

Performance Audit of Incurred Costs – Ohio State University

REPORT PREPARED BY COTTON & COMPANY LLP

NATIONAL SCIENCE FOUNDATION
OFFICE OF INSPECTOR GENERAL

August 8, 2019
OIG 19-1-016





AT A GLANCE

Performance Audit of Incurred Costs – Ohio State University

Report No. OIG 19-1-016

August 8, 2019

AUDIT OBJECTIVE

The National Science Foundation Office of Inspector General engaged Cotton & Company LLP (C&C) to conduct a performance audit of incurred costs at Ohio State University (OSU) for the period February 1, 2015, to January 31, 2018. The auditors tested more than \$5.6 million of the \$147.3 million of costs claimed to NSF. The objective of the audit was to determine if costs claimed by OSU during this period were allocable, allowable, reasonable, and in conformity with NSF award terms and conditions and applicable Federal financial assistance requirements.

AUDIT RESULTS

The report highlights concerns about OSU's compliance with certain Federal, NSF, and/or OSU regulations and policies when allocating expenses to NSF awards. The auditors questioned \$502,587 of costs claimed by OSU during the audit period. Specifically, the auditors found \$304,977 of inappropriately allocated expenses; \$76,822 of unapproved subaward payments; \$67,006 of unsupported expenses; \$46,178 of unallowable expenses; and \$7,604 of inappropriately applied indirect costs. The auditors also identified 5 findings related to insufficient human subject payment policies, incorrect application of proposed indirect cost rates, non-compliance with OSU policies, fringe benefits inappropriately applied to cost transfers, and hours inconsistent with salary agreements for which there were no questioned costs. C&C is responsible for the attached report and the conclusions expressed in this report. NSF OIG does not express any opinion on the conclusions presented in C&C's audit report.

RECOMMENDATIONS

The auditors included 10 findings in the report with associated recommendations for NSF to resolve the questioned costs and to ensure OSU strengthens administrative and management controls.

AUDITEE RESPONSE

OSU disagreed or partially disagreed with all of the findings but did not provide explanations for its disagreements. OSU's response is attached in its entirety to the report as Appendix B.

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



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

MEMORANDUM

DATE: August 8, 2019

TO: Dale Bell
Director
Division of Institution and Award Support

Jamie French
Director
Division of Grants and Agreements

FROM: Mark Bell [REDACTED]
Assistant Inspector General
Office of Audits

SUBJECT: Audit Report No. 19-1-016, Ohio State University

This memorandum transmits the Cotton & Company LLP (C&C) report for the audit of costs charged by Ohio State University (OSU) to its sponsored agreements with the National Science Foundation during the period February 1, 2015, to January 31, 2018. The audit encompassed more than \$5.6 million of the \$147.3 million claimed to NSF during the period. The objective of the audit was to determine if costs claimed by OSU on NSF awards were allowable, allocable, reasonable, and in conformity with NSF award terms and conditions and Federal financial assistance requirements.

Please coordinate with our office during the 6-month resolution period, as specified by Office of Management and Budget 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

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THE OHIO STATE UNIVERSITY

**PERFORMANCE AUDIT OF INCURRED COSTS FOR
NATIONAL SCIENCE FOUNDATION AWARDS
FOR THE PERIOD FEBRUARY 1, 2015 TO JANUARY 31, 2018**

**NATIONAL SCIENCE FOUNDATION
OFFICE OF INSPECTOR GENERAL**

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**NATIONAL SCIENCE FOUNDATION
PERFORMANCE AUDIT OF INCURRED COSTS
THE OHIO STATE UNIVERSITY**

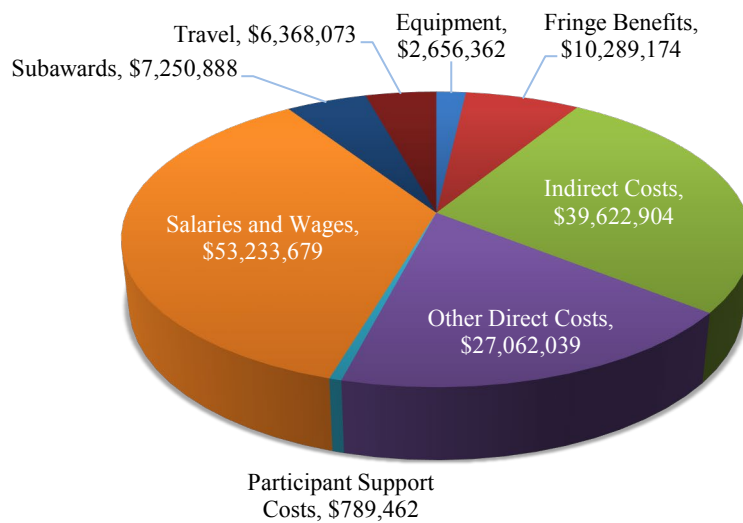
I. BACKGROUND

The National Science Foundation (NSF) is an independent Federal agency whose mission is to promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense. Through grant awards, cooperative agreements, and contracts, NSF enters into relationships with non-Federal organizations to fund research and education initiatives and to assist in supporting its internal financial, administrative, and programmatic operations.

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

NSF OIG engaged Cotton & Company LLP (referred to as "we") to conduct a performance audit of costs incurred by the Ohio State University (OSU). OSU is a public land-grant university that reported \$324 million in grant and contract revenue earned from Federal sources in fiscal year (FY) 2017. As illustrated in Figure 1, OSU's general ledger supported more than \$147 million of expenses claimed on 750 NSF awards during our audit period of performance (POP), or February 1, 2015 through January 31, 2018. Figure 1 also shows costs claimed by budget category based on the accounting data that OSU provided.

Figure 1. Costs Claimed by NSF Budget Category, February 1, 2015 through January 31, 2018



Source: Auditor analysis of accounting data provided by OSU.

This performance audit, conducted under Order No. D17PB00321, was designed to meet the objectives identified in the Objectives, Scope, and Methodology (OSM) section of this report (Appendix C) and was conducted in accordance with *Generally Accepted Government Auditing Standards* (GAGAS), issued by the U.S. Government Accountability Office. We communicated the results of our audit and the related findings and recommendations to OSU and NSF OIG. OSU's full response to the report is included in its entirety in Appendix B.

II. AUDIT RESULTS

As described in the OSM section of this report, this performance audit included obtaining transaction-level data for all costs that OSU claimed on NSF awards during the audit period. We judgmentally selected 300 transactions for testing, totaling \$5,632,158.

OSU did not always comply with all Federal, NSF, and OSU regulations and policies when allocating expenses to NSF awards. It needs improved oversight of the allocation and documentation of expenses charged to NSF awards to ensure that it supports that costs claimed are reasonable, allocable, and allowable in accordance with those regulations and policies. As a result of this lack of sufficient oversight during our audit period, we identified \$502,587 of direct and indirect costs that OSU inappropriately claimed during the audit period that we are questioning, as follows:

- \$304,977 of inappropriately allocated expenses
- \$76,822 of unapproved subaward payments
- \$67,006 of unsupported expenses

- \$46,178 of unallowable expenses
- \$7,604 of inappropriately applied indirect costs

Additionally, we identified compliance related findings, as follows:

- Insufficient human subject payment policies
- Incorrect application of proposed indirect cost rates
- Non-Compliance with OSU policies
- Fringe benefits inappropriately applied to cost transfers
- Hours inconsistent with salary agreement

We provide a breakdown of the questioned costs by finding in Appendix A of this report.

Finding 1: Expenses Not Appropriately Allocated to NSF Awards

OSU did not allocate expenses to NSF awards based on the relative benefits received by the awards, as required by 2 CFR Part 220, Appendix A, Section C.4 and 2 CFR Part §200.405.¹ Specifically, OSU inappropriately allocated \$304,977 of expenses to 18 NSF awards, as follows:

- ***OSU Did Not Appropriately Allocate Materials and Equipment Expenses to NSF Awards***

- [REDACTED] *Materials and Equipment Expenses*

In the final seven months of NSF Award No. [REDACTED]'s POP², OSU charged the award \$80,648 for the purchase of materials, supplies, and equipment that the Principal Investigator (PI) placed in [REDACTED] personal lab in the [REDACTED]. Because NSF awarded the funding to support the operations of [REDACTED], not [REDACTED], these purchases do not appear to have benefited this award. As a result, OSU should not have charged the following expenses to the award:

| Purchase Date | GL Transaction Date | Equipment/Supplies Description | Amount |
|---------------|---------------------|--|----------|
| 11/25/2014 | 03/19/2015 | [REDACTED] Microscope System | \$29,187 |
| 05/13/2015 | 06/22/2015 | Multiflo FX with Peri Washer | 15,000 |
| 07/14/2015 | 08/03/2015 | UL Standard Compact 1600 Degree C Tube Furnace | 5,685 |
| 09/01/2015 | 09/09/2015 | Biological Safety Cabinet | 9,500 |
| 09/29/2015 | 09/30/2015 | Biological Assay Materials | 7,425 |
| 09/14/2015 | 10/16/2015 | Upright Freezer | 7,105 |

¹ Both 2 CFR Part 220, Appendix A, Section C.4 and 2 CFR Part §200.405 state that a cost should be allocated to a particular cost objective in accordance with the relative benefits received.

² The POP of NSF Award No. [REDACTED] was October 1, 2009 to September 30, 2015.

| Purchase Date | GL Transaction Date | Equipment/Supplies Description | Amount |
|---------------|---------------------|--------------------------------|------------------------|
| 09/28/2015 | 11/13/2015 | Microscope Parts | 3,524 |
| 09/28/2015 | 11/13/2015 | Laser Diode | <u>3,222</u> |
| Total | | | <u>\$80,648</u> |

○ *Other Materials and Equipment Expenses*

When purchasing materials and equipment at the end of an award's POP, OSU did not allocate the expenses to NSF awards based on the relative benefits received by the award charged. Specifically:

- In December 2015, OSU charged NSF Award No. [REDACTED] for \$6,003 of expenses incurred on November 23, 2015 to purchase a water chiller. The PI stated that the chiller was necessary for a graduate student to continue performing work related to the award; however, it does not appear reasonable to charge the full cost of this expense to this NSF award, as the equipment would only have been available for a maximum of 7 days of the award's 5-year POP³.
- In April 2016, OSU charged NSF Award No. [REDACTED] for \$15,211 of expenses incurred in February 2016 to purchase spare parts for an automated [REDACTED] machine. Although OSU purchased the parts before the award expired on March 31, 2016, it noted that installation would not take place until January 2017, 10 months after the award expired. As a result, it does not appear reasonable to allocate any of this expense to this NSF award.
- In January 2016, OSU ordered a \$682,889 piece of equipment and noted that \$400,889 of this expense, or 58.7 percent, was allocable to NSF Award No. [REDACTED]. In April 2016, OSU received a \$691,877 invoice for this equipment and charged NSF Award No. [REDACTED] for \$418,891, or 60.5 percent of the total expense. We requested a justification explaining the increase in the percentage of the equipment that was allocable to this award. OSU reviewed our request and determined that it should only have charged this award for 58.7 percent of the invoiced expense, or \$406,132.⁴ Therefore, we are questioning the \$12,759 overcharged to this award.
- In February 2017, OSU charged NSF Award No. [REDACTED] for \$16,394 in subaward expenses that the University [REDACTED] invoiced to OSU for the purchase of supplies/equipment. [REDACTED] was able to provide support indicating that it had purchased the supplies/equipment before the award

³ The POP of NSF Award No. [REDACTED] was June 15, 2010 to November 30, 2015.

⁴ OSU noted that it has requested a \$9,021 refund for an overpayment made to the vendor.

expired; however, [REDACTED] did not receive the supplies/equipment until December 2016, the final month of the award's POP, and it did not invoice any labor expenses during that month. As a result, it does not appear that these expenses directly benefited this award.

