# AT A GLANCE

Performance Audit of Incurred Costs – University of Arizona  
Report No. OIG 17-1-010 (Revised)  
October 3, 2017

## AUDIT OBJECTIVE

The National Science Foundation Office of Inspector General engaged Moss Adams LLP (Moss Adams) to conduct a performance audit of incurred costs at the University of Arizona (UA) for the period January 1, 2012, to December 31, 2014. The audit encompassed more than $176 million comprising all costs claimed to NSF. The objective of the audit was to determine if costs claimed by UA during this period were allocable, allowable, reasonable, and in conformity with NSF award terms and conditions and applicable Federal financial assistance requirements. Moss Adams is responsible for the attached auditor’s report and the conclusions expressed in this report. NSF OIG does not express any opinion on the conclusions presented in Moss Adams’ audit report.

## AUDIT RESULTS

Costs UA charged to its NSF-sponsored agreements did not always comply with Federal and NSF award requirements. The auditors questioned $56,904 of costs claimed by UA during the audit period. Specifically, auditors found $39,770 in inappropriate subaward payments; $12,196 in improperly allocated compassionate leave; $3,529 in travel that did not appear to benefit the award; $859 in unallowable pre-award charges; and $550 on an unallowable expenditure. Additionally, the auditors noted an other matter related to an improperly coded transaction.

## RECOMMENDATIONS

The auditors included five findings and an other matter in the report with associated recommendations for NSF to resolve the questioned costs and to ensure UA strengthens its administrative and management controls.

## AUDITTEE RESPONSE

UA agreed with some, but not all, of the findings in the report. UA contends that some of the costs within the findings are allowable and disagreed with the auditors’ conclusions. After taking UA’s comments into consideration, the auditors continue to question the costs and left the findings unchanged. UA’s response is attached in its entirety to the report as Appendix A.

**FOR FURTHER INFORMATION, CONTACT US AT (703) 292-7100 OR OIG@NSF.GOV.**
MEMORANDUM

TO: Dale Bell
   Director
   Division of Institution and Award Support

Jamie French
Director
Division of Grants and Agreements

FROM: Mark Bell
   Assistant Inspector General
   Office of Audits

DATE: October 3, 2017

SUBJECT: Audit Report No. 17-1-010 (Revised), University of Arizona

Attached for your information is the Moss Adams LLP (Moss Adams) revised report for the audit of costs totaling approximately $176 million charged by the University of Arizona (UA) to its sponsored agreements with the National Science Foundation during the period January 1, 2012, to December 31, 2014. We revised the report to include UA’s complete response, part of which was erroneously omitted from the original report, which was issued on September 28, 2017.

The objective of the audit was to determine if costs claimed by UA during this period were allocable, allowable, reasonable, and in conformity with NSF award terms and conditions and applicable Federal financial assistance requirements.

In accordance with Office of Management and Budget Circular A-50, Audit Followup, please provide a written corrective action plan to address the report recommendations. In addressing the report’s recommendations, this corrective action plan should detail specific actions and associated milestone dates. Please provide the action plan within 60 calendar days of the date of this report.

OIG Oversight of Audit

To fulfill our monitoring responsibilities, the Office of Inspector General:

- reviewed Moss Adams’ 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 Moss Adams, as necessary, to discuss audit progress, findings, and recommendations;
- reviewed the audit report prepared by Moss Adams to ensure compliance with generally accepted government auditing standards; 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 Ken Lish at 703-292-7100.

