

Audit of NSF's Monitoring of Government-Owned Equipment Purchased on NSF Awards

NATIONAL SCIENCE FOUNDATION
OFFICE OF INSPECTOR GENERAL

August 26, 2020
OIG 20-2-007





AT A GLANCE

Audit of NSF's Monitoring of Government-Owned Equipment Purchased on NSF Awards

Report No. OIG 20-2-007
August 26, 2020

WHY WE DID THIS AUDIT

The National Science Foundation is the funding source for approximately 25 percent of all federally supported basic research conducted by America's colleges and universities. A recipient organization may request to use NSF award funds to purchase equipment, ranging from scientific equipment to airplanes. NSF decides whether to vest title to equipment in the Government, which is called Government-owned equipment (GOE), or in the recipient. The objective of this audit was to determine if NSF has sufficient controls to ensure it can account for GOE purchased with NSF award funds.

WHAT WE FOUND

NSF did not have sufficient controls to account for certain types of equipment purchased by award recipients. For example, NSF did not always account for GOE held by award recipients, ensure its award letters contained the correct terms and conditions regarding equipment, or ensure recipients properly handled GOE after award expiration. In addition, NSF's policies and procedures did not articulate staff responsibilities for GOE oversight. NSF acknowledged it must increase its oversight of GOE and has started to explore possible solutions to issues raised in this report, including setting up an agency-wide equipment working group to develop standard operating guidance.

WHAT WE RECOMMEND

We made seven recommendations aimed at improving NSF's controls to account for certain types of equipment purchased on awards.

AGENCY RESPONSE

NSF agreed with all seven of our recommendations and is developing new internal standard operating guidance. NSF's response is included in its entirety in Appendix A.

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



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

MEMORANDUM

DATE: August 26, 2020

TO: F. Fleming Crim
Chief Operating Officer
Office of the Director

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

SUBJECT: Audit Report No. 20-2-007, *Audit of NSF's Monitoring of Government-Owned Equipment Purchased on NSF Awards*

Attached is the final report on the subject audit. We have included NSF's response to the draft report as an appendix.

This report contains seven recommendations aimed at improving NSF's controls to account for certain types of equipment purchased on awards. NSF concurred with all of our recommendations. In accordance with Office of Management and Budget Circular A-50, *Audit Followup*, please provide a written corrective action plan to address the report recommendations. In addressing the report's recommendations, this corrective action plan should detail specific actions and associated milestone dates. Please provide the action plan within 60 calendar days.

We appreciate the courtesies and assistance NSF staff provided during the audit. If you have any questions, please contact Elizabeth Kearns, Director of Audit Execution, at 703.292.8483 or ekearns@nsf.gov.

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ABBREVIATIONS

FFRDC	Federally Funded Research and Development Centers
GOE	Government-Owned Equipment
SBIR/STTR	Small Business Innovation Research/Small Business Technology Transfer
SOG	Standard Operating Guidance



Background

The National Science Foundation is the funding source for approximately 25 percent of all federally supported basic research conducted by America’s colleges and universities. A recipient organization may request to use NSF award funds to purchase equipment, ranging from scientific equipment to research aircraft. NSF also funds major multi-user research facilities (major facilities) such as giant optical and radio telescopes, ships for ocean research, and gravitational wave observatories, that acquire a significant amount of equipment to meet their missions.

According to the *Uniform Guidance*,¹ equipment is “tangible personal property... having a useful life of more than one year and a per-unit acquisition cost which equals or exceeds the lesser of the capitalization level established by the non-Federal entity for financial statement purposes, or \$5,000.” For equipment acquired under an NSF award, NSF has authority to vest title in the Government, making it Government-owned equipment (GOE),² or to vest title in the recipient. When NSF vests equipment title in the recipient, it is usually considered “exempt property” and subject to specific conditions, including NSF’s right to transfer the title to the Government or to a third party. Therefore, NSF may allow the recipient to keep equipment after the award ends to build the scientific infrastructure at America’s institutions, or it may choose to identify the equipment as GOE to keep title to the equipment.