- ***OSU Did Not Appropriately Allocate Consultant/Service Expenses to NSF Awards***

OSU did not appropriately allocate consultant/service expenses to NSF awards based on the relative benefits received by each award. Specifically:

- In September 2015, OSU transferred \$10,477 in consulting expenses to NSF Award No. [REDACTED] for costs invoiced for services provided in June and July 2015. Specifically, OSU's Center [REDACTED] hired and paid a consultant to provide liaison and recruiting services from April 2014 through September 2015. In September 2015, OSU transferred a portion of these expenses to NSF Award No. [REDACTED] based on the total funds that remained on the award at the end of its POP. Because OSU charged these expenses to the award based on the amount of funding available, rather than on the amount of effort the consultant expended on grant-specific work, it appears to have transferred these costs to NSF Award No. [REDACTED] solely because funding remained on the award.⁵
- In August 2016, OSU charged NSF Award No. [REDACTED] for \$26,901 in data-processing services for the period from August through December 2016. Because this award's POP ended on September 30, 2016, OSU received the majority of these services after the award expired. In addition, the invoice did not indicate that the service provider performed or would perform any of the work prior to September 30, 2016; as a result, we were unable to verify that OSU received any of these services during the award's POP.⁶ Therefore, we are questioning all costs associated with these data-processing services.
- In January 2017, the final month of NSF Award No. [REDACTED]'s POP,⁷ OSU charged the award for \$11,532 in survey services that would be provided from January through June 2017. Because the invoice did not indicate that the service provider performed, or would perform, any services prior to the award's expiration date, January 31, 2017, we were unable to verify that OSU received any of these services during the award's POP. Therefore, we are questioning all costs associated with these survey services.

⁵ According to 2 Part CFR 220, Appendix A, Section C.4.b., organizations may not shift costs to meet deficiencies caused by overruns or other fund considerations, or for other reasons of convenience.

⁶ We further noted that OSU charged a separate funding source for the second installment of costs incurred under the same data-processing services contract, which included services for the period from January through May 2017.

⁷ The POP of NSF Award No. [REDACTED] was August 15, 2011 to January 31, 2017.

- ***OSU Did Not Appropriately Allocate Travel Expenses to NSF Awards***

OSU did not appropriately allocate travel expenses to NSF awards based on the relative benefits received by each award. Specifically:

- In May 2016, OSU charged NSF Award No. [REDACTED] for \$5,242 in travel expenses that the PI incurred to attend a conference in [REDACTED] to present a paper. Because the paper acknowledged support from three other NSF awards but did not acknowledge this award,⁸ and because the PI did not include any information regarding this conference or the paper in the annual reports for the award, this trip does not appear to have been allocable to this award. Therefore, OSU should not have charged this expense to this NSF award.
- In September 2016, OSU charged NSF Award No. [REDACTED] for \$5,458 in travel expenses incurred for foreign undergraduate students to travel to a summer program at OSU. OSU did not include program participation in the budget for this award, and the program did not appear to relate to the objectives of the award. Therefore, OSU should not have charged this expense to this NSF award.
- In September 2017, OSU charged NSF Award No. [REDACTED] for \$4,045 in travel expenses incurred for a co-PI to travel to [REDACTED] to attend a workshop and present a poster. The travel occurred approximately one month before the award's POP expired, on August 31, 2017. OSU did not mention either the trip or the presentation in the final report submitted for this award, and the presentation did not appear to support the objectives of the award. Therefore, OSU should not have charged this expense to this NSF award.
- In November 2016, OSU charged NSF Award No. [REDACTED] for \$11,162 in travel expenses incurred for a co-PI to attend a conference in [REDACTED]; speak at a conference in [REDACTED]; and, visit a former post-doctoral student in [REDACTED]. OSU was unable to provide documentation to support that the co-PI disseminated grant-related research results at the conference in [REDACTED], or that the collaboration with the post-doctoral student in [REDACTED] related to this award. Therefore, OSU should not have charged this NSF award for the additional expenses incurred to travel to [REDACTED] and [REDACTED] totaling \$9,915.
- In October 2016, OSU charged NSF Award No. [REDACTED] for \$30,800 in travel expenses incurred for up to ten travelers to conduct fieldwork in [REDACTED]. As only \$27,108 of these travel expenses related to fieldwork performed by the three individuals performing research for this award, OSU should not have charged this award for the additional \$3,692 of expenses incurred for the other travelers to this NSF award.

⁸ The PI presented a paper titled [REDACTED] which acknowledged support from NSF Award Numbers [REDACTED], [REDACTED], and [REDACTED].

- In October 2017, OSU charged NSF Award No. [REDACTED] for \$12,058 in travel expenses that the PI incurred to attend conferences, give presentations, and visit collaborators in [REDACTED], [REDACTED], and [REDACTED]. However, OSU did not mention the person that the PI visited in [REDACTED] as a collaborator in the proposal or annual reports submitted for this NSF award. As a result, the PI's travel to [REDACTED] does not appear to have benefited the objectives of the award. Therefore, OSU should not have charged this NSF award for the portion of the travel expense associated with the visit to [REDACTED] of \$1,845.

- ***OSU Did Not Appropriately Allocate Other Expenses to NSF Awards***

OSU did not appropriately allocate other expenses to NSF awards based on the relative benefits received by each award. Specifically:

- In December 2014, approximately 3 months after NSF Award No. [REDACTED] expired, OSU charged the award for \$1,657 in Electrical and Computer Engineering Cleanroom laboratory access and equipment user fees for two individuals. Although OSU incurred the user fees during the award's POP,⁹ OSU did not identify the two individuals as participants on this award in its final report, nor did these individuals charge any effort to this project during the months included in the invoice. Therefore, OSU should not have charged this expense to the NSF award.
- In March 2016, OSU charged NSF Award No. [REDACTED] for a \$20,450 payment made to [REDACTED] to provide funding for replacement teaching costs while one of [REDACTED] employees assisted OSU with a program related to the NSF award. Although the NSF award included funding for teaching replacement costs for long-term visitors, [REDACTED] was unable to locate a replacement teacher during the period when the scholar was visiting OSU. [REDACTED] noted that it would use the funds to support a teacher buy-out in [REDACTED]. However, the scholar was no longer visiting OSU at that time; as a result, these expenses do not appear to have benefited the NSF award as intended. Therefore, OSU should not have charged this expense to the NSF award.
- In August 2016, OSU charged approximately 81 percent of the total expenses it incurred to purchase access to a "Deed and Tax" data set for 96 months to NSF Award [REDACTED] to spend the remaining \$61,984 of funding on the award. While the PI noted that the data set was used to perform grant related research, because only 2 percent of the data set's access period fell within the POP¹⁰ of this award, it does not appear reasonable that OSU allocated 81 percent of the total cost to this award. Because only 2 percent of the data access period was within this award's POP, OSU should only have charged the award for 2 percent of the total

⁹ The POP of NSF Award No. [REDACTED] was October 1, 2009 through September 30, 2014.

¹⁰ The POP of NSF Award No. [REDACTED] was January 1, 2011 through September 30, 2016.

cost, or \$1,292. Therefore, OSU should not have charged \$60,692 of this expense to the NSF award.

- In November 2016, OSU charged NSF Award No. [REDACTED] for \$9,976 of expenses incurred to ship samples to the [REDACTED]. The supporting documentation indicated that OSU intended to charge 50 percent of the expense to this NSF award and 50 percent to a [REDACTED] grant. However, the PI appears to have charged 100 percent of the shipment to this NSF award to avoid overspending on the [REDACTED] grant.¹¹ Therefore, OSU should not have charged this NSF award for \$4,988, or 50 percent of the cost of the shipment.
- In June 2015, OSU charged NSF Award No. [REDACTED] for \$10,944 of expenses incurred to purchase a 2-year software license. OSU appears to have used this software to benefit this grant; however, because only 8.5 months of the 24-month software license was within the award’s POP,¹² OSU should only have charged the award for \$3,876, or 35.42 percent of this expense (8.5 months/24 months). Therefore, OSU should not have charged \$7,068 of this expense to this NSF award.

OSU does not have proper controls in place to ensure that it always allocates costs to sponsored awards based on the relative benefits received by the awards. As a result, OSU charged NSF awards for expenses that should have been allocated to alternative funding sources. Therefore, we are questioning \$304,977 of inappropriately allocated direct, and associated indirect, expenses, as follows:

Table 1. Expenses Not Appropriately Allocated to NSF Awards

| Description | NSF Award No. | Fiscal Year | Questioned Costs |
|---|---------------|-------------|------------------|
| March 2015 Unallocable [REDACTED] Equipment Expense | [REDACTED] | 2015 | \$29,187 |
| June 2015 Unallocable [REDACTED] Equipment Expense | [REDACTED] | 2015 | 15,000 |
| August 2015 Unallocable [REDACTED] Equipment Expense | [REDACTED] | 2016 | 5,685 |
| September 2015 Unallocable [REDACTED] Equipment Expense | [REDACTED] | 2016 | 9,500 |
| September 2015 Unallocable [REDACTED] Materials Expense | [REDACTED] | 2016 | 7,425 |
| October 2015 Unallocable [REDACTED] Equipment Expense | [REDACTED] | 2016 | 7,105 |
| November 2015 Unallocable [REDACTED] Equipment Expense | [REDACTED] | 2016 | 3,524 |
| November 2015 Unallocable [REDACTED] Equipment Expense | [REDACTED] | 2016 | 3,222 |
| December 2015 Unallocable Equipment Expense | [REDACTED] | 2016 | 6,003 |
| April 2016 Unallocable Equipment Expense | [REDACTED] | 2016 | 15,211 |
| April 2016 Unallocable Equipment Expense | [REDACTED] | 2016 | 12,759 |
| February 2017 Unallocable Supplies/Equipment Expense | [REDACTED] | 2017 | 16,394 |

¹¹ In November 2016, after being notified that the [REDACTED] award was overspent, the PI inquired [REDACTED]

¹² The POP of NSF Award No. [REDACTED] was February 15, 2010 through January 31, 2016.

| Description | NSF Award No. | Fiscal Year | Questioned Costs |
|---|---------------|-------------|-------------------------|
| September 2015 Unallocable Consulting Expense | | 2016 | 10,477 |
| August 2016 Unallocable Service Expense | | 2017 | 26,901 |
| January 2017 Unallocable Service Expense | | 2017 | 11,532 |
| May 2016 Unallocable Travel Expense | | 2016 | 5,242 |
| September 2016 Unallocable Travel Expense | | 2017 | 5,458 |
| September 2017 Unallocable Travel Expense | | 2018 | 4,045 |
| November 2016 Unallocable Travel Expense | | 2017 | 9,915 |
| October 2016 Unallocable Travel Expense | | 2017 | 3,692 |
| October 2017 Unallocable Travel Expense | | 2018 | 1,845 |
| December 2014 Unallocable User Fee Expense | | 2015 | 1,657 |
| March 2016 Unallocable Teaching Replacement Expense | | 2016 | 20,450 |
| August 2016 Unallocable Data Expense | | 2017 | 60,692 |
| November 2016 Unallocable Shipping Expense | | 2017 | 4,988 |
| June 2015 Unallocable Software Expense | | 2015 | 7,068 |
| Total Questioned Costs | | | <u>\$304,977</u> |

Source: Auditor summary of questioned transactions.

Recommendations

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

1. Resolve the \$304,977 in questioned equipment, materials/supplies, consulting/services, travel and other costs and direct OSU to repay or otherwise remove the sustained questioned costs from its NSF awards.
2. Direct OSU to strengthen the administrative and management controls and processes over allocating expenses to sponsored funding sources. Processes could include requiring PIs or other designated staff to document the allocation methodology used to charge expenses to sponsored awards, including a detailed justification for how they determined that the allocation methodology used was appropriate.
3. Direct OSU to strengthen the administrative and management controls and processes over purchasing equipment and materials/supplies at the end of a project's POP. Processes could include requiring OSU to specifically review all equipment and materials/supplies purchased during the final 90 days of an award's POP to evaluate whether the costs are allocable in accordance with all relevant Federal and sponsor-specific regulations before charging the expenses to a sponsored project.

Ohio State University Response: OSU disagreed with this finding, however, it did agree that the following expense was not allocable to the NSF award charged:

| Description | Audit Sample | NSF Award No. | Fiscal Year | Questioned Costs |
|--|--------------|---------------|-------------|------------------|
| April 2016 Unallocable Equipment Expense | C&C_102 | ██████████ | 2016 | \$12,759 |
| Total | | | | \$12,759 |

Auditors' Additional Comments: Our position regarding this finding does not change.