Attachment

cc:
John Anderson    Fae Korsmo    Carrie Davison    Ken Lish
John Veysey      Teresa Grancorvitz  Allison Lerner  Billy McCain
Ann Bushmiller   Pamela Hawkins    Ken Chason      Jeremy Hall
Christina Sarris Alex Wynnyk       Susan Carnohan  
Joan Ferrini-Mundy Rochelle Ray    Dan Buchtel
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Abbreviations

AAG  Award and Administration Guide
ACM$  Award Cash Management Service
CFR  Code of Federal Regulation
UA  University of Arizona
NSF  National Science Foundation
OIG  Office of Inspector General
OMB  Office of Management and Budget
PI  Principal Investigator
IDC  Indirect Costs
Background

The National Science Foundation (NSF) is an independent Federal agency created to promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense. NSF is also committed to ensuring an adequate supply of the Nation’s scientists, engineers, and science educators. NSF funds research and education in science and engineering by awarding grants and contracts to educational and research institutions in all parts of the United States.

NSF grantees must follow Federal and NSF grant regulations and guidance in administering their NSF awards. The University of Arizona (UA or University) is a public university that was established in 1885 and is a land-grant university with two medical schools. UA brings in more than $606 million in research investment each year. UA is a member of the Association of American Universities, which comprises the 62 leading public and private research universities. During the audit period, UA had 568 NSF awards with $176,931,012 in costs claimed.

Moss Adams LLP, under contract with the NSF Office of Inspector General (OIG), audited the costs claimed by UA on NSF awards for the period beginning January 1, 2012, and ending December 31, 2014. In our testing of 250 judgmentally selected transactions, we identified 5 transactions with a total $56,904 (including associated Indirect Costs) of questioned costs charged to 5 NSF awards and one transaction that was improperly coded within the correct grant.

The following findings were identified during our fieldwork of the above referenced selections and are described in greater detail in the sections below.

1. One (1) subaward payment totaling $39,770 (including estimated IDC) made outside of budget allocations.
2. One (1) Compassionate Leave Expense in the amount of $12,196 (including estimated IDC) improperly allocated to the award based upon UA’s policy.
3. One (1) Travel Charge in the amount of $3,529 (including OIG estimated IDC) that did not appear to benefit the grant.
4. One (1) Pre-Award Charge in the amount of $859 (including estimated IDC) charged outside of the allowable limit.
5. One (1) transaction in the amount of $550 that was not allowable based upon allowable cost guidance.

In addition, there was one (1) transaction in the amount of $12,000 related to consulting services that was properly budgeted as consulting services on the initial NSF proposed budget but was improperly coded to subawards rather than consulting when expensed. This did not result in a monetary impact and therefore is noted as an other matter for the University’s consideration.

A schedule of questioned costs by award is included in Appendix C.
Results of Audit

Finding 1 –Subaward Costs

We noted one transaction totaling $39,770, which included indirect costs of $9,371, that was charged to an award for costs that had been classified as a subaward but was not budgeted within the original and/or revised budgets, nor was any prior approval requested from NSF. According to UA, the subaward was made to another university so that the PI, who transferred to that university, could continue the work as originally described in the award proposal.

AAG, Chapter II, Section B.2. h (i) states if a PI plans to leave an organization during the course of a grant, NSF gives the organization the prerogative to nominate a substitute PI or request termination and close-out of the grant. But where the PI’s “original and new organizations agree, NSF will facilitate a transfer of the grant and the assignment of remaining unobligated funds to the [PI’s] new organization.” This should normally be done with a tripartite agreement or “by a subaward arrangement (in certain circumstances) between the [PI’s ] original and new organizations, subject to NSF’s consent.” Section B.2. h (ii) further states “[w]hen a [PI] plans to leave an organization during the course of a grant, the [PI] or the Sponsored Projects Office, or equivalent, shall notify the NSF Program Office…If the project is to be continued at the [PI’s] new organization, and if NSF and both organizations agree, formal notification of the impending transfer can be electronically initiated by either the [PI] or the [PI's] organization.” In addition, AAG, Chapter II, Section B.3.a. states “[e]xcluding the procurement of items such as commercially available supplies, materials, equipment, or general support services allowable under the grant, no significant part of the research or substantive effort under an NSF grant may be contracted or otherwise transferred to another organization without prior NSF authorization.” In addition, Chapter II, Section B.3.b. states “If it becomes necessary to contract or otherwise transfer a significant part of the research or substantive effort after a grant has been made, the grantee shall submit [electronically], at a minimum: (i) a clear description of the work to be performed; (ii) the basis for [the subawardee’s selection]; and (iii) a separate budget for each subaward….NSF authorization will be indicated by an amendment to the grant.” There was no evidence that UA requested or received any pre-authorization from NSF for the subcontracted work. Table 1 details the questioned costs related to this transaction.