At the time of our audit, NSF generally vested equipment title in the Government for the following award types and recipients:

- Federally Funded Research and Development Centers (FFRDCs) if awarded before March 1, 2018, and equipment cost exceeds \$25,000³
- For-profit award recipients
- Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Phase II awards with effective dates prior to December 26, 2014⁴
- State, local, or tribal governments
- Award with International Research Terms and Conditions or Foreign Grant General Conditions
- Fixed-price awards

¹ The Office of Management and Budget issued *Uniform Administrative Requirements, Cost Principles, and Audit Requirements (Uniform Guidance)* for Federal awards to non-Federal entities. The *Uniform Guidance* is codified in 2 CFR Part 200. Equipment is defined in §200.33.

² At the time of our audit, NSF referred to such equipment as Government-owned equipment (GOE) in award terms and conditions. The *Uniform Guidance* refers to GOE as “federally-owned property” and NSF is transitioning to this synonymous term.

³ In March 2018, NSF replaced its CA-FATC supplemental terms and conditions for FFRDCs and major facilities, respectively, with the *Cooperative Agreement Modifications and Supplemental Financial and Administrative Terms and Conditions (CAFATC) for Major Multi-User Research Facility Projects and Federally Funded Research and Development Centers*. Effective March 1, 2018, if a major facility or FFRDC recipient is a non-profit or higher education institution, title for equipment that costs \$5,000 or more vests in the recipient, unless NSF otherwise customizes the cooperative agreement, which it sometimes does for major facilities and FFRDCs.

⁴ Before December 26, 2014, equipment title vested in the Government. On or after December 26, 2014, title to equipment purchased on SBIR/STTR Phase II awards vests in the recipient.



NSF documents whether title to the equipment vests in the recipient or NSF in the award terms and conditions. At the time of our audit, the award type and recipient type — for-profit or non-profit, for example — drove which terms NSF included in an award and served as the general basis for whether title to equipment vests in NSF or the recipient. For example, different recipient types have different standard terms, which apply only to the extent they are incorporated into the award letter. NSF may default from the general basis by customizing the award letter. For example, even though awards made to institutions of higher education typically vest equipment in the recipient, NSF may customize the award letter to vest title to equipment in the Government.

If NSF issues an award with terms vesting title to equipment in the Government, both NSF and the award recipient have additional reporting and oversight responsibilities. For example, the *Uniform Guidance* (§200.312(a)) requires award recipients with GOE to report annual inventories to the awarding agency; these provide the Federal Government information on the amount and value of GOE in the recipient's possession. The *Uniform Guidance* also requires recipients to report GOE to NSF when the award is complete to allow the Government to further use the equipment.

The objective of this audit was to determine if NSF has sufficient controls to ensure it can account for GOE purchased with NSF award funds.

Results of Audit

NSF did not have sufficient controls to account for certain types of equipment purchased by award recipients. For example, NSF did not always account for GOE held by award recipients, ensure its award letters contained the correct terms and conditions regarding equipment, or ensure recipients properly handled GOE after award expiration. In addition, NSF's policies and procedures did not sufficiently articulate staff responsibilities for GOE oversight. NSF acknowledged it must increase its oversight of GOE and has started to explore possible solutions to issues raised in this report, including setting up an agency-wide equipment working group to develop standard operating guidance.

NSF Did Not Always Account for GOE Held by Award Recipients

NSF did not always include the correct terms and conditions for equipment title in award letters or properly identify equipment in its award system. Consistently and accurately identifying GOE could help NSF better monitor and account for GOE and protect its right to transfer equipment title to the Government, especially at its major facilities.

Award Letters Did Not Always Include the Correct Terms and Conditions for Equipment Title

Unless otherwise specified, awards to institutions of higher education and non-profit organizations incorporate applicable *Research Terms and Conditions*, as well as NSF's *Agency Specific Requirements*, which vests title to equipment purchased with NSF award funds in the recipient. Grants to for-profit organizations (other than SBIR/STTR recipients) and State, local, and tribal governments are subject to NSF's *Grant General Conditions*, which vests title to equipment purchased with NSF funds in the Government, unless otherwise specified in the award.



