Summarizing the results of our fieldwork and confirming that we did not identify
  any extraordinary circumstances that justified the need for an expanded audit
  phase.\textsuperscript{18}

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 UVM personnel to ensure UVM 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 \textit{Generally Accepted Government
Auditing Standards} (GAGAS), issued by the Comptroller General of the United States. Those
standards require that we plan and perform the audit to obtain sufficient, appropriate
evidence to provide a reasonable basis for our findings and conclusions based on our audit
objectives. We believe that the evidence obtained provides a reasonable basis for our
findings and conclusions based on our audit objectives.

\textsuperscript{18} Based on the areas of elevated risk of noncompliance identified during the initial phase, we determined that
there was no need for an expanded audit phase.
Appendix C, Table 1: Schedule of Questioned Costs by Finding

<table>
<thead>
<tr>
<th>Finding</th>
<th>Description</th>
<th>Unsupported</th>
<th>Unallowable</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Inadequately Supported Internal Service Expenses</td>
<td>$0</td>
<td>$19,422</td>
<td>$19,422</td>
</tr>
<tr>
<td>2</td>
<td>Inappropriately Allocated Equipment Expenses</td>
<td>-</td>
<td>7,596</td>
<td>7,596</td>
</tr>
<tr>
<td>3</td>
<td>Unallowable Participant Support Costs</td>
<td>-</td>
<td>3,699</td>
<td>$3,699</td>
</tr>
<tr>
<td>4</td>
<td>Non-Compliance with UVM’s Cost Transfer Policy</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>$0</strong></td>
<td><strong>$30,717</strong></td>
<td><strong>$30,717</strong></td>
</tr>
</tbody>
</table>

*Source: Auditor summary of questioned costs by finding.*
Appendix C, Table 2: Summary of Questioned Costs by NSF Award Number

<table>
<thead>
<tr>
<th>NSF Award No.</th>
<th>No. of Transaction Exceptions</th>
<th>Questioned Direct Costs</th>
<th>Questioned Indirect Costs</th>
<th>Questioned Total</th>
<th>UVM Agreed to Reimburse</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$3,699</td>
<td>$0</td>
<td>$3,699</td>
<td>$3,699</td>
</tr>
<tr>
<td></td>
<td></td>
<td>450</td>
<td>252</td>
<td>702</td>
<td>702</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12,000</td>
<td>6,720</td>
<td>18,720</td>
<td>18,720</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7,596</td>
<td>-</td>
<td>7,596</td>
<td>7,596</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6</strong></td>
<td><strong>$23,745</strong></td>
<td><strong>$6,972</strong></td>
<td><strong>$30,717</strong></td>
<td><strong>$30,717</strong></td>
</tr>
</tbody>
</table>

*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

<table>
<thead>
<tr>
<th>Finding No.</th>
<th>NSF Award No.</th>
<th>Description</th>
<th>Fiscal Year(s)</th>
<th>Direct</th>
<th>Indirect</th>
<th>Total</th>
<th>UVM Agreed to Reimburse</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Inadequately Supported Internal Service Expenses</td>
<td></td>
<td>February 2020 Microscope Services</td>
<td>2020</td>
<td>$12,000</td>
<td>$6,720</td>
<td>$18,720</td>
<td>$18,720</td>
</tr>
<tr>
<td></td>
<td></td>
<td>August 2022 Laboratory Services</td>
<td>2023</td>
<td>450</td>
<td>252</td>
<td>702</td>
<td>702</td>
</tr>
<tr>
<td>2) Inappropriately Allocated Equipment Expenses</td>
<td></td>
<td>May 2022 Equipment</td>
<td>2022</td>
<td>7,596</td>
<td>-</td>
<td>7,596</td>
<td>7,596</td>
</tr>
<tr>
<td>4) Non-Compliance with UVM’s Cost Transfer Policy</td>
<td></td>
<td>Non-Compliance with UVM’s Cost Transfer Policy</td>
<td>2022</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-Compliance with UVM’s Cost Transfer Policy</td>
<td>2022</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td>$23,745</td>
<td>$6,972</td>
<td>$30,717</td>
<td>$30,717</td>
</tr>
</tbody>
</table>

*Source: Auditor summary of identified exceptions.*
APPENDIX D: SUMMARY OF RECOMMENDATIONS AND CONSIDERATIONS
We recommend that NSF’s Director of the Division of Institution and Award Support:

1.1. Direct UVM to provide documentation supporting that it repaid or otherwise credited the $19,422 in questioned internal service expenses for which it has agreed to reimburse NSF.