Table 1. Finding 1 Detailed Questioned Costs

<table>
<thead>
<tr>
<th>Description</th>
<th>Award #</th>
<th>Direct Costs</th>
<th>Associated Indirect Costs</th>
<th>Total Questioned Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subaward was charged but never included in the budget</td>
<td></td>
<td>$30,399</td>
<td>$9,371</td>
<td>$39,770</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$30,399</td>
<td>$9,371</td>
<td>$39,770</td>
</tr>
</tbody>
</table>

Source: Auditor analysis of UA-transaction detail
Recommendations:

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

1. Repay the $39,770 of questioned costs.
2. Strengthen the administrative and management controls to ensure anticipated subawardee costs are identified within the original budget, or, if subawardee costs are later identified as necessary and reasonable for the grant, request prior approval from NSF through the appropriate steps. If a change is due to a PI transfer, administrative controls should be strengthened to identify the transfer and notify NSF.

University of Arizona Response: UA does not agree with the recommendation to repay the questioned costs, although they do agree that they did not obtain NSF approval for the issuance of the subaward. UA believes the subaward was used to continue the work originally described in the proposal and there was a subsequent subaward approved by NSF for these activities. UA believes the costs were appropriate.

Auditor’s Additional Comments: The subsequent subaward was related to undergraduate researchers rather than the transfer of the PI. NSF requires prior approval for subawards as well as changes/transfers of PIs, even though the subaward was furthering the goals of the agreement. Our position regarding this finding does not change.

Finding 2 – Unallowable Compassionate Leave

We noted compassionate leave in the amount of $12,196, which includes fringe of $1,856 and indirect costs of $4,146, for an employee that was identified as being charged to the grant as shown in Table 2; however, compassionate leave is not allowable based upon UA’s compassionate transfer of leave policy, which states “Grants and contracts may not be charged for compassionate leave without approval of the sponsoring agency.” As no approval was documented, this charge is unallowable based upon the University’s policy. Internal controls do not appear to be in place to identify when compassionate leave is being identified as a charge to a grant so approval can be requested in accordance with policy.

Table 2. Finding 2 Detailed Questioned Costs

<table>
<thead>
<tr>
<th>Description</th>
<th>Award #</th>
<th>Direct Costs</th>
<th>Fringe</th>
<th>Associated Indirect Costs</th>
<th>Total Questioned Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grants and contracts may not be charged for compassionate leave without approval of the sponsoring agency.</td>
<td>$6,194</td>
<td>$1,856</td>
<td>$4,146</td>
<td></td>
<td>$12,196</td>
</tr>
<tr>
<td>Total</td>
<td>$6,194</td>
<td>$1,856</td>
<td>$4,146</td>
<td></td>
<td>$12,196</td>
</tr>
</tbody>
</table>

Source: Auditor analysis of UA-transaction detail
**Recommendations:**

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

1. Repay the $12,196 of questioned costs.
2. Strengthen the administrative and management controls to ensure that there are processes in place to facilitate the adherence to UA policies and procedures.

**University of Arizona Response:** UA partially agrees with the finding and notes that Federal and NSF guidance does not specifically prohibit charging compassionate leave, however does agree that their internal procedures require sponsor approval.