We found NSF did not always include the correct terms and conditions for equipment title in award letters. This occurred because NSF did not always identify the correct terms and conditions for the recipient organization type when setting up the recipient's information in the award system; the award letters automatically pull in the terms and conditions assigned to the organization in the system unless overridden. For example, we found NSF did not assign the correct terms and conditions for more than 50 for-profit organizations. An NSF senior official told us the manual selection process at the time of setting up a new award recipient can lead to errors. For example, if NSF does not correctly assign the terms and conditions in the institution address file for a for-profit organization, then the correct terms and conditions will not pull into the award letter. As a result, NSF staff may not know to identify the equipment as GOE in NSF's award system and thus may not properly monitor the equipment.

NSF Did Not Always Use Special Attention Codes in Its Award System When Required

NSF's award system has automated processes to close out some types of awards. However, NSF can flag awards for manual closeout by adding special attention codes, if applicable. Special attention codes trigger actions such as transferring title to equipment to the Government or resolving GOE disposition at the end of the award. NSF also uses the special codes to determine which award recipients must submit annual inventory reports to NSF and support information in NSF's annual *Agency Financial Report*. If coding is inaccurate, NSF might not issue timely disposition instructions to recipients when an award expires or exercise its right to transfer equipment title to the Government or to a new major facility recipient after a recompetition.

According to NSF's Office of Budget, Finance and Award Management *Standard Operating Guidance 2016-8 (SOG)*, *DGA & DACS Award Closeout*, grants officers and Division of Acquisition and Cooperative Support staff must enter the code for GOE when equipment title vests in the Government. However, neither the SOG nor the *Proposal and Award Manual* had clear guidance indicating when certain special codes should be used. For example, the SOG does not specify if the GOE code is used only if the entity's proposal budget includes equipment or if the code is used solely due to entity type and award terms.

We reviewed 174 awards that had budgeted equipment and award terms stating the equipment title would vest in the Government. Of these, only 21 (12 percent) were flagged using the GOE code. We also reviewed 643 awards without equipment in the proposed budgets and award terms stating that any equipment purchased with award funds would vest in the Government. NSF staff did not use the GOE code for any of these awards and did not have another means to easily determine if any of the recipients later used award funds to purchase GOE. NSF typically allows recipients to transfer funds from one budget category to another for allowable expenditures during the award duration without obtaining prior approval.⁵ Therefore, if otherwise allowable, the recipient could purchase GOE without NSF's knowledge.

Setting the GOE code by entity type and award terms may help protect the Government's interest and

⁵ Recipients must obtain prior approval if such transfers would change the scope of the award or include costs in connection with NSF-sponsored conferences or training projects.



investment in its property, such as if a recipient did not include equipment in its proposal but used award funds to purchase equipment after NSF made the award.

NSF Did Not Consistently Use the GOE Code for Awards to Major Facility Recipients

NSF sometimes designated the equipment at a major facility as GOE, and other times NSF vested the title to the equipment in the recipient, which it is authorized to do. However, NSF did not always enter the appropriate special attention codes for major facility awards with equipment. For awards for which the title vests in the recipient but for which NSF wishes to retain the right to transfer title within the grant period,⁶ the grants officers should have entered the code for the “120 Day Equipment Option” (120-day code). Of the 277 major facility awards we reviewed, 136 did not have an equipment code. We determined that NSF should have used the 120-day code for 86 and the GOE code for 49 of these awards. The 120-day code is important because it indicates that NSF must issue disposition instructions to the recipient no later than 120 days after the award ends. For example, NSF may exercise its right to transfer equipment title to another recipient as a result of a major facility award’s recompetition.