Finding 2: NSF Approval Not Obtained Before Transferring Significant Parts of Award Research to Another Organization

OSU transferred a significant part of the research, and a substantive amount of the effort, awarded under NSF Award No. ██████████ to another organization without receiving NSF's approval to do so, as required by the NSF *Proposal and Award Policies and Procedures Guide* (PAPPG).¹³ Specifically, OSU did not request approval to contract or transfer a significant amount of the research or effort under the award to another organization before the audit,¹⁴ either in the original grant proposal or through a subsequent request¹⁵ submitted via NSF's electronic systems;¹⁶ however, OSU awarded \$147,410, or 54.7 percent of the \$269,504 awarded for this grant, to the ██████████ to allow a post-doctoral student to perform grant-related research with a microlensing team at ██████████. The subaward's POP was 2.67 years,¹⁷ or 89 percent of the NSF award's 3-year POP.¹⁸

OSU did not have sufficient policies or procedures in place to ensure that it always obtained authorization from appropriate NSF personnel when transferring a significant amount of the

¹³ NSF PAPPG 15-1, Part II, Award & Administration Guidelines (AAG), Chapter II: Grant Administration, Section B.3 states that, excluding the purchase of items such as commercially available materials and supplies, equipment, or general support services allowable under the grant, organizations may not subaward, transfer, or contract out any part of an NSF award to another organization without prior NSF authorization. Further, NSF's December 26, 2014, Grant General Conditions, Section 8 states that the grantee is required to obtain prior written approval from the cognizant NSF Grants and Agreements Officer whenever there are significant changes in the project or its direction, such as a transfer of project effort (subaward).

¹⁴ In response to a documentation request that we submitted during the audit, OSU confirmed that it did not request NSF's permission at the time it entered into the subaward, but that it was in the process of requesting NSF approval for this subaward as of September 10, 2018.

¹⁵ NSF 15-1, PAPPG, Part II, Chapter II, Section B.3 states that the intent to enter into a subaward agreement should be disclosed in the proposal submission, and that if it becomes necessary to subaward, transfer, or contract out part of an NSF award after a grant has been made, the grantee shall submit, at a minimum (i) a clear description of the work to be performed by each subrecipient and (ii) a separate budget for each subaward, and NSF will indicate its authorization by an amendment to the grant signed by the Grants and Agreements Officer. Further, NSF's December 26, 2014, Grant General Conditions, Section 8 states that grantees do not require NSF authorization to transfer a significant part of the research or substantive effort to another organization that has been disclosed in the proposal, but if it becomes necessary to transfer a significant part of the research or effort after a grant has been made, the request shall include a clear description of the work to be performed and a proposal budget, and NSF will indicate its approval of such changes by an amendment to the grant signed by the cognizant NSF Grants and Agreements Officer.

¹⁶ NSF 15-1, PAPPG, Part II, Chapter II, Section A.2 states that all notifications and requests contained in AAG Exhibit II-1, which includes subawarding, transferring, or contracting out part of an NSF award, must be submitted electronically via use of NSF's electronic systems.

¹⁷ The POP of this subaward was January 1, 2016, through August 31, 2018.

¹⁸ The POP of NSF Award No. ██████████ was September 1, 2015, through August 31, 2018.

research funded by NSF awards to other organizations. Because OSU did not receive authorization to enter into the subaward agreement identified above, we are questioning the cumulative direct, and associated indirect, costs that OSU charged NSF for this subaward as of January 31, 2018, the end of our audit period.

Table 2. Unallowable Subaward Payments

| Description | NSF Award No. | Fiscal Year | Questioned Costs |
|-------------------------------|---------------|-------------|------------------------|
| Subaward | | 2016-2019 | \$76,822 ¹⁹ |
| Total Questioned Costs | | | <u>\$76,822</u> |

Source: Auditor summary of questioned transactions.

Recommendations

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

1. Resolve the \$76,822 in questioned subaward costs and direct OSU to repay or otherwise remove the sustained questioned costs from its NSF awards.
2. Direct OSU to strengthen the administrative and management controls and processes over transferring significant parts of federally funded research to other organizations. Processes could include:
 - a. requiring all subawards sponsored by Federal funding to be approved by the Federal award sponsor before formally entering into a subaward agreement; and,
 - b. requiring periodic training for PIs and other personnel responsible for entering into subaward agreements.

Ohio State University Response: OSU disagreed with this finding.

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

Finding 3: Unsupported Expenses

OSU was unable to provide adequate documentation to support the allocability, allowability, and reasonableness of \$67,006 of expenses charged to NSF awards during the audit period, as required by relevant Federal policies.²⁰ Specifically:

¹⁹ Calculated as \$63,322 (the total invoiced by [redacted]) plus \$13,500 (the indirect costs that OSU claimed related to the direct costs invoiced by [redacted]).

²⁰ According to 2 Part CFR §200.403(a) and 2 CFR Part 220, Appendix A, Section C.2, a cost must be reasonable and allocable to be allowable under a Federal award. Further, §200.403(g) states that a cost must be adequately documented in order to be allowable on a Federal award, and 2 CFR Part §215.21(b)(7) states that an awardee’s financial management system shall provide accounting records that are supported by source documentation.

- In August 2016, OSU charged NSF Award No. [REDACTED] for a \$22,208 invoice for licenses and professional fees associated with a software platform. The invoice did not identify how the service provider calculated the total amount charged, nor did it identify the period in which OSU received these services. The PI provided e-mail documentation supporting that the amount invoiced was an advance payment based on the PI's estimate, [REDACTED].
[REDACTED]
As a result, we were unable to verify that OSU used the funds to reimburse actual, reasonable, and allowable expenses. Therefore, we are questioning all costs associated with this invoice.
- In October 2015, OSU charged NSF Award No. [REDACTED] for \$3,088 in supplemental pay provided to a visiting scholar.²¹ OSU noted that it provided the additional pay to assist the visiting scholar in covering rent, utilities, and per diem expenses; however, OSU was unable to provide support indicating that it had reimbursed the actual costs incurred, or that it had a formal agreement with the scholar to provide the additional funds. As such, we were unable to verify that OSU used the funds to reimburse actual, reasonable, and allowable expenses. Therefore, we are questioning all costs associated with the supplemental pay.
- In January 2016, OSU charged NSF Award No. [REDACTED] for \$88,801 in travel expenses incurred for members of the [REDACTED] team to travel to [REDACTED] for a research expedition. OSU was unable to provide documentation to support expenses incurred to purchase a laptop and dinner during this trip. Therefore, we concluded that the amount associated with these expenses, totaling \$1,540, is unsupported.
- In [REDACTED], OSU charged NSF Award No. [REDACTED] for \$26,368 in supplemental salary paid to the PI of this award while the PI was on sabbatical. OSU was unable to provide an approved Faculty Professional Leave (FPL) request to support that OSU had approved these supplemental salary payments, nor did it provide any documentation to support that NSF had approved OSU's use of award funding to support the PI's sabbatical leave. Further, the PI charged supplemental salary to this award for [REDACTED] of the [REDACTED] academic year; however, the PI only reported working on this award for [REDACTED] each year. As such, we were unable to verify that OSU used the funds to reimburse actual, reasonable, and allowable expenses. Therefore, we are questioning all costs associated with the supplemental salary payments.
- In June 2015, OSU charged NSF Award No. [REDACTED] for \$10,675, or 70 percent of a travel advance provided to a graduate student to conduct grant-related fieldwork in [REDACTED] and [REDACTED]. We determined that it appeared to be reasonable for OSU to charge 70 percent of the travel advance to this award; however, we noted that OSU did not have adequate receipts to support \$9,497 of the expenses related to the travel to [REDACTED]. As such,

²¹ While it appears that OSU charged \$7,720 to this award for supplemental salary provided to this scholar, we are only questioning the \$3,088 of supplemental salary selected as part of our transaction testing.

we were unable to verify that OSU used the funds to reimburse actual, reasonable, and allowable expenses. Therefore, we are questioning the \$9,497 in travel costs associated with the travel to [REDACTED].

- In June 2015, OSU charged NSF Award No. [REDACTED] for \$13,275 in travel expenses incurred to conduct grant-related fieldwork. The general purpose of the travel appeared to benefit this award; however, OSU was unable to provide sufficient documentation to support that the \$4,305 of airfare expenses incurred were reasonable, allocable, or allowable, including \$2,125 in change fees. Therefore, we are questioning the \$4,305 in travel costs associated with airfare expenses.

OSU does not have appropriate policies and procedures in place to ensure that it always retains sufficient documentation to support that costs charged to Federal awards are allocable, reasonable, or allowable. As a result, we were unable to verify that all selected costs were allowable on the NSF awards charged. Therefore, we are questioning \$67,006 of unsupported direct, and associated indirect, expenses, as follows:

Table 3. Unsupported Expenses

| Description | NSF Award No. | Fiscal Year | Questioned Costs |
|---|---------------|-------------|------------------------|
| August 2016 Unsupported Software Expense | [REDACTED] | 2017 | \$22,208 |
| October 2015 Unsupported Salary Expense | [REDACTED] | 2016 | 3,088 |
| January 2016 Unsupported Travel Expense | [REDACTED] | 2016 | 1,540 |
| [REDACTED] Unsupported Sabbatical Expense | [REDACTED] | [REDACTED] | 26,368 |
| June 2015 Unsupported Travel Expense | [REDACTED] | 2015 | 9,497 |
| June 2015 Unsupported Travel Expense | [REDACTED] | 2015 | 4,305 |
| Total Questioned Costs | | | <u>\$67,006</u> |

Source: Auditor summary of questioned transactions.

Recommendations

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

1. Resolve the \$67,006 in questioned software, salary, and travel costs and direct OSU to repay or otherwise remove the sustained questioned costs from its NSF awards.
2. Direct OSU to strengthen the administrative and management controls and processes over obtaining and maintaining sufficient supporting documentation. Processes could include:
 - a. implementing controls to ensure that OSU can only reimburse invoices from consultants with active consulting agreements;
 - b. performing reviews of sabbatical expenses charged to sponsored awards;

- c. performing reviews of transactions posted in the final month of each award to ensure that PIs do not bill expenses in anticipation of the award's expiration; and,
- d. ensuring that all reimbursed travel expenses are supported by original receipts.

Ohio State University Response: OSU disagreed with this finding.

Auditors' Additional Comments: Our position regarding this finding does not change.

Finding 4: Unallowable Expenses

OSU charged \$46,178 of unallowable expenses to 15 NSF awards, as follows:

- ***Unallowable Salary Expenses***

OSU inappropriately charged unallowable salary expenses to an NSF award. Specifically:

- In June 2017, OSU charged NSF Award No. [REDACTED] for \$9,666 in salary expenses provided to an OSU employee as supplemental compensation for providing consulting services on this award. Because OSU did not include this intra-university consulting payment in the budget for this award and did not specifically obtain NSF's approval for the payment, the extra compensation is not allowable on this award per OSU's policies and procedures.²² Further, we noted that OSU did not have a consulting agreement in place to support how it had determined the amount of the payment to be reasonable and to identify the period of performance for these services. Therefore, we are questioning all salary and fringe²³ costs associated with this payment.

- ***Unallowable Travel Expenses***

OSU inappropriately charged unallowable travel expenses to nine NSF awards. Specifically:

- In June 2015, OSU charged NSF Award No. [REDACTED] for \$108 in personal travel costs that the PI incurred while attending a grant-related conference.²⁴ We are questioning the costs associated with these personal expenses.

²² OSU's Allowable Costs policy states that any charges for work representing extra compensation above the base salary are only allowable when such arrangements are specifically provided for in the sponsored agreement or approved in writing by the sponsoring agency.

²³ OSU applied the questioned fringe benefits at a rate of 25.53% rather than at the appropriate rate of 23% per OSU's Negotiated Indirect Cost Rate Agreement (NICRA):

- 7/1/2016 to 6/30/2017: 23.0% for Faculty

²⁴ OSU Policy 2.11 – Travel states that travelers incurring additional costs by taking vacation in conjunction with business travel must pay for the costs of travel and other expenses using personal funds and request reimbursement for the business travel costs after completing the trip.