**Auditor’s Additional Comments:** Our position regarding this finding does not change.

**Finding 3 – Unallowable Travel Charge**

We identified one transaction for travel expenses in the amount of $3,529, which included indirect costs of $1,200, that were charged to a specified grant, but appears to benefit a different grant the PI was working on, as shown in Table 3. The PI’s justification was the travel was for a meeting, which advanced the goal of the project. In reviewing the original travel documentation, we noted the Fiscal Officer had written the trip was for “giving invited talk at [Redacted] for extremely large telescope to talk about [Redacted] AO System.” The PI had noted the expense was for “giving invited talk on Future AO systems at the [Redacted] conference.” Based upon our review of the grant proposals and summaries, we noted that grant # [Redacted] was specifically for research related to the [Redacted] AO System and therefore, appears to be directly related to a different grant and not related to the grant the expenses were coded to when reviewing the Fiscal Officer’s written documentation. In addition, the related payroll for the PI was charged to the other grant, which further supports the travel was charged to the incorrect grant. Internal controls did not seem to have been properly followed to ensure the expenditures were coded to the correct grant.

**Table 3. Finding 3 Detailed Questioned Costs**

<table>
<thead>
<tr>
<th>Description</th>
<th>Award #</th>
<th>Transaction total</th>
<th>Associated Indirect Costs</th>
<th>Total Questioned Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel to [Redacted] does not agree with budget description for this award,</td>
<td></td>
<td>$2,329</td>
<td>$1,200</td>
<td>$3,529</td>
</tr>
<tr>
<td>but instead appears to be related to award [Redacted]. Question use of</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[Redacted] funds for travel.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Auditor analysis of UA-transaction detail
Recommendations:

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

1. Repay the $3,529 of questioned costs.
2. Strengthen the administrative and management controls to ensure charges to the grant directly benefit the grant being charged, rather than other grants on which the PI may be simultaneously working.

University of Arizona Response: UA disagrees with the finding and believes the PI’s travel documentation justifies charging the travel to the award. They note the abstract for the award describes the scope as being in-line with the conference the PI attended.

Auditor’s Additional Comments: Our position regarding this finding does not change. The PI’s notes do not provide a clear indication of which grant the travel expenses related to; however, the Fiscal Officer had additional notes related to the expenditure that imply they directly relate to another grant. In addition, the related payroll costs which were charged to a different grant further support our conclusion.

Finding 4 – Unallowable Pre-Award Charge

We identified one transaction related to a pre-award charge, which was outside of the NSF specified time period for pre-award charges, for the amount of $859, which included indirect costs of $292, as shown in Table 4. AAG, Chapter V, Section A.2.b.i. states that “grantees may incur pre-award costs within the 90-day period immediately preceding the start date of the grant.” UA has informed us that the grant had an anticipated start date of March 1, 2013, and, therefore, they began work and incurred expenditures benefitting the grant in January 2013; however, due to internal administrative reasons the grant did not commence until May 15, 2013, and the cost was not identified as being outside the pre-award period. As the purchase was made prior to NSF’s 90-day pre-award period, the charge is considered unallowable.

Table 4. Finding 4 Detailed Questioned Costs

<table>
<thead>
<tr>
<th>Description</th>
<th>Award #</th>
<th>Transaction Total</th>
<th>Associated Indirect Costs</th>
<th>Total Questioned Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase of Research supplies were charged against this award 96 days prior to effective date</td>
<td>96</td>
<td>$567</td>
<td>$292</td>
<td>$859</td>
</tr>
</tbody>
</table>

Source: Auditor analysis of UA-transaction detail
**Recommendations:**

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

1. Repay the $859 of questioned costs.
2. Strengthen the administrative and management controls to ensure procedures are in place to ensure pre-award purchases are made within the specified 90-day window.

**University of Arizona Response:** UA agrees with the finding; however, they noted the costs were incurred as they had anticipated an earlier start date. They note the costs incurred were specifically for the benefit of the project and would have otherwise been allowable.