Incorrect Use of Codes Affected Financial Statement Information

At the time of our audit, NSF used special attention codes to support equipment information in its “Notes to the Financial Statements” in its annual *Agency Financial Report*. The Federal Accounting Standards Advisory Board requires NSF to include the book value⁷ of GOE at its recipients in NSF’s notes to the financial statements if the recipient includes the GOE in its audited financial statements. Although not required, NSF also included the number of recipients with either a GOE or 120-day code entered in NSF’s system in its notes to the financial statements in past reports. For the fiscal year ended September 30, 2018, NSF reported that 17 colleges and universities and 9 commercial entities received awards that allow for the purchase of equipment. Our audit identified additional entities that were not included in the note. As a result of our audit, NSF no longer included this supplemental information about recipients with GOE in its notes to the financial statements for the fiscal year ended September 30, 2019.

More Guidance for Identifying GOE is Needed

We found that NSF staff need additional guidance and training on identifying and handling GOE. Although NSF’s *Proposal and Award Manual* provides instructions to NSF staff on assistance award administration and proposal review and processing, it does not discuss NSF staff roles for identifying GOE. Further, the SOG does not have sufficient guidance for program officers and grants officers about identifying recipients with GOE. For example, the program officers and grants officers we interviewed told us they did not always know when or how to identify awards with GOE, who is responsible to flag GOE, or that they should coordinate these actions.

⁶ Even when NSF vests equipment title in the recipient, NSF typically reserves the right to transfer title to the Government or to a third party at any time during the award period.

⁷ Book value means “[t]he net amount at which an asset or liability is carried on the books of account It equals the gross or nominal amount of any asset or liability minus any allowance or valuation amount[.]” as defined in the *FASAB Handbook of Federal Accounting Standards and Other Pronouncements, as Amended*, as of June 30, 2016.



NSF Did Not Always Receive, Use, or Retain Annual Inventory Reports

The *Uniform Guidance* requires recipients to provide annual GOE inventory reports to NSF. Additionally, NSF's standard award terms and conditions require recipients to submit the GOE inventory report to NSF by August 15 each year, though award-specific terms may specify a different date. The Property Administrator stores the annual inventories and provides instructions to recipients on how to handle GOE at the end of an award.

We determined that NSF did not always receive recipients' annual GOE inventory reports or did not receive them on a timely basis. NSF uses the 120-day and GOE codes in its system to determine which award recipients must submit annual inventory reports to NSF. However, NSF did not properly use the codes for all recipients required to submit GOE inventory reports. Accordingly, NSF's Property Administrator requested annual inventory reports only from awards flagged with the codes. In addition, of the 50 awards NSF identified as required to report in 2017, recipients did not submit a total of 42 reports to the Property Administrator on time. The Property Administrator did not consistently follow up with recipients for the past-due reports.

NSF also does not have an adequate system to track GOE. Its primary record system for managing annual GOE inventory submissions is a group email inbox maintained by the Property Administrator. After NSF determines which award recipients must submit annual inventory reports, the Property Administrator manually emails requests for these reports and tracks which recipients submitted them. In January 2015, NSF discovered that it lost all inventory reports in the group mailbox from 1995 through 2014; NSF could not explain the circumstances surrounding the lost reports.⁸ We also identified several NSF staff without GOE responsibilities who had full access to read, modify, and delete parts of the email inbox. According to NSF, it has since removed access from these employees and placed a hold on the property mailbox to prevent users from accidentally deleting records.

Further, the Property Administrator did not consistently distribute the annual inventory reports to program and grants staff. The reports give staff insight into changes in a recipient's inventory to help determine what GOE was purchased and how to handle it at the end of an award. Improved records systems would also help NSF better account for and monitor GOE. For example, eJacket, NSF's electronic end-to-end proposal and grant management system, includes a Property/Equipment module that could potentially be used instead of the group email inbox to store inventory reports.

NSF Needs Better Controls over the Disposition of GOE

NSF did not ensure recipients reported GOE to NSF for further agency use or give award recipients timely disposition instructions at the end of the award. The *Uniform Guidance* requires the award recipient to report GOE it holds to the awarding agency upon completion of the award or when the property is no longer needed.⁹

⁸ According to the U.S. National Archives and Records Administration *General Records Schedule* 5.4, 010, January 2017, NSF must maintain the annual inventory reports for a minimum of 3 years.