- In July 2015, OSU charged NSF Award No. [REDACTED] for \$881 in personal travel costs that the PI incurred while attending and presenting at a symposium.²³ We are questioning the costs associated with these personal expenses.
- In September 2015, OSU charged NSF Award No. [REDACTED] for \$244 in unallowable travel expenses that the PI incurred while conducting field research and attending a conference. Specifically, OSU made errors when converting taxi and gas expenses into U.S. dollars (USD).²⁵ In addition, the PI claimed per diem amounts in excess of the daily maximum amounts.²⁶ Therefore, we are questioning the costs associated with these overpayments.
- In March 2017, OSU charged NSF Award No. [REDACTED] for \$2,483 in airfare for the PI to conduct field research in [REDACTED]. However, the PI purchased a portion of this airfare from a non-U.S. flag carrier, despite being required to comply with the Fly America Act.²⁷ Because we were unable to determine the portion of this expense that related to the non-compliant airfare, we are questioning the full cost of this airfare.
- In February 2016, OSU charged NSF Award No. [REDACTED] for \$439 in unallowable travel expenses that the PI incurred while attending a conference. Specifically, the PI claimed lodging expenses in excess of the allowable quoted conference rate.²⁸ Therefore, we are questioning the costs associated with this overpayment.
- In August 2016, OSU charged NSF Award No. [REDACTED] for \$13,020 in airfare for the PI of this award to attend a workshop in [REDACTED]. However, the PI booked one leg of [REDACTED] flight as a business-class fare, rather than as standard airfare.²⁹ Because we were unable to separate the cost of this leg of the trip from the cost of the remaining airfare, we are questioning the full cost of this airfare.
- In July 2017, OSU charged NSF Award No. [REDACTED] for \$97 in unallowable travel expenses that the PI incurred while presenting results at a conference in [REDACTED]. Specifically, the PI claimed per diem amounts that exceeded the daily

²⁵ OSU's Sponsored Program Travel Policies states that travelers should use Oanda's currency conversion website to identify the rate the travelers should use to convert foreign currency into USD. The traveler used the correct conversion rate; however, they made errors when converting two receipt amounts into USD.

²⁶ OSU Policy 2.11 – Travel states that meal allowances are based upon per diem rates that vary by city location and provides a link to the General Services Administration per diem rates.

²⁷ NSF PAPPG 11-1, Part II, Chapter VI, Section G.1.b.(i) states that travelers must comply with the *Fly America Act*, which requires travelers to use U.S. flag carriers if they are traveling using funds provided by the Federal Government.

²⁸ OSU Policy 2.11 – Travel states that lodging payments must not exceed either the conference rate at the conference/convention site or twice the Federal lodging rate for the business travel location.

²⁹ According to 2 CFR Part 220, Appendix A, Section J.53.c., airfare costs that exceed the cost of standard commercial airfare are unallowable unless the organization appropriately justifies and documents an authorized exception. Further, OSU Policy 2.11 – Travel states that employees may not purchase economy plus, seating upgrades, or pre-boarding options using university resources, and that OSU will not reimburse these purchases.

maximum amounts. Therefore, we are questioning the costs associated with this overpayment.

- In October 2017, OSU charged NSF Award No. [REDACTED] for \$2,656 in unallowable travel expenses that the PI incurred while traveling to [REDACTED] and [REDACTED]. Because the PI's travel to [REDACTED] was personal in nature, the amount claimed for airfare included both personal and business travel. However, we were unable to separate the personal portion of the airfare from the business portion. Further, the PI's return flight from [REDACTED] did not comply with the Fly America Act.³⁰ Therefore, we are questioning the full cost of this airfare.
- In August 2017, OSU charged NSF Award No. [REDACTED] for \$276 in unallowable travel expenses that the PI incurred while attending a conference. Specifically, the PI rented a car to travel from the airport to the conference location; however, the conference provided chartered buses at a lower cost. Because the rental car was not the most economical type of transportation³¹ and the PI appears to have elected to rent the car primarily for personal travel after the conference ended, we are questioning the \$276 difference between the cost of a round-trip ticket on the chartered bus and the cost of the rental car and gasoline.
- In June 2015, OSU charged NSF Award No. [REDACTED] for \$2,601 in unallowable travel expenses that the PI incurred while conducting research in [REDACTED] and presenting research results at two international conferences. Specifically, OSU reimbursed the PI for two nights in a hotel at a rate that was higher than twice the maximum Federal rate.³² In addition, three of the PI's plane tickets were premium economy fares, rather than the allowable standard commercial airfare. Therefore, we are questioning the costs associated with the overclaimed lodging and premium economy flights.

- ***Unallowable Participant Support Cost Expenses***³³

OSU inappropriately charged travel expenses as participant support costs (PSCs) on two NSF awards. Specifically:

- In September 2015, OSU used PSC funds awarded on NSF Award No. [REDACTED] to reimburse a post-doctoral student for \$1,939 in travel expenses incurred to attend a conference in [REDACTED]. Because the PSC budget did not include funding to

³⁰ NSF PAPPG 14-1, Part II, Chapter VI, Section G.1.b.(i) states that travelers must comply with the *Fly America Act*, which requires travelers to use U.S. flag carriers if they are traveling using funds provided by the Federal Government.

³¹ OSU Policy 2.11 – Travel states that use of a rental vehicle as a primary mode of travel transportation is authorized only if renting a vehicle and driving is more economical than any other type of transportation, or if the destination is not otherwise accessible.

³² OSU Policy 2.11 – Travel states that lodging payments must not exceed twice the Federal lodging rate for the business travel location.

³³ NSF Grant Proposal Guide 07-140, Chapter II, Section C.2.g(v), Footnote 21 and NSF PAPPG 16-1, Part II, Chapter V, Section A.3.b. state that written authorization from the cognizant NSF Program Officer is required prior to the reallocation of funds provided for PSCs.

support post-doctoral student travel to conferences, and because NSF did not approve rebudgeting of PSCs under this award, OSU should not have charged these costs to this award. Further, the post-doctoral student who received the travel reimbursement was not listed in the budget or annual reports for this award, nor did the student allocate effort to this award. Moreover, the PI provided an annual report that identified the post-doctoral student as a participant who performed research and presented at a conference related to a different NSF award, NSF Award No. [REDACTED].

- In July 2015, OSU used PSC funds awarded on NSF Award No. [REDACTED] to reimburse the PI for \$2,410 in travel costs incurred to present the project results at a conference in [REDACTED]. Because the PSC budget did not include funding for this trip and because NSF did not approve rebudgeting of PSCs under this award, OSU should not have charged these costs to this award. Further, the PI did not mention this trip in the reports for this award; instead, the PI included the trip in a report for a different NSF award, NSF Award No. [REDACTED].
- In March 2017, OSU used PSC funds awarded on NSF Award No. [REDACTED] to reimburse an invited speaker for \$2,055 in travel costs incurred to travel to a workshop. Because the speaker began the travel well in advance of the workshop, a portion of this trip was outside of the scope of the PSC funding for this award, and NSF did not approve rebudgeting of PSCs under this award. In addition, the traveler charged the award for an unallowable first-class airfare upgrade.³⁴ OSU should not have charged this NSF award for the costs associated with travel days that were not supported by the PSC budget, or for the fare upgrade. Because the traveler split several travel expenses with a co-PI for the award, we are also questioning the relevant expenses in the co-PI's travel reimbursement, for a total questioned amount of \$2,859.
- In December 2016, OSU used PSC funds awarded on NSF Award No. [REDACTED] to reimburse a co-PI for \$3,292 in travel costs incurred to travel to a workshop. Because the co-PI began the travel well in advance of the workshop, a portion of this trip was outside of the scope of the PSC funding for this award, and NSF did not approve rebudgeting of PSCs under this award. In addition, the traveler charged the award for a full conference registration fee when the award budget only included registration for a one-day workshop. Because the PSC budget did not support either the costs associated with the travel days or the full registration fee, OSU should not have charged \$2,335 to this award.

³⁴ According to 2 Part CFR §200.474 (d), airfare costs that exceed the cost of standard commercial airfare are unallowable with limited exceptions, which did not apply to the sampled airfare. Further, OSU Policy 2.11 – Travel states that employees may not purchase first-class airfare using university resources and that OSU will not reimburse such purchases.

- ***Unallowable Pre-Award Expenses***³⁵

OSU inappropriately charged unallowable pre-award expenses to an NSF award. Specifically:

- On April 26, 2016, or 128 days before NSF Award No. [REDACTED] became effective,³⁶ OSU charged the award for \$2,015 of expenses incurred to purchase PVC piping. Because the PI did not receive NSF approval to incur costs more than 90 days before the award's effective date, these costs are not allowable on this award.

- ***Unallowable Promotional Expenses***³⁷

OSU inappropriately charged unallowable promotional items to an NSF award. Specifically:

- In August 2017, OSU charged NSF Award No. [REDACTED] for \$1,782 of expenses incurred to purchase 190 [REDACTED]-branded water bottles to hand out to students during a community development event. Because OSU distributed the water bottles as part of an event to help students learn about the [REDACTED] program, "to help them build a connection with each other and the community," the water bottles appear to be promotional items. Promotional items are unallowable on NSF awards.

- ***Unallowable Foreign Currency Expenses***

OSU inappropriately charged unallowable expenses related to an incorrect foreign currency conversion to an NSF award. Specifically:

- In May 2015, OSU entered into an agreement with an international vendor to purchase \$13,655 in equipment related to work under NSF Award No. [REDACTED]. OSU negotiated the \$13,655 price in USD; however, OSU actually paid a total of \$14,022 for the equipment because the exchange rate was different when it paid the 12,282.99 Euro invoice via wire transfer. Because OSU had negotiated the equipment price in USD, the \$367 paid in excess of the negotiated price is unallowable.³⁸

OSU does not have sufficient policies and procedures in place to ensure that it only charges allowable costs to NSF awards. As a result, OSU inappropriately charged unallowable salary,

³⁵ NSF PAPPG 16-1, Part II, Chapter V, Section A.3.b.1 states that written prior approval from the NSF Grants and Agreements Officer is required for pre-award costs in excess of 90 days.

³⁶ NSF Award No. [REDACTED] became effective on September 1, 2016.

³⁷ According to 2 CFR Part 220, Appendix A, Section J.1.f.(3), the costs of promotional items and memorabilia, including models, gifts, and souvenirs, are unallowable.

³⁸ OSU's International Purchasing policy states that to avoid problems with fluctuations in currency exchange rates, price quotations should be requested in USD. The price quotation may be in the appropriate currency, but prices must be converted to USD at the current exchange rate on the date of the price quotation on the requisition.

travel, participant support, pre-award, promotional, and foreign currency expenses to NSF awards. Therefore, we are questioning \$46,178 of unallowable direct, and associated indirect, expenses, as follows:

Table 4. Unallowable Expenses

| Description | NSF Award No. | Fiscal Year | Questioned Costs |
|---|---------------|-------------|------------------------|
| June 2017 Unallowable Salary Expense | ██████████ | 2017 | \$9,666 |
| June 2015 Unallowable Personal Travel Expense | ██████████ | 2015 | 108 |
| July 2015 Unallowable Personal Travel Expense | ██████████ | 2016 | 881 |
| September 2015 Unallowable Transportation and Per Diem Expenses | ██████████ | 2016 | 244 |
| March 2017 Unallowable Foreign Flag Carrier Airfare | ██████████ | 2017 | 2,483 |
| February 2016 Unallowable Lodging Expense | ██████████ | 2016 | 439 |
| August 2016 Unallowable Airfare Upgrade | ██████████ | 2017 | 13,020 |
| July 2017 Unallowable Per Diem Expense | ██████████ | 2018 | 97 |
| October 2017 Unallowable Personal Travel Expense and Foreign Flag Carrier Airfare | ██████████ | 2018 | 2,656 |
| August 2017 Unallowable Rental Car Expense | ██████████ | 2018 | 276 |
| June 2015 Unallowable Lodging and Airfare Upgrade Expenses | ██████████ | 2015 | 2,601 |
| September 2015 Unallowable Travel Expense Charged as a PSC | ██████████ | 2016 | 1,939 |
| July 2015 Unallowable Travel Expense Charged as a PSC | ██████████ | 2016 | 2,410 |
| March 2017 Unallowable Travel Expense Charged as a PSC | ██████████ | 2017 | 2,859 |
| December 2016 Unallowable Travel Expense Charged as a PSC | ██████████ | 2017 | 2,335 |
| April 2016 Unallowable Pre-Award Expense | ██████████ | 2016 | 2,015 |
| August 2017 Unallowable Advertising Expense | ██████████ | 2018 | 1,782 |
| May 2015 Unallowable Foreign Currency Expense | ██████████ | 2015 | 367 |
| Total Questioned Costs | | | <u>\$46,178</u> |

Source: Auditor summary of questioned transactions.

Recommendations

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

1. Resolve the \$46,178 in questioned salary, travel, participant support, pre-award, promotional, and foreign currency costs and direct OSU to repay or otherwise remove the sustained questioned costs from its NSF awards.