1.2. Direct UVM to strengthen its policies and procedures to ensure all costs charged as internal services are supported by actual, rather than estimated, usage.

1.3. Direct UVM to strengthen its policies and procedures to ensure all costs charged as internal services are supported by a calculated and approved internal service rate, prior to being charged to NSF awards. This includes only using the approved rates of the specific services being used.

1.4. Direct UVM to implement additional procedures to ensure rates included in internal service invoices are consistent with the internal service rate sheet in effect at the time the cost was incurred.

2.1. Direct UVM to provide documentation supporting that it repaid or otherwise credited the $7,596 in questioned equipment expenses for which it has agreed to reimburse NSF.

2.2. Direct UVM to strengthen its policies and procedures and internal controls for the allocation of equipment expenses charged to sponsored projects. Updated processes could include requiring the Principal Investigators to review and certify that the equipment is charged based on the documented allocation at the time of payment.

3.1 Direct UVM to provide documentation supporting that it repaid or otherwise credited the $3,699 in questioned participant support costs for which it has agreed to reimburse NSF.

3.2 Direct UVM to strengthen its administrative and management processes for ensuring that it only charges participant support expenses to the award(s) that benefit from the purchase.

4.1. Direct UVM to implement procedures or internal controls to track all expenses that require a cost transfer to ensure that expenses are appropriately transferred in a timely manner or when identified as an error.

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

- Directing UVM to develop formal policies and/or procedures regarding how to verify—and document verification of—it’s election, and its subawardees’ election, to use proposed indirect cost rates. This should address how UVM will ensure the decision 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) and (2 CFR Revision § 200.1).

**Return to the term’s initial use.**

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

**Return to the term’s initial use.**

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

(a) Be necessary and reasonable for the performance of the federal award and be allocable thereto under these principles.

(b) Conform to any limitations or exclusions set forth in these principles or in the federal award as to types or amount of cost items.

(c) Be consistent with policies and procedures that apply uniformly to both federally-financed and other activities of the non-federal entity (2 CFR § 200.403).

**Return to the term’s initial use.**
**Area for Improvement.** For the purposes of this report, an area for improvement represents a condition that does not constitute the grantee’s non-compliance but warrants the attention of the grantee and NSF management.

*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) and (2 CFR Revision § 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
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).

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).

Proposal & Award Policies & Procedures Guide (PAPPG). Comprises documents relating to NSF’s proposal and award process for the assistance programs of NSF. The PAPPG, in conjunction with the applicable standard award conditions incorporated by reference in award, serve as the NSF’s implementation of 2 CFR § 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. If the PAPPG and the award conditions are silent on a specific area covered by 2 CFR § 200, the requirements specified in 2 CFR § 200 must be followed (NSF PAPPG 20-1).

Questioned Cost. §5(f)(1) a cost that is questioned by the Office because of: (A) an alleged violation of a provision of a law, regulation, contract, grant, cooperative agreement, or other agreement or document governing the expenditure of funds; (B) a finding that, at the time of the audit, such cost is not supported by adequate document; or (C) a finding that the expenditure of funds for the intended purpose is unnecessary or unreasonable.

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).

Unsupported Cost. §5(f)(2) a cost that is questioned by the Office because the Office found that, at the time of the audit, such cost is not supported by adequate documentation. Unsupported Cost is a subset of and included in Questioned Costs.
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Pursuant to Pub. L. No. 117-263 § 5274, business entities and non-governmental organizations specifically identified in this report have 30 days from the date of report publication to review this report and submit a written response to NSF OIG that clarifies or provides additional context for each instance within the report in which the business entity or non-governmental organizations is specifically identified. Responses that conform to the requirements set forth in the statute will be attached to the final, published report.

If you find your business entity or non-governmental organization was specifically identified in this report and wish to submit comments under the above-referenced statute, please send your response within 30 days of the publication date of this report to OIGPL117-263@nsf.gov, no later than November 27, 2023. We request that comments be in .pdf format, be free from any proprietary or otherwise sensitive information, and not exceed two pages. Please note, a response that does not satisfy the purpose set forth by the statute will not be attached to the final report.