⁹ *Uniform Guidance*, §200.312(a)



Seven of the nine recipients with GOE in our judgmental sample¹⁰ did not report GOE to the Property Administrator at the end of the award. After the Property Officer followed up with these recipients, five reported GOE inventory to NSF; the remaining two recipients had not submitted a final inventory report at the time of our audit.

For six of the nine awards, NSF did not provide evidence that it gave final GOE disposition instructions to recipients. One of these recipients requested disposition instructions 8 years after the award expired and then closed its business shortly thereafter.

For equipment titled to the recipient but subject to NSF's right to transfer title, NSF's standard terms and conditions state that if NSF elects to transfer title, NSF will issue disposition instructions to the recipient no later than 120 days after the end date of the award. For 15 awards in our judgmental sample for which NSF reserved the right to transfer title, we reviewed the documentation in the Property Administrator's records; for 11 of the 15 awards, we could not find evidence NSF issued final disposition instructions within 120 days of award expiration.

Untimely disposition of GOE may result in a missed opportunity to evaluate whether a recipient could transfer the GOE to another recipient or award. For example, we found that in 2017, NSF closed seven SBIR awards with GOE that ended between 2005 and 2009 without following up on the GOE.

Additionally, NSF staff disagreed whether NSF loses the right to transfer equipment to the Government or another recipient if NSF does not provide disposition instruction within 120 days. A Division of Acquisition and Cooperative Support official was unsure what the 120-day requirement meant, and a Division of Grants and Agreements official's understanding was that if NSF does not issue disposition instructions within 120 days, the recipient keeps the equipment. In one major facility award letter we reviewed, NSF incorporated language stating that NSF forfeits title to equipment if it fails to exercise its right to transfer title within 120 days of the end of the award. This term places significant risk on NSF to ensure that it provides timely disposition instructions or risk the benefit of possibly transferring millions of dollars' worth of equipment.

NSF Could Better Communicate Guidance to Recipients on GOE Held by Subrecipients

NSF's standard terms do not provide guidance on how a prime recipient should identify and account for GOE held by its subrecipients. Article 6 of cooperative agreement terms and conditions and grant conditions indicate whether title to equipment purchased with NSF award funds vests in the Government or in the prime recipient. Prime recipients must flow down terms and conditions to subrecipients when applicable, but NSF does not include the specific equipment requirements in Article 6 in its flow-down provisions. NSF officials told us that the prime is responsible for identifying GOE at subrecipients based on the subrecipients' institution type. However, NSF's standard terms do not communicate this expectation to the prime recipient. For example, if NSF makes an award to a non-profit entity, which

¹⁰ We selected a judgmental sample of 22 awards from a universe of 139 awards with a GOE code, 120-day code, or both codes, which expired before 10/31/18, and which had more than 120 days between the award expiration and administrative close.



then makes a subaward to a for-profit entity, it is unclear if the equipment title vests in the recipient based on the prime recipient's terms, or if it should vest in the Government because the subrecipient is for-profit, and title to equipment purchased by for-profit entities typically vests in the Government.

According to the *Uniform Guidance*, “The non-Federal entity must submit annually an inventory listing of federally-owned property in its custody to the Federal awarding agency.”¹¹ An award recipient may interpret the *Uniform Guidance* to mean subrecipients should report their GOE directly to the Federal Government or that the prime should include their subrecipients' GOE in its report. NSF officials told us prime recipients should include their subrecipients' GOE in the primes' annual inventory reports. However, neither NSF's standard terms nor the *Uniform Guidance* clearly defines whether the prime recipient must include GOE held by subrecipients in its annual inventory report or subrecipients must report GOE directly to NSF.¹² Without clear NSF terms and conditions in the prime award, there is a risk that the prime recipient may not report GOE held by subrecipients.