2. Direct OSU to strengthen the administrative and management procedures over allocating salary expenses to sponsored awards. Procedures could include:
 - a. reviewing personnel expenses related to leave (e.g., personal leave, sick leave, sabbaticals) that OSU allocates to sponsored projects; and,
 - b. performing periodic reviews of transactions in which personnel charge consultant fees as payroll.
3. Direct OSU to strengthen the administrative and management procedures over allocating travel expenses to sponsored awards. Procedures could include:
 - a. reviewing all foreign airfare purchases for compliance with the Fly America Act before charging the expenses to federally sponsored awards;
 - b. performing periodic reviews of transactions involving airfare to ensure that PIs do not inappropriately charge sponsored awards for business-class or premium economy fares; and,
 - c. reviewing reimbursement requests to ensure that OSU can support the business purpose for all travel days for which OSU reimbursed expenses.
4. Direct OSU to strengthen the administrative and management procedures over allocating PSCs to sponsored projects. Procedures could include requiring that OSU review and approve the rebudgeting of funds to PSCs before moving the funds or charging the expenses to a federally sponsored project.
5. Direct OSU to strengthen the administrative and management procedures over allocating pre-award expenses to sponsored projects. Procedures could include requiring OSU to review all pre-award transactions before charging the expenses to a federally sponsored project.
6. Direct OSU to strengthen the administrative and management procedures over allocating promotion-related expenses to sponsored projects. Procedures could include periodic reviews of transactions with high-risk descriptions to ensure that OSU does not charge promotion-related expenses to federally sponsored projects.
7. Direct OSU to strengthen the administrative and management procedures over allocating expenses involving foreign currency to sponsored projects. Procedures could include reviewing and documenting historical exchange rates to ensure that personnel convert the foreign currency to the appropriate amount before charging the expense to federally sponsored projects.

Ohio State University Response: OSU disagreed with this finding, however, it did agree that the following expenses were not allowable on the NSF awards charged:

| Description | Audit Sample | NSF Award No. | Fiscal Year | Questioned Costs |
|---|--------------|---------------|-------------|------------------------|
| June 2015 Unallowable Personal Travel Expense | C&C_026 | ████████ | 2015 | \$108 |
| September 2015 Unallowable Transportation and Per Diem Expenses | C&C_061 | ████████ | 2016 | 244 |
| February 2016 Unallowable Lodging Expense | C&C_084 | ████████ | 2016 | 439 |
| August 2016 Unallowable Airfare Upgrade | C&C_126 | ████████ | 2017 | 13,020 |
| May 2015 Unallowable Foreign Currency Expense | C&C_025 | ████████ | 2015 | <u>367</u> |
| Total | | | | <u>\$14,178</u> |

Auditors' Additional Comments: Our position regarding this finding does not change.

Finding 5: Inappropriate Application of Indirect Costs

In September 2016, OSU inappropriately applied indirect costs to expenses incurred on NSF Award No. ██████████ to purchase a computing workstation that should have been excluded from OSU's Modified Total Direct Cost (MTDC) base per 2 CFR Part 220, Appendix A, Section G.2 and OSU's Negotiated Indirect Cost Rate Agreements (NICRAs).³⁹ As a result, OSU charged NSF for \$7,604 in unallowable indirect costs.

OSU does not have sufficient policies and procedures in place to ensure that it appropriately accounts for computer purchases as either materials/supplies or equipment based on the items' purchase price and useful life. Therefore, we are questioning \$7,604 of inappropriately applied indirect costs, as follows:

Table 5. Inappropriate Application of Indirect Costs

| Description | NSF Award No. | Fiscal Year | Questioned Costs |
|--|---------------|-------------|-----------------------|
| September 2016 Indirect Costs Applied to Equipment | ████████ | 2017 | \$7,604 |
| Total Questioned Costs | | | <u>\$7,604</u> |

Source: Auditor summary of questioned transactions.

Recommendations

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

³⁹ Because the computing workstation purchased had a cost of more than \$5,000, had a useful life of more than one year, and functioned independently, OSU should have accounted for the workstation as equipment. According to 2 CFR Part 220, Appendix A, Section G.2 and OSU's NICRAs published from July 1, 2006 through June 30, 2020, equipment and capital expenditures should be excluded from the indirect cost base.

1. Resolve the \$7,604 in questioned indirect costs and direct OSU to repay or otherwise remove the sustained questioned costs from its NSF awards.
2. Direct OSU to strengthen the administrative and management controls and processes over applying indirect costs to Federal awards. Processes could include developing new policies and procedures that require OSU to manually review all materials and supplies purchases that exceed \$5,000, to ensure that OSU has not erroneously included equipment in the MTDC base when it should have capitalized the equipment instead.

Ohio State University Response: OSU stated that it disagreed with this finding, however, its detailed response indicated that it agreed that indirect costs should not have been charged to the sampled equipment expense, as follows:

| Description | Audit Sample | NSF Award No. | Fiscal Year | Questioned Costs |
|--|--------------|---------------|-------------|------------------|
| September 2016 Indirect Costs Applied to Equipment | C&C_128 | ██████████ | 2017 | \$7,604 |
| Total | | | | \$7,604 |

Auditors' Additional Comments: Our position regarding this finding does not change.

Finding 6: Insufficient Human Subject Payment Policies

OSU does not have sufficient policies and procedures in place to ensure that it tracks and reconciles payments to human subjects in a timely manner. Specifically, OSU's Payments to Human Subjects Policy does not establish a procedure for reconciling cash advance payments or gift card purchases provided to pay human subjects, nor does it include a deadline for the reconciliation process. The human subject payments that we tested appeared to be reasonable and allocable to their respective NSF awards; however, we did note that, because it lacked a detailed human subjects payment policy, OSU did not reconcile human subject payments until significantly after making the payments, as follows:

- In January 2017, OSU charged NSF Award No. ██████████ for \$9,121 of expenses incurred for cash payments that the PI made to human subjects between 2012 and 2014. According to OSU, the PI believed that ██████ had charged the expense to the grant in 2012 when ██████ received the original cash advance to make the payments. ██████ did not understand that ██████ would need to complete a Human Subject Account Reimbursement Form and return it to the Office of Sponsored Programs (OSP) to close out the cash advance. OSP notified the PI of this requirement during the award close-out process, and ██████ completed and returned the form at that time. As a result, the payments posted as expenses to the NSF award approximately 5 years after the PI received the original cash advance and 3 years after ██████ made the final payments.
- In March 2017, OSU charged NSF Award No. ██████████ for \$4,851 of expenses incurred to purchase electronic gift cards used to pay human subjects. Although the cards were included in the award budget and OSU personnel appeared to have appropriately

distributed the cards, the person who issued the cards did not require participants to sign receipts certifying that they had received the cards until September 2018, when we requested the receipts as part of our audit.

This issue did not result in any questioned costs; however, without sufficient policies and procedures in place to ensure that OSU reconciles high-risk cash and gift card payments in a timely manner, there is a risk that personnel will inappropriately disburse these payments.

Recommendations

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

1. Direct OSU to clarify its existing policies surrounding payments to human research subjects to establish a formal process/procedure and reasonable deadline(s) for closing out cash advances and for receiving and reconciling gift card payment receipts.
2. Direct OSU to strengthen the administrative and management procedures in place surrounding payments to human research subjects. Procedures could include:
 - a. requiring periodic training for PIs and other personnel responsible for disbursing payments to human subjects; and,
 - b. performing periodic reviews of open cash advances and providing reminders to responsible personnel to follow the proper closeout procedures.

Ohio State University Response: OSU disagreed with this finding.

Auditors' Additional Comments: Our position regarding this finding does not change.

Finding 7: Incorrect Application of Proposed Indirect Cost Rates

Contrary to Federal⁴⁰ and NSF guidance,⁴¹ OSU applied incorrect indirect cost rates to direct expenses accumulated on six NSF awards. For each of these awards, OSU applied the NICRA rate that was in effect at the time it submitted the grant proposal, rather than the rate that was in effect as of the effective date of the NSF award. As a result, OSU applied indirect costs at a rate that was lower than the approved NICRA rate as of the effective date of the award.

OSU did not have sufficient policies and procedures in place to ensure that it calculated indirect costs using the NICRA rates in effect as of the effective date of the NSF awards, rather than the rates in effect as of the date that OSU submitted its grant proposal or received the grant award.

⁴⁰ According to 2 CFR Part 220, Appendix A, Section G.7 when identifying and computing indirect costs at Institutions of Higher Education (IHE), Federal Agencies must use the negotiated rates in effect at the time of the initial award throughout the life of the award.

⁴¹ NSF also requires IHEs to use the negotiated indirect cost rate in effect at the time the award was made throughout the life of the award. See NSF PAPPs 09-1, 10-1, and 13-1, Part I, Chapter II, Section C.2.g.(viii).

As a result, OSU applied inappropriate indirect cost rates to direct expenses accumulated on the awards shown in the table below.

Table 7. Incorrect Application of Proposed Indirect Cost Rates

| NSF Award No. | Award Effective Date | Appropriate Rate | Rate Applied |
|---------------|----------------------|------------------|--------------|
| | 10/01/2009 | 52.50% | 50.00% |
| | 10/01/2009 | 52.50% | 50.00% |
| | 02/15/2010 | 52.50% | 50.00% |
| | 12/15/2009 | 52.50% | 50.00% |
| | 09/15/2013 | 38.00% | 36.00% |
| | 07/01/2013 | 53.50% | 52.50% |

Source: Auditor summary of identified instances of non-compliance.

This issue did not result in any questioned costs; however, without policies and procedures in place to ensure that OSU uses the correct indirect cost rate, it is possible that OSU may overcharge sponsoring organizations for indirect costs in the future. Therefore, we are noting a compliance exception.

Recommendation

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

1. Direct OSU to strengthen the administrative and management controls and processes over establishing indirect cost rates for Federal awards to ensure that it applies costs at the rates in effect as of the effective date of the grant.

Ohio State University Response: OSU disagreed with this finding.

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

Finding 8: Non-Compliance with OSU Policies

OSU did not comply with its own internal policies and procedures when incurring costs charged to NSF awards, as follows:

- ***Non-Compliance with OSU Procurement Policies***

We identified four instances in which OSU employees did not comply with OSU’s procurement policies. Specifically:

- In February 2015, OSU charged NSF Award No. [REDACTED] for \$5,023 in subaward expenses that it should have accounted for as consulting services under its

procurement policies.⁴² OSU's procurement policies establish a clear distinction between subrecipients and vendors. However, OSU does not have appropriate procedures in place to ensure that it does not inappropriately categorize consultants as subrecipients. Because the costs charged appeared to be reasonable, we are only noting a compliance exception.

- In February 2015, OSU entered into a \$110,400 agreement with a consultant under NSF Award No. [REDACTED]. OSU was unable to support that the agreement was appropriately procured in accordance with OSU policy.⁴³ While the consultant was specifically identified in the NSF grant proposal, OSU's policies note that a single/sole source justification and/or a waiver of competitive bidding form should have been completed as the agreement was over \$10,000. As the consultant costs appeared reasonable and allocable to this award, we did not question any costs; however, we determined that OSU does not have appropriate procedures in place to ensure that it enforces its procurement policy.
- In August 2016, OSU charged NSF Award No. [REDACTED] for \$26,901 of expenses incurred to purchase services related to data processing; however, OSU was unable to provide documentation to support that it met competitive bidding requirements in accordance with OSU's procurement policies.⁴⁴ OSU policies state that procurement transactions that exceed \$25,000 must either undergo a competitive bidding process or have an approved justification for noncompetitive purchasing. However, OSU does not have appropriate procedures in place to ensure that it enforces this policy.
 - We also determined that these costs were not allocable to this award and therefore questioned all costs associated with these services in Finding 1.
- In August 2016, OSU charged NSF Award No. [REDACTED] for \$22,208 of expenses incurred to purchase a software license and pay professional fees associated with a software platform; however, OSU was unable to provide documentation to support that it obtained appropriate approval for this purchase from OSP.⁴⁵ OSU policies state that personnel should obtain OSP's approval before entering into software license agreements; however, OSU does not have appropriate procedures in place to ensure that it enforces this policy.

⁴² OSU's Subcontracting Policy states that a subrecipient serves as a co-investigator and is responsible for the end results of the research effort equally with the PI. A vendor provides ancillary goods or services that the PI needs to conduct the research effort.

⁴³ OSU's Consultant Agreement Procedure states that the competitive bidding process applies if the aggregate total of the consultant agreement fee is \$10,000 on a Federal contract. Personnel should submit a Single/Sole Source Justification and/or Waiver of Competitive Bidding form (PR-025) with any such request.