**Auditor’s Additional Comments:** Our position regarding this finding does not change.

**Finding 5 – Unallowable Cost Charged**

We identified one transaction for $550, in which UA had charged gym access fees to a grant, as shown in Table 5. Entertainment costs are not typically an allowable expense based upon OMB Circular A-21, Section J. 17. In addition, membership in organizations are typically not allowable based upon OMB Circular A-21, Section J. 33. It is not clear how the expenditure would have benefitted the Federal award or that it was ordinary and necessary for the operation of the award. It appears as though staff responsible for approving the expenditures were not aware that these types of expenditures are typically unallowable based upon the CFRs.

**Table 5. Finding 5 Detailed Questioned Costs**

<table>
<thead>
<tr>
<th>Description</th>
<th>Award #</th>
<th>Transaction Total</th>
<th>Associated Indirect Costs</th>
<th>Total Questioned Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gym access fees are not allowable.</td>
<td></td>
<td>$550</td>
<td>-</td>
<td>$550</td>
</tr>
</tbody>
</table>

Source: Auditor analysis of UA-transaction detail

**Recommendations:**

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

1. Repay the $550 of questioned costs.
2. Strengthen the administrative and management controls to ensure charges to the grant are allowable per NSF guidelines.
University of Arizona Response: UA agreed with the finding although notes the costs were incurred for the benefit of the students that participated on the project.

Auditor’s Additional Comments: Our position regarding this finding does not change.

Other Matter

During the review of budget versus actual transactions for award # [redacted], we noted a transaction for $12,000 related to consulting, which was charged to the subaward category, although it was initially budgeted under consulting fees. Based upon discussions with UA, this was a clerical error, which resulted in charging the incorrect budget code. As the transaction was for consulting services, which were budgeted, we do not consider this a questioned cost; however, there appears to be a deficiency in controls as the cost was coded to the incorrect account.

Recommendations:

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

1. Strengthen the administrative and management controls to ensure charges made to each budget category are correctly expensed to the corresponding categories.

University of Arizona Response: UA agreed with the recommendation and plans to review their controls pertaining to coding of subawards and consultant payments.

Auditor’s Additional Comments: Our position regarding this recommendation does not change.

Moss Adams LLP
Moss Adams LLP
September 22, 2017
Appendix A: Awardee Response

September 21, 2017

Tammy Erickson  
Partner, Moss Adams  
601 W Riverside, Suite 1800  
Spokane, WA 99201


Dear Ms. Erickson,

On behalf of The University of Arizona (UA), enclosed are our comments in response to the Draft Audit Report issued by Moss Adams, on September 8, 2017 in regards to the above referenced audit. We would also like to take this opportunity to thank the Moss Adams team for their professionalism throughout the audit process.

Finding 1 – Subaward Costs

The University of Arizona Response:

UA does not concur with the auditor’s recommendation to refund the subaward costs. Although the administrative step to obtain National Sciences Foundation (NSF) approval for the initial subaward issuance was missed, we believe the costs are for the benefit of the project and should not be refunded.

After the NSF project was awarded to UA, one of the co-principal investigators, Dr. [redacted] moved to [redacted] University. A subaward was issued to [redacted] as an administrative solution for Dr. [redacted] to continue work as originally described in the proposal. The subaward did not represent a change in scope, or result in the involvement of new key personnel.

Although we did not obtain NSF approval for the issuance of the subaward, NSF awarded a subsequent Research Experiences for Undergraduates supplement for an additional subaward to [redacted]. This supplement specifically referenced the subaward activities taking place at [redacted]. Additionally, the annual progress reports accepted by NSF referenced Dr. [redacted] activity at [redacted]. Email correspondence between the principal investigators and NSF officials also referred to Dr. [redacted] activity at [redacted].

The UA reviewed the subaward to ensure the costs were appropriate. A site visit to [redacted] occurred, where a UA investigator conducted a thorough review of the work, along with an inspection of the facilities. Dr. [redacted] also traveled back to the UA to discuss the project. The investigators maintained regular electronic correspondence throughout the project period.