NSF Corrective Actions

NSF has acknowledged the need to strengthen its policies and procedures to account for and monitor GOE held by award recipients and to ensure recipients coordinate GOE disposition with NSF. As a result of our audit, NSF established an agency-wide property and equipment working group in February 2019. Headed by Budget, Finance and Award Management officials and including staff from the Division of Administrative Services, as well as Office of General Counsel and Science Directorates as needed, this group is charged to “develop and publish standard operating guidelines (SOG) and standard operating procedures (SOP) which provide uniform management and oversight operating requirements over National Science Foundation-supported property (real and personal) and equipment [P&E] acquired through grants, cooperative agreements, and contracts.” Objectives for this group include identifying gaps in practices, policies, and procedures, and creating a central repository of NSF materials relevant to GOE purchased on awards.

In January 2020, NSF issued a revised version of its *Proposal and Award Policies and Procedures Guide* (NSF 20-1), which is effective for awards made on or after June 1, 2020. In the revised guide, NSF updated the property management standards to specify that title to equipment acquired with NSF award funds will normally vest in the recipient, including institutions of higher education or other non-profit organizations, small businesses or other for-profit organizations, and foreign public entities or foreign organizations. Title will pass directly to the Government upon acquisition only if specified in the award. NSF also revised most of its terms and conditions with an effective date of October 5, 2020 to mirror this new guidance. NSF also changed the due date for the submission of the required annual inventory report for GOE to October 15. According to NSF 20-1, NSF is retaining, as one of its title conditions, its right to transfer equipment back to the Government (i.e., NSF) or a third party, if needed. NSF is also planning to conduct a deeper review on GOE at FFRDCs and major facilities.

¹¹ According to *Uniform Guidance* § 200.69, a non-Federal entity is “a state, local government, Indian tribe, institution of higher education... or nonprofit organization that carries out a Federal award as a recipient or *subrecipient*” [emphasis added].

¹² *Uniform Guidance* § 200.312, *Federally-owned and exempt property* and 200.69, *Non-Federal entity*, respectively.



In addition, as a result of our audit, NSF changed how it reports about recipients with GOE in its notes to the financial statements in its *Agency Financial Report* for the fiscal year ended September 30, 2019, as previously discussed.

Recommendations

We recommend that the Chief Operating Officer, National Science Foundation:

1. Develop terms and conditions to enable NSF to better account for and monitor equipment purchased with award funds. Such terms should, as applicable:
 - a) Ensure NSF can account for equipment purchased on awards that do not specifically call out equipment in the proposed budget but for which terms vest equipment title in the Government; and
 - b) Clarify NSF's right to transfer title term to protect the Government's interests in equipment if NSF does not provide final instructions to the recipients within 120 days.
2. For all major facility awards including Federally Funded Research and Development Centers, either indicate the title to purchased equipment will vest in the Government or develop a process to ensure NSF timely transfers title to equipment to the Government when applicable.
3. Develop guidance to better account for and monitor Government-owned equipment purchased with award funds and train staff on how to implement that guidance. Such guidance should:
 - a) Define when title to equipment purchased by recipients vests in the Government;
 - b) Clarify roles and responsibilities for using equipment special attention codes; and
 - c) Establish roles and responsibilities for reviewing recipients' annual Government-owned equipment inventory reports.
4. Develop or improve existing tools to account for and monitor Government-owned equipment. Such tools should help:
 - a) Ensure NSF program officers and grants and agreements officers can readily access information about equipment, including annual inventory reports, disposition records, and other pertinent information;
 - b) Ensure NSF provides timely disposition instructions to recipients with Government-owned equipment;
 - c) Identify the status of Government-owned equipment disposition instructions, including confirmation that final disposition occurred;
 - d) Track which recipients have submitted annual inventory reports and whether inventory changed; and
 - e) Retain Government-owned equipment records, including annual inventory reports and disposition records, as required by the U.S. National Archives and Records Administration.