⁴⁴ OSU's Purchasing (Special Issues) Policy states that procurement transactions of \$25,000 or more require competitive bidding or an approved justification for noncompetitive purchasing. Personnel must submit a Single/Sole Source Justification and/or Waiver of Competitive Bidding form (PR-025) with the requisition when requesting a noncompetitive procurement.

⁴⁵ OSU's Software License Agreements Policy states that PIs should submit the license agreement and a completed requisition form to OSP's Procurement department.

- We also determined that these costs were not adequately supported and therefore questioned all costs associated with the software license purchase in Finding 3.
- ***Non-Compliance with OSU Cost Transfer Policies***⁴⁶

We identified two instances in which OSU employees did not comply with OSU's cost transfer policies. Specifically:

- On May 2, 2017, or 91 days after NSF Award No. [REDACTED] expired on January 31, 2017, OSU processed a cost transfer to move \$8,449 of travel costs incurred in 2016 to the award. The transferred expenses appeared to be reasonable and allocable; however, OSU policy dictates that personnel must complete cost transfers no later than 60 days after a project terminates.
- On November 7, 2017, OSU processed a cost transfer to move \$2,130 of student aid costs that it had originally posted on July 31, 2017, to NSF Award No. [REDACTED]. The transferred expenses appeared to be reasonable and allocable; however, OSU did not transfer these costs until 99 days after the original posting, and OSU policy dictates that personnel must complete cost transfers within 90 days of the date that OSU had originally recorded the cost in the financial accounting system.

OSU policies state that personnel must complete cost transfers within 90 days of the date that OSU had originally recorded the cost and no later than 60 days after the project terminates; however, OSU does not have appropriate procedures in place to ensure that it enforces this policy.

- ***Lack of Documentation for Constructive Airfare Costs***⁴⁷

We identified five instances in which OSU allowed travelers to combine personal travel with business-related travel but did not properly obtain or document the constructive airfare cost associated with the business portion of the trip to verify that the personal travel expenses did not increase the costs charged to NSF awards. Specifically:

- In April 2015, the PI of NSF Award No. [REDACTED] traveled to [REDACTED] to attend a scientific session meeting for career development. Rather than traveling immediately prior to the conference, the PI departed nearly two weeks early for personal travel. OSU provided a comparison quote for the cost of the business travel without the personal travel component; however, OSU had generated the quote approximately one month after the PI booked the original fare and less than

⁴⁶ OSU's Sponsored Projects Cost Transfers Policy states that the PI is responsible for ensuring that cost transfers are made within 90 days of the date that OSU originally recorded the cost in the Financial Accounting System but no later than 60 days after the project terminates.

⁴⁷ OSU Policy 2.11 – Travel states that when vacation time is added to university business travel, personnel must clearly identify and document any cost variance of expenses such as airfare, vehicle rental, and/or lodging in eTravel to validate that the vacation time does not add additional cost to the university.

two weeks before the PI's departure date. The travel expenses appeared to be reasonable; however, OSU was unable to support that it had properly documented the constructive airfare costs for the business portion of this trip.

- In December 2015, the PI of NSF Award No. [REDACTED] traveled to [REDACTED] to attend a conference. Rather than returning immediately after the conference ended, the PI spent an additional five days in [REDACTED] for personal travel. OSU provided a comparison quote for the cost of the business travel without the personal travel component; however, OSU had generated the quote approximately 2.5 months after the PI booked the original fare and less than one week before the PI's departure date. The travel expenses appeared to be reasonable; however, OSU was unable to support that it had properly documented the constructive airfare costs for the business portion of this trip.
- In July 2017, the PI of NSF Award No. [REDACTED] traveled to [REDACTED] to collaborate with other researchers and to speak at a symposium. As part of the return flight, the PI stopped in [REDACTED] for personal travel. OSU was unable to support that it had properly documented the constructive airfare costs for the business portion of this trip. Therefore, we questioned the airfare costs in Finding 4 and are noting a compliance exception in this finding.
- In April 2015, the PI of NSF Award No. [REDACTED] traveled from Ohio to [REDACTED] to present NSF-supported research results at a grant-related conference, then from [REDACTED] to [REDACTED], where [REDACTED] attended a non-grant-related conference before returning to Ohio. OSU was unable to support that it had properly documented the constructive airfare costs for the business portion of this trip that related to the NSF award. Therefore, we questioned the airfare costs in Finding 4 and are noting a compliance exception in this finding.
- In June 2017, the PI of NSF Award No. [REDACTED] traveled to [REDACTED] to attend a conference. Rather than returning immediately after the conference, the PI spent an additional two days in [REDACTED] for personal travel. OSU provided a comparison quote for the cost of the business portion of this trip; however, the comparison used dates in August 2017, when OSU conducted the comparison, rather than dates in June 2017, when the PI attended the conference. The flight expense appeared to be reasonable; however, OSU was unable to support that it had properly documented the constructive airfare costs for the business portion of this trip.

OSU policies state that personnel must clearly document cost variances incurred due to taking personal travel in conjunction with business travel; however, OSU does not have sufficient policies or procedures in place to ensure that personnel traveling for both business and personal purposes are only charging sponsors for costs related to the business purpose of the trip.

- **Travel Advance Not Settled within 30 Days**⁴⁸

We identified two instances in which OSU employees did not settle a travel advance within the required time period after completing a trip. OSU policies require travelers to reconcile expenses related to travel advances within 30 days of completing a trip; however, OSU does not have appropriate procedures in place to ensure that it enforces this policy.

- The PI of NSF Award No. [REDACTED] requested a cash advance for grant-related travel performed from April [REDACTED] 2017 to May [REDACTED] 2017 but did not submit an expense report to settle the travel advance until July [REDACTED] 2017, 66 days after [REDACTED] returned from [REDACTED] trip.
- A PhD student participating in a conference related to NSF Award No. [REDACTED] requested a cash advance for travel performed from August [REDACTED] 2014 to August [REDACTED] 2014 but did not submit an expense report to settle the travel advance until February [REDACTED] 2015, 171 days after [REDACTED] returned from his trip.

The compliance issues alone did not result in any questioned costs; however, OSU does not have sufficient policies or procedures in place to ensure that it consistently complies with its internal policies and procedures. Therefore, we are noting 13 instances of non-compliance with OSU policy, as follows:

Table 8. Non-Compliance with OSU Policies

| NSF Award No. | Compliance Issue Identified |
|---------------|--|
| [REDACTED] | Improperly Categorized Consulting Services |
| [REDACTED] | Lack of Documentation of Competitive Bidding |
| [REDACTED] | Lack of Documentation of Competitive Bidding |
| [REDACTED] | Lack of Prior Authorization for Software |
| [REDACTED] | Cost Transfer Not Processed within 60 Days After Project Termination |
| [REDACTED] | Cost Transfer Not Processed within 90 Days |
| [REDACTED] | Lack of Documentation for Constructive Airfare Costs |
| [REDACTED] | Lack of Documentation for Constructive Airfare Costs |
| [REDACTED] | Lack of Documentation for Constructive Airfare Costs |
| [REDACTED] | Lack of Documentation for Constructive Airfare Costs |
| [REDACTED] | Lack of Documentation for Constructive Airfare Costs |
| [REDACTED] | Travel Advance Not Settled within 30 Days |
| [REDACTED] | Travel Advance Not Settled within 30 Days |

Source: Auditor summary of identified instances of non-compliance.

⁴⁸ OSU Policy 2.11 – Travel states that personnel must reconcile and substantiate expenses associated with a cash advance within 30 days of completing the trip.

Recommendation

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

1. Direct OSU to strengthen the administrative and management procedures over procurement and travel on sponsored awards. Procedures could include:
 - a. requiring periodic training for PIs and other personnel responsible for approving and processing subawards, making purchases that exceed relevant procurement thresholds, processing cost transfers, and booking travel on sponsored awards;
 - b. implementing controls that would prevent personnel from processing consultant agreements that exceed \$10,000 or purchases that exceed \$25,000 without proper documentation of competitive bidding or an approved justification for noncompetitive purchasing;
 - c. implementing controls that would prevent personnel from purchasing software licenses on sponsored projects without first obtaining OSP’s approval;
 - d. implementing controls that would prevent OSU from processing cost transfers more than 90 days after originally posting the expense or more than 60 days after award expiration;
 - e. requiring award participants to provide constructive airfare for all travel requests that include personal travel before approving travel related to federally sponsored projects; and,
 - f. implementing controls that would prevent personnel from submitting travel advance reconciliations outside the 30-day allowable period without justification and specific approval.

Ohio State University Response: OSU disagreed with this finding, however, it did agree that it did not appropriately comply with OSU policies in the following identified exceptions:

| Description | Audit Sample | NSF Award No. | Fiscal Year |
|--|--------------|---------------|-------------|
| Lack of Documentation for Constructive Airfare Costs | C&C_026 | ██████ | 2015 |
| Lack of Documentation for Constructive Airfare Costs | C&C_084 | ██████ | 2016 |

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

Finding 9: Fringe Benefits Inappropriately Applied to Cost Transfers

OSU inappropriately applied fringe benefit rates to six payroll cost transfers selected during the audit period. For each of these cost transfers, OSU applied the fringe benefit rate that was in effect at the time of the transfer, rather than the rate that was in effect at the time OSU posted the original salary expense. As a result, OSU transferred fringe benefit costs onto or off of funding sources using an amount that differed from the original fringe expense charged to the award.

OSU's accounting system applies and removes fringe benefits based on the current effective fringe benefit rate, as outlined within OSU's NICRA, rather than the rate applicable when OSU initially incurred the salary expense.⁴⁹ As a result, OSU did not correctly apply fringe benefits to transferred salary costs when the fiscal year of the transfer differed from the fiscal year in which OSU incurred the original salary expense, as shown in the table below.

Table 9. Fringe Benefits Inappropriately Applied to Cost Transfers

| NSF Award No. | Date of Original Salary Expense | Date of Cost Transfer | Appropriate Rate | Rate Applied |
|---------------|---------------------------------|-----------------------|------------------|---------------------|
| | 07/31/2014 | 07/29/2015 | 16.9% | 16.3% |
| | 06/30/2015 | 08/12/2015 | 16.9% | 16.3% |
| | 06/30/2016 | 10/26/2016 | 16.3% | 12.0% |
| | 04/30/2016 | 10/26/2016 | 16.3% | 12.0% |
| | 06/30/2017 | 07/24/2017 | 12.0% | 12.7% ⁵⁰ |
| | 05/31/2017 & 06/30/2017 | 11/14/2017 | 10.2% | 9.7% ⁵¹ |

Source: Auditor summary of identified instances of non-compliance.

This issue did not result in any questioned costs; however, without policies and procedures in place to ensure that OSU uses the correct fringe benefit rate, it is possible that OSU may overcharge sponsoring organizations for fringe benefits in the future. Therefore, we are noting a compliance exception.

Recommendation

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

⁴⁹ According to OSU's NICRAs, the following fringe benefit rates applied to the selected payroll expenses:

- 7/1/2014 to 6/30/2015: 16.9% for Non-Student Specials / 10.8% for Students
- 7/1/2015 to 6/30/2016: 16.3% for Non-Student Specials / 11.4% for Students
- 7/1/2016 to 6/30/2017: 12.0% for Non-Student Specials / 10.2% for Students
- 7/1/2017 to 6/30/2018: 12.7% for Non-Student Specials / 9.7% for Students

⁵⁰ OSU processed this cost transfer to remove salary and fringe benefits from an NSF award. As OSU removed the fringe benefits at a rate that was higher than was the appropriate rate, this resulted in OSU removing excess fringe benefits from the award. Therefore, we are not questioning any costs.

⁵¹ OSU processed this cost transfer to remove fringe benefits that it mistakenly charged to an NSF award. As OSU removed the fringe benefits at a rate than was lower than was the rate originally applied to the salary transactions, this resulted in a small amount of unallowable fringe benefits remaining on the award. As the amount was immaterial, we are not questioning any costs.

1. Direct OSU to update its accounting system to ensure that it correctly applies and removes fringe benefits using the fringe benefit rates in effect when the original expenses are incurred.

Ohio State University Response: OSU disagreed with this finding.

Auditors' Additional Comments: Our position regarding this finding does not change.