As a corrective measure, we will review our subaward issuance process and verify controls are in place to ensure appropriate Federal approvals are obtained. We will also review our procedures for when investigators transfer to new institutions, to ensure the necessary notifications are made. Additionally,
we will conduct training for business officials involved in the subaward issuance and investigator transfer process.

Finding 2 – Unallowable Compassionate Leave

The University of Arizona Response:
UA partially concurs with the auditor’s recommendation. We wish to note that Federal Uniform Guidance, the preceding A-21 Cost Principles, and NSF Grants Policy, do not specifically prohibit charging compassionate leave. However, since our published procedure recommended obtaining sponsor approval, we will refund the compassionate leave costs as a conservative measure.

As part of a broader effort to review our internal policies and procedures pertaining to Federal projects, we will review our compassionate leave policy to provide clearer guidance that adheres to Federal requirements.

Finding 3 – Unallowable Travel Charge

The University of Arizona Response:
UA does not concur with the auditor’s recommendation to refund the travel costs. During the audit process, the principal investigator reviewed the travel documentation, and provided a signed statement justifying the travel’s purpose for award [redacted]. The travel charge was to attend a conference pertaining to adaptive optics [redacted] research. The PI also delivered a presentation on adaptive optics systems.

The abstract for award [redacted] describes the scope as using adaptive optics [redacted]. The abstract for award [redacted] describes the scope as improving the adaptive optics system. Although adaptive optics research is part of both awards, we believe the scope of award [redacted] lends itself to being the most appropriate project for the travel charge.

Finding 4 – Unallowable Pre-Award Charge

The University of Arizona Response:
UA concurs with the auditor’s recommendation and will refund the pre-award costs. As noted in the finding summary, we incurred the pre-award costs with the anticipation of a March 1, 2013 start date; however, the award was issued with a May 15, 2013 start date. This resulted in the incurred costs being charged outside of the 90-day pre-award period. We do wish to note the expenditures incurred were specifically for the benefit of the project, and would have otherwise been allowable charges.

We will review our internal controls regarding pre-award costs to ensure appropriate approvals are obtained when costs need to be incurred outside of the prescribed pre-award period.

Finding 5 – Unallowable Cost Charged – Gym Access Fees

The University of Arizona Response:
UA concurs with the auditor’s recommendation and will refund the costs. We do wish to note the costs were incurred for the benefit of visiting students that participated on a Research Experiences for
Undergraduates project. The principal investigator purchased recreation center access as a means to help the students cope with the demanding fieldwork during a two-week workshop. However, the costs should have been charged to a UA account rather than the NSF project. We believe this example of an unallowable cost to be an isolated occurrence. We conduct regular cost allowability training for business officials who manage expenditures on Federal projects, along with maintaining training and policy resources on our research gateway website.

Other Matter – Cost coding

The University of Arizona Response:
UA concurs with the auditor’s recommendation and will review administrative and management controls pertaining to the coding of subawards and consultant payments.

We appreciate the knowledge gained from the audit process. We will develop “Lessons Learned” as a training opportunity for our research community in order to share the knowledge gained from this process. We believe the experience will strengthen our compliance with both Federal and NSF policies.

If you have any questions or need additional clarification from UA, please contact Marcel Villalobos at 520-626-6311 or via email at [email protected].

Sincerely,

Paul Sandoval
Director, Sponsored Projects & Contracting Services
The University of Arizona

Cc: Caroline Garcia, Associate Vice President, Research, The University of Arizona
Duc Ma, Interim Associate Vice President, Financial Services, The University of Arizona
Appendix B: Objective, Scope, Methodology and Criteria

The NSF OIG Office of Audits engaged Moss Adams, LLP (referred to as “we” in this report) to conduct a performance audit of costs that the University of Arizona incurred on NSF awards for the period from January 1, 2012, through December 31, 2014. The objectives of the audit were to identify and report on instances of unallowable, unallocable, and unreasonable costs, as well as instances of noncompliance with regulations, Federal financial assistance requirements, and provisions of the NSF award agreements as they relate to the transactions tested.