Finding 10: Hours Inconsistent with Salary Agreement

OSU allowed a student to work, and to receive pay for, hours that exceeded the terms of the student's employment agreement. Specifically, in August 2016, OSU charged NSF Award No. [REDACTED] for \$1,311 in salary expenses related to an undergraduate student who performed 38 hours of work per week over the course of two weeks, while the student's employment agreement stated that he could work up to 28 hours per week.⁵²

OSU does not have sufficient policies or procedures in place to ensure that employees do not work hours in excess of those permitted by their salary agreements. Because OSU policy allows students to work up to 38 hours per week,⁵³ and because OSU was able to provide timesheets to support these hours, we did not question any costs associated with this finding. However, we are noting an instance of non-compliance, as OSU should not have paid the student for work performed outside of the student's employment agreement without specific approval.

Table 10. Hours Inconsistent with Salary Agreement

| NSF Award No. | Compliance Issue Identified |
|---------------|--|
| [REDACTED] | Hours Inconsistent with Salary Agreement |

Source: Auditor summary of identified instances of non-compliance.

Recommendation

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

1. Direct OSU to strengthen the administrative and management procedures in place surrounding student employment agreements. Procedures could include:
 - a. updating OSU's timekeeping system to prevent employees from recording hours in excess of those permitted by the employees' salary agreements without specific approval; and,

⁵² The student's employment agreement states that the offered position is part-time for up to 28 hours per week, and that it is a temporary position beginning on June [REDACTED] 2016, and lasting through the summer 2016 semester.

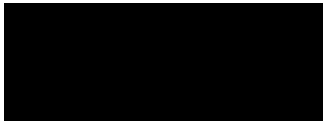
⁵³ OSU Student Employment Policy 10.10 states that student employees are restricted to working 28 hours per week during academic terms in which they are enrolled and 38 hours per week during their off academic term and official school breaks.

- b. performing periodic reviews of student employment agreements to ensure that the agreements are worded in a manner that is accurate and consistent with OSU's established policies.

Ohio State University Response: OSU disagreed with this finding.

Auditors' Additional Comments: Our position regarding this finding does not change.

COTTON & COMPANY LLP



Michael W. Gillespie, CPA, CFE
Partner
August 5, 2019

APPENDIX A: SCHEDULE OF QUESTIONED COSTS BY FINDING

NATIONAL SCIENCE FOUNDATION
ORDER # D17PB00321
PERFORMANCE AUDIT OF COSTS CLAIMED ON NSF AWARDS
THE OHIO STATE UNIVERSITY

SCHEDULE OF QUESTIONED COSTS BY FINDING

| Finding | Description | Questioned Costs | | Total |
|--------------|---|------------------------|-------------------------|-------------------------|
| | | Unsupported | Unallowable | |
| 1 | Expenses Not Appropriately Allocated to NSF Awards | \$0 | \$304,977 | \$304,977 |
| 2 | NSF Approval Not Obtained Before Transferring Significant Parts of Award Research to Another Organization | 0 | 76,822 | 76,822 |
| 3 | Unsupported Expenses | 67,006 | 0 | 67,006 |
| 4 | Unallowable Expenses | 0 | 46,178 | 46,178 |
| 5 | Inappropriate Application of Indirect Costs | 0 | 7,604 | 7,604 |
| 6 | Insufficient Human Subject Payment Policies | 0 | 0 | 0 |
| 7 | Incorrect Application of Proposed Indirect Cost Rates | 0 | 0 | 0 |
| 8 | Non-Compliance with OSU Policies | 0 | 0 | 0 |
| 9 | Fringe Benefits Inappropriately Applied to Cost Transfers | 0 | 0 | 0 |
| 10 | Hours Inconsistent with Salary Agreement | 0 | 0 | 0 |
| Total | | <u>\$67,006</u> | <u>\$435,581</u> | <u>\$502,587</u> |

APPENDIX B: THE OHIO STATE UNIVERSITY RESPONSE

In response to our request that OSU provide a written response to the findings and recommendations in the audit report Mr. Jeffrey Kemper, Senior Director, Financial Services and Procurement at OSU sent an email on July 17, 2019 that included the following:

Since the findings are based on the accumulation of the disallowances from the individual samples and we do not agree with almost all of the disallowances from the individual samples, we disagree with all of the findings and associated comments/recommendations for those findings.

Finding 1: OSU disagrees with finding; See Detailed Response to NSF Report Findings by Sample Number BW attached
Finding 2: OSU disagrees with finding; See Detailed Response to NSF Report Findings by Sample Number BW attached
Finding 3: OSU disagrees with finding; See Detailed Response to NSF Report Findings by Sample Number BW attached
Finding 4: OSU disagrees with finding; See Detailed Response to NSF Report Findings by Sample Number BW attached
Finding 5 OSU disagrees with finding; See Detailed Response to NSF Report Findings by Sample Number BW attached
Finding 6: OSU disagrees with finding; See Detailed Response to NSF Report Findings by Sample Number BW attached
Finding 7: OSU disagrees with finding; See Detailed Response to NSF Report Findings by Sample Number BW attached
Finding 8: OSU disagrees with finding; See Detailed Response to NSF Report Findings by Sample Number BW attached
Finding 9: OSU disagrees with finding; See Detailed Response to NSF Report Findings by Sample Number BW attached
Finding 10: OSU disagrees with finding; See Detailed Response to NSF Report Findings by Sample Number BW attached

When examining all of the questions and all of the answers provided for the samples that we are in disagreement with, we came to different conclusions on the allowability of the samples than the Cotton & Company auditors. The attached file Detailed Response to NSF Report Findings by Sample Number BW is a list of all 300 samples and our agreement or disagreement with the auditor's conclusion on the allowability of the sample including the related finding/comment/recommendation.

| Audit Sample | The Ohio State University Response |
|---------------------|---|
| C&C_001 | Agree with No finding No Comment |
| C&C_002 | Disagree with the finding and associated comments |
| C&C_003 | Agree with No finding No Comment |
| C&C_004 | Disagree with the finding and associated comments |
| C&C_005 | Agree with No finding No Comment |
| C&C_006 | Agree with No finding No Comment |
| C&C_007 | Agree with No finding No Comment |
| C&C_008 | Disagree with the finding and associated comments |
| C&C_009 | Disagree with the finding and associated comments |
| C&C_010 | Agree with No finding No Comment |
| C&C_011 | Agree with No finding No Comment |
| C&C_012 | Agree with No finding No Comment |
| C&C_013 | Agree with No finding No Comment |
| C&C_014 | Agree with No finding No Comment |
| C&C_015 | Agree with No finding No Comment |
| C&C_016 | Agree with No finding No Comment |
| C&C_017 | Agree with No finding No Comment |
| C&C_018 | Agree with No finding No Comment |
| C&C_019 | Agree with No finding No Comment |
| C&C_020 | Agree with No finding No Comment |
| C&C_021 | Agree with No finding No Comment |
| C&C_022 | Agree with No finding No Comment |
| C&C_023 | Agree with No finding No Comment |
| C&C_024 | Agree with No finding No Comment |
| C&C_025 | Agree with the finding; issued refund chk number 721602; 10/18/2018 |
| C&C_026 | Agree with the finding; issued refund chk number 723355; 10/23/2018 |
| C&C_027 | Agree with No finding No Comment |
| C&C_028 | Agree with No finding No Comment |
| C&C_029 | Agree with No finding No Comment |
| C&C_030 | Disagree with the finding and associated comments |
| C&C_031 | Agree with No finding No Comment |
| C&C_032 | Agree with No finding No Comment |
| C&C_033 | Agree with No finding No Comment |
| C&C_034 | Agree with No finding No Comment |
| C&C_035 | Agree with No finding No Comment |
| C&C_036 | Disagree with the finding and associated comments |
| C&C_037 | Agree with No finding No Comment |
| C&C_038 | Agree with No finding No Comment |
| C&C_039 | Agree with No finding No Comment |
| C&C_040 | Agree with No finding No Comment |
| C&C_041 | Agree with No finding No Comment |
| C&C_042 | Agree with No finding No Comment |
| C&C_043 | Disagree with the finding and associated comments |
| C&C_044 | Agree with No finding No Comment |
| C&C_045 | Agree with No finding No Comment |

| | |
|---------|---|
| C&C_046 | Disagree with the finding and associated comments |
| C&C_047 | Agree with No finding No Comment |
| C&C_048 | Disagree with the finding and associated comments |
| C&C_049 | Agree with No finding No Comment |
| C&C_050 | Agree with No finding No Comment |
| C&C_051 | Agree with No finding No Comment |
| C&C_052 | Agree with No finding No Comment |
| C&C_053 | Disagree with the finding and associated comments |
| C&C_054 | Agree with No finding No Comment |
| C&C_055 | Agree with No finding No Comment |
| C&C_056 | Agree with No finding No Comment |
| C&C_057 | Agree with No finding No Comment |
| C&C_058 | Agree with No finding No Comment |
| C&C_059 | Agree with No finding No Comment |
| C&C_060 | Disagree with the finding and associated comments |
| C&C_061 | Agree with the finding; issued refund chk number 723597; 10/25/2018 |
| C&C_062 | Agree with No finding No Comment |
| C&C_063 | Agree with No finding No Comment |
| C&C_064 | Disagree with the finding and associated comments |
| C&C_065 | Disagree with the finding and associated comments |
| C&C_066 | Agree with No finding No Comment |
| C&C_067 | Agree with No finding No Comment |
| C&C_068 | Agree with No finding No Comment |
| C&C_069 | Agree with No finding No Comment |
| C&C_070 | Agree with No finding No Comment |
| C&C_071 | Agree with No finding No Comment |
| C&C_072 | Disagree with the finding and associated comments |
| C&C_073 | Disagree with the finding and associated comments |
| C&C_074 | Agree with No finding No Comment |
| C&C_075 | Agree with No finding No Comment |
| C&C_076 | Agree with No finding No Comment |
| C&C_077 | Agree with No finding No Comment |
| C&C_078 | Disagree with the finding and associated comments |
| C&C_079 | Agree with No finding No Comment |
| C&C_080 | Agree with No finding No Comment |
| C&C_081 | Agree with No finding No Comment |
| C&C_082 | Agree with No finding No Comment |
| C&C_083 | Agree with No finding No Comment |
| C&C_084 | Agree with the finding; issued refund chk number 723718; 10/30/2018 |
| C&C_085 | Agree with No finding No Comment |
| C&C_086 | Agree with No finding No Comment |
| C&C_087 | Agree with No finding No Comment |
| C&C_088 | Agree with No finding No Comment |
| C&C_089 | Agree with No finding No Comment |
| C&C_090 | Agree with No finding No Comment |
| C&C_091 | Disagree with the finding and associated comments |
| C&C_092 | Agree with No finding No Comment |

| | |
|---------|--|
| C&C_093 | Agree with No finding No Comment |
| C&C_094 | Agree with No finding No Comment |
| C&C_095 | Agree with No finding No Comment |
| C&C_096 | Disagree with the finding and associated comments |
| C&C_097 | Agree with No finding No Comment |
| C&C_098 | Disagree with the finding and associated comments |
| C&C_099 | Agree with No finding No Comment |
| C&C_100 | Disagree with the finding and associated comments |
| C&C_101 | Agree with No finding No Comment |
| C&C_102 | Agree with the finding; appropriate changes made to ongoing project in October of 2018 |
| C&C_103 | Disagree with the finding and associated comments |
| C&C_104 | Disagree with the finding and associated comments |
| C&C_105 | Agree with No finding No Comment |
| C&C_106 | Agree with No finding No Comment |
| C&C_107 | Agree with No finding No Comment |
| C&C_108 | Agree with No finding No Comment |
| C&C_109 | Agree with No finding No Comment |
| C&C_110 | Agree with No finding No Comment |
| C&C_111 | Agree with No finding No Comment |
| C&C_112 | Agree with No finding No Comment |
| C&C_113 | Agree with No finding No Comment |
| C&C_114 | Agree with No finding No Comment |
| C&C_115 | Agree with No finding No Comment |
| C&C_116 | Agree with No finding No Comment |
| C&C_117 | Agree with No finding No Comment |
| C&C_118 | Agree with No finding No Comment |
| C&C_119 | Disagree with the finding and associated comments |
| C&C_120 | Agree with No finding No Comment |
| C&C_121 | Disagree with the finding and associated comments |
| C&C_122 | Agree with No finding No Comment |
| C&C_123 | Disagree with the finding and associated comments |
| C&C_124 | Agree with No finding No Comment |
| C&C_125 | Agree with No finding No Comment |
| C&C_126 | Agree with the finding; issued refund chk number 722962; 10/16/2018 |
| C&C_127 | Agree with No finding No Comment |
| C&C_128 | Agree with the finding; issued refund chk number 721603; 09/18/2018 |
| C&C_129 | Agree with No finding No Comment |
| C&C_130 | Disagree with the finding and associated comments |
| C&C_131 | Agree with No finding No Comment |
| C&C_132 | Agree with No finding No Comment |
| C&C_133 | Agree with No finding No Comment |
| C&C_134 | Agree with No finding No Comment |
| C&C_135 | Disagree with the finding and associated comments |
| C&C_136 | Agree with No finding No Comment |
| C&C_137 | Agree with No finding No Comment |
| C&C_138 | Agree with No finding No Comment |
| C&C_139 | Agree with No finding No Comment |

| | |
|---------|---|
| C&C_140 | Agree with No finding No Comment |
| C&C_141 | Agree with No finding No Comment |
| C&C_142 | Disagree with the finding and associated comments |
| C&C_143 | Agree with No finding No Comment |
| C&C_144 | Agree with No finding No Comment |
| C&C_145 | Agree with No finding No Comment |
| C&C_146 | Agree with No finding No Comment |
| C&C_147 | Agree with No finding No Comment |
| C&C_148 | Agree with No finding No Comment |
| C&C_149 | Disagree with the finding and associated comments |
| C&C_150 | Agree with No finding No Comment |
| C&C_151 | Disagree with the finding and associated comments |
| C&C_152 | Disagree with the finding and associated comments |
| C&C_153 | Disagree with the finding and associated comments |
| C&C_154 | Agree with No finding No Comment |
| C&C_155 | Agree with No finding No Comment |
| C&C_156 | Disagree with the finding and associated comments |
| C&C_157 | Agree with No finding No Comment |
| C&C_158 | Agree with No finding No Comment |
| C&C_159 | Disagree with the finding and associated comments |
| C&C_160 | Agree with No finding No Comment |
| C&C_161 | Agree with No finding No Comment |
| C&C_162 | Agree with No finding No Comment |
| C&C_163 | Agree with No finding No Comment |
| C&C_164 | Agree with No finding No Comment |
| C&C_165 | Agree with No finding No Comment |
| C&C_166 | Agree with No finding No Comment |
| C&C_167 | Agree with No finding No Comment |
| C&C_168 | Agree with No finding No Comment |
| C&C_169 | Agree with No finding No Comment |
| C&C_170 | Agree with No finding No Comment |
| C&C_171 | Agree with No finding No Comment |
| C&C_172 | Disagree with the finding and associated comments |
| C&C_173 | Disagree with the finding and associated comments |
| C&C_174 | Agree with No finding No Comment |
| C&C_175 | Agree with No finding No Comment |
| C&C_176 | Agree with No finding No Comment |
| C&C_177 | Agree with No finding No Comment |
| C&C_178 | Agree with No finding No Comment |
| C&C_179 | Agree with No finding No Comment |
| C&C_180 | Disagree with the finding and associated comments |
| C&C_181 | Agree with No finding No Comment |
| C&C_182 | Agree with No finding No Comment |
| C&C_183 | Agree with No finding No Comment |
| C&C_184 | Agree with No finding No Comment |
| C&C_185 | Disagree with the finding and associated comments |
| C&C_186 | Agree with No finding No Comment |

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|---------|---|
| C&C_187 | Agree with No finding No Comment |
| C&C_188 | Agree with No finding No Comment |
| C&C_189 | Disagree with the finding and associated comments |
| C&C_190 | Agree with No finding No Comment |
| C&C_191 | Agree with No finding No Comment |
| C&C_192 | Agree with No finding No Comment |
| C&C_193 | Agree with No finding No Comment |
| C&C_194 | Agree with No finding No Comment |
| C&C_195 | Agree with No finding No Comment |
| C&C_196 | Agree with No finding No Comment |
| C&C_197 | Agree with No finding No Comment |
| C&C_198 | Agree with No finding No Comment |
| C&C_199 | Agree with No finding No Comment |
| C&C_200 | Agree with No finding No Comment |
| C&C_201 | Agree with No finding No Comment |
| C&C_202 | Disagree with the finding and associated comments |
| C&C_203 | Agree with No finding No Comment |
| C&C_204 | Agree with No finding No Comment |
| C&C_205 | Agree with No finding No Comment |
| C&C_206 | Agree with No finding No Comment |
| C&C_207 | Disagree with the finding and associated comments |
| C&C_208 | Agree with No finding No Comment |
| C&C_209 | Agree with No finding No Comment |
| C&C_210 | Agree with No finding No Comment |
| C&C_211 | Agree with No finding No Comment |
| C&C_212 | Agree with No finding No Comment |
| C&C_213 | Disagree with the finding and associated comments |
| C&C_214 | Disagree with the finding and associated comments |
| C&C_215 | Agree with No finding No Comment |
| C&C_216 | Disagree with the finding and associated comments |
| C&C_217 | Agree with No finding No Comment |
| C&C_218 | Agree with No finding No Comment |
| C&C_219 | Agree with No finding No Comment |
| C&C_220 | Agree with No finding No Comment |
| C&C_221 | Agree with No finding No Comment |
| C&C_222 | Agree with No finding No Comment |
| C&C_223 | Agree with No finding No Comment |
| C&C_224 | Agree with No finding No Comment |
| C&C_225 | Agree with No finding No Comment |
| C&C_226 | Agree with No finding No Comment |
| C&C_227 | Agree with No finding No Comment |
| C&C_228 | Agree with No finding No Comment |
| C&C_229 | Disagree with the finding and associated comments |
| C&C_230 | Agree with No finding No Comment |
| C&C_231 | Disagree with the finding and associated comments |
| C&C_232 | Disagree with the finding and associated comments |
| C&C_233 | Agree with No finding No Comment |

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|---------|---|
| C&C_234 | Agree with No finding No Comment |
| C&C_235 | Agree with No finding No Comment |
| C&C_236 | Agree with No finding No Comment |
| C&C_237 | Agree with No finding No Comment |
| C&C_238 | Disagree with the finding and associated comments |
| C&C_239 | Agree with No finding No Comment |
| C&C_240 | Agree with No finding No Comment |
| C&C_241 | Agree with No finding No Comment |
| C&C_242 | Agree with No finding No Comment |
| C&C_243 | Agree with No finding No Comment |
| C&C_244 | Agree with No finding No Comment |
| C&C_245 | Disagree with the finding and associated comments |
| C&C_246 | Agree with No finding No Comment |
| C&C_247 | Agree with No finding No Comment |
| C&C_248 | Agree with No finding No Comment |
| C&C_249 | Agree with No finding No Comment |
| C&C_250 | Agree with No finding No Comment |
| C&C_251 | Agree with No finding No Comment |
| C&C_252 | Agree with No finding No Comment |
| C&C_253 | Agree with No finding No Comment |
| C&C_254 | Agree with No finding No Comment |
| C&C_255 | Agree with No finding No Comment |
| C&C_256 | Agree with No finding No Comment |
| C&C_257 | Agree with No finding No Comment |
| C&C_258 | Disagree with the finding and associated comments |
| C&C_259 | Disagree with the finding and associated comments |
| C&C_260 | Agree with No finding No Comment |
| C&C_261 | Agree with No finding No Comment |
| C&C_262 | Disagree with the finding and associated comments |
| C&C_263 | Disagree with the finding and associated comments |
| C&C_264 | Disagree with the finding and associated comments |
| C&C_265 | Agree with No finding No Comment |
| C&C_266 | Disagree with the finding and associated comments |
| C&C_267 | Disagree with the finding and associated comments |
| C&C_268 | Agree with No finding No Comment |
| C&C_269 | Agree with No finding No Comment |
| C&C_270 | Agree with No finding No Comment |
| C&C_271 | Agree with No finding No Comment |
| C&C_272 | Agree with No finding No Comment |
| C&C_273 | Agree with No finding No Comment |
| C&C_274 | Agree with No finding No Comment |
| C&C_275 | Agree with No finding No Comment |
| C&C_276 | Agree with No finding No Comment |
| C&C_277 | Disagree with the finding and associated comments |
| C&C_278 | Disagree with the finding and associated comments |
| C&C_279 | Disagree with the finding and associated comments |
| C&C_280 | Disagree with the finding and associated comments |

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|---------|---|
| C&C_281 | Disagree with the finding and associated comments |
| C&C_282 | Disagree with the finding and associated comments |
| C&C_283 | Disagree with the finding and associated comments |
| C&C_284 | Agree with No finding No Comment |
| C&C_285 | Agree with No finding No Comment |
| C&C_286 | Agree with No finding No Comment |
| C&C_287 | Disagree with the finding and associated comments |
| C&C_288 | Agree with No finding No Comment |
| C&C_289 | Agree with No finding No Comment |
| C&C_290 | Agree with No finding No Comment |
| C&C_291 | Agree with No finding No Comment |
| C&C_292 | Disagree with the finding and associated comments |
| C&C_293 | Agree with No finding No Comment |
| C&C_294 | Agree with No finding No Comment |
| C&C_295 | Agree with No finding No Comment |
| C&C_296 | Agree with No finding No Comment |
| C&C_297 | Disagree with the finding and associated comments |
| C&C_298 | Agree with No finding No Comment |
| C&C_299 | Disagree with the finding and associated comments |
| C&C_300 | Agree with No finding No Comment |

APPENDIX C: OBJECTIVES, SCOPE, AND METHODOLOGY

OBJECTIVES, SCOPE, AND METHODOLOGY

NSF OIG Office of Audits engaged Cotton & Company LLP (referred to as “we” in this report) to conduct a performance audit of costs that OSU incurred on NSF awards for the period from February 1, 2015 to January 31, 2018. The objective of the audit was to determine if costs claimed by OSU during this period were allocable, allowable, reasonable, and in conformity with NSF award terms and conditions and applicable Federal financial assistance requirements.

Our work required us to rely on computer-processed data obtained from OSU and NSF OIG. NSF OIG provided award data that OSU reported through ACM\$ during our audit period. OSU provided detailed transaction-level data to support all costs charged to NSF awards during the period. This data resulted in a total audit universe of \$147,272,581 in costs claimed on 750 NSF awards.

We assessed the reliability of the data provided by OSU by (1) comparing costs charged to NSF award accounts within OSU’s accounting records to reported net expenditures, as reflected in OSU’s ACM\$ drawdown requests submitted to NSF for the corresponding periods; and, (2) reviewing the parameters that OSU used to extract transaction data from its accounting records and systems.

Based on our assessment, we found OSU’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, or the controls over, NSF’s databases were accurate or reliable; however, the independent auditor’s report on NSF’s financial statements for FY 2017 found no reportable instances in which NSF’s financial management systems did not substantially comply with applicable requirements.

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

After confirming the accuracy of the data provided, but before performing our analysis, we reviewed all available accounting and administrative policies and procedures, relevant documented management initiatives, previously issued external audit reports, and desk review reports to ensure that we understood the data and that we had identified any possible weaknesses within OSU’s system that warranted focus during our testing.

We began our analytics process by reviewing the transaction-level data that OSU provided and used IDEA software to combine it with the NSF OIG-provided data. We conducted data mining and data analytics on the entire universe of data provided and compiled a list of transactions that represented anomalies, outliers, and aberrant transactions. We reviewed the results of each of our

data tests and judgmentally selected transactions for testing based on criteria including, but not limited to, large dollar amounts, possible duplications, indications of unusual trends in spending, descriptions indicating potentially unallowable costs, cost transfers, expenditures outside of an award's period of performance, and unbudgeted expenditures.

We identified 250 transactions for testing and requested that OSU provide documentation to support each transaction. We reviewed this supporting documentation to determine if we had obtained sufficient, appropriate evidence to support the allowability of the selected expenditures. When necessary, we requested and reviewed additional supporting documentation and obtained explanations and justifications from PIs and other knowledgeable OSU personnel until we had sufficient support to assess the allowability, allocability, and reasonableness of each transaction.

We discussed the results of our initial fieldwork and our recommendations for expanded testing with NSF OIG personnel. Based on the results of this discussion, we used IDEA software to select an additional judgmental selection of 50 transactions. We requested and received supporting documentation for the additional transactions and summarized the results in our final fieldwork summary.

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 OSU personnel to ensure that they were aware of each of our findings and that no additional documentation was available 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.



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