UA management is responsible for establishing and maintaining effective internal control to ensure that Federal award funds are used in compliance with laws, regulations, and award terms. In planning and performing our audit, we considered UA’s internal control solely for the purpose of understanding the policies and procedures relevant to the financial reporting and administration of NSF awards in order to evaluate UA’s compliance with laws, regulations, and award terms applicable to the items selected for testing, but not for the purpose of expressing an opinion on the effectiveness of UA’s internal control over award financial reporting and administration. Accordingly, we do not express an opinion on the effectiveness of UA’s internal control over its award financial reporting and administration.

At NSF OIG’s request, UA provided detailed transaction data for all costs charged to NSF awards for the period January 1, 2012, through December 31, 2014. NSF OIG reviewed available accounting and administration policies and procedures, relevant documented management initiatives, previously issued external audit reports and desk review reports, and schedules and reconciliations prepared by UA.

After verifying the population of data was appropriate, NSF OIG analyzed the data contained in UA’s general ledger and supporting detailed ledgers to identify anomalies, outliers, and aberrant transactions. NSF OIG then judgmentally selected a sample of transactions to test based on criteria that included, but were not limited to, large dollar amounts; possible duplications; indications of unusual trends in spending; inconsistency with other transactions; even dollar amounts; and descriptions indicating potentially unallowable costs and frequency.

NSF OIG identified and provided to us a list of 250 initial transactions for testing and then another 37 transactions for cluster testing. We sent this list to UA and requested documentation to support each transaction. We reviewed the supporting documentation provided by UA and evaluated the allowability, allocability, and reasonableness of each transaction. When necessary, we requested additional supporting documentation, reviewed it, and obtained explanations and justifications from PIs and other knowledgeable UA personnel until we had sufficient support to assess the allowability, allocability, and reasonableness of each transaction. Our work required us to rely on the computer-processed data obtained from UA and NSF OIG. We assessed NSF’s computer processed data and found it to be sufficiently reliable for the purposes of this audit.
At the conclusion of our fieldwork, we provided a summary of our results to NSF OIG personnel for review. We also provided the summary of results to UA personnel to ensure they were aware of each of our findings and did not have any additional documentation to support the questioned costs.

We conducted this performance audit in accordance with Generally Accepted Government Auditing Standards. 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: Questioned Costs Summary by Award

<table>
<thead>
<tr>
<th>Finding</th>
<th>Selection Group</th>
<th>Rule</th>
<th>Award</th>
<th>Direct costs</th>
<th>Associated Indirect Costs</th>
<th>Total Unsupported Costs</th>
<th>Total Questioned Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Procurement</td>
<td>Subaward Budget vs. Actual</td>
<td>☐ ☐</td>
<td>$30,399</td>
<td>$9,371</td>
<td>0</td>
<td>$39,770</td>
</tr>
<tr>
<td>2</td>
<td>Payroll</td>
<td>Compassionate Leave</td>
<td>☐ ☐</td>
<td>$6,194</td>
<td>$6,002</td>
<td>0</td>
<td>$12,196</td>
</tr>
<tr>
<td>3</td>
<td>General Ledger</td>
<td>Travel on Different Award than Payroll</td>
<td>☐ ☐</td>
<td>2,329</td>
<td>1,200</td>
<td>0</td>
<td>$3,529</td>
</tr>
<tr>
<td>4</td>
<td>General Ledger</td>
<td>Pre-Award Charges</td>
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<td>$859</td>
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<td>General Ledger</td>
<td>Unallowable Costs</td>
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<td>-</td>
<td>0</td>
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</tr>
<tr>
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