5. Review and correct the special attention codes in NSF's award system if NSF must take additional action on equipment purchased with award funds before closing out the award.
6. Determine any changes necessary to ensure accurate reporting of Government-owned equipment in future financial statements.
7. Revise award terms and conditions to specify when title to equipment purchased by subrecipients vests in the Government and how prime recipients should annually report Government-owned equipment held by its subrecipients.

OIG Evaluation of Agency Response

NSF agreed with all seven of our recommendations and is developing new internal standard operating guidance. NSF's complete response appears in Appendix A.



Appendix A: Agency Response



National Science Foundation

MEMORANDUM

Date: August 20, 2020

To: Mark Bell, Assistant Inspector General, Office of Audits

From: F. Fleming Crim, Chief Operating Officer [REDACTED]

Via: Wonzie Gardner, Chief Human Capital Officer and Head, OIRM
Teresa Grancorvitz, Chief Financial Officer and Head, BFA
PEGGY A GARTNER Digitally signed by PEGGY A GARTNER
Date: 2020.08.21 13:36:37 -0400

Subject: Official Draft Report, *Audit of NSF's Monitoring of Government-Owned Equipment Purchased on NSF Awards*

The National Science Foundation (NSF) appreciates the opportunity to review and provide comments on the OIG's draft report. We also greatly appreciated the on-going dialog with your office during the audit that enabled NSF to take early and substantial action related to government-owned property. NSF considers its stewardship over federal funds a high priority and oversight of property funded on NSF awards is an important element of sound stewardship.

NSF agrees with all seven of the OIG's recommendations. Development of new internal standard operating guidance addressing these recommendations is nearing completion. Given that the principal purpose of federal assistance awards is to "transfer a thing of value to the non-federal entity"¹, NSF sees risks related to property for our overall award enterprise as low. Our effort is focused primarily on major facility awards and aligning them, where appropriate, with this principal purpose. Details will be provided in NSF's Corrective Action Plan.

On behalf of the NSF staff participating in the engagement, we want to acknowledge the OIG staff for their diligence and commitment to understanding NSF's oversight processes. We look forward to receiving the final report. If you have any questions, please contact Matthew Hawkins at mjhawkin@nsf.gov (x7407) or Maren Williams at mcwillia@nsf.gov (x5148).

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¹ Federal Grant and Cooperative Agreement Act; 1977



Appendix B: Objective, Scope, and Methodology

The objective of this audit was to determine if NSF has sufficient controls to ensure it can account for GOE purchased with NSF award funds. Our scope included awards that were open as of October 31, 2018, or that were closed between May 1, 2015, and October 31, 2018.

To perform our audit, we reviewed Federal guidance, including 42 US Code § 1870, *General Authority of Foundation; Uniform Guidance*; and the U.S. National Archives and Records Administration General Records Schedules. In addition, we reviewed other criteria applicable to our audit, including the November 2002 Federal Accounting Standards Advisory Board guidance to NSF on financial statement reporting of GOE at major facility award recipients, such as the FFRDCs. To obtain an understanding of applicable internal controls, we reviewed NSF policies and procedures, including the *NSF Proposal and Award Manual*, its *Proposal and Award Policies and Procedures Guide*, NSF award terms and conditions for various NSF award types, and the SOG. To confirm our understanding, we discussed policies and procedures with NSF program officers, grants officers, the NSF Property Administrator, and NSF senior officials. We tested compliance with these policies through the audit.

The audit team identified a universe of those award types and award recipients within our scope that would most likely have GOE. To obtain a population of awards for testing, we obtained cooperative agreement and cooperative support agreement numbers from NSF’s Large Facilities Office, extracted data from SAM.gov on entities that self-identified as “For-Profit,” and searched NSF’s report server. Specifically, we conducted queries of NSF’s report server to identify awards with:

- a special attention code flagged for equipment
- a fixed-price instrument code
- international research terms
- program element name “SMALL BUSINESS PHASE II” or “STTR PHASE II”
- FFRDCs or major facilities as recipients
- State and local governments as recipients

We downloaded award documents and searched using key words to identify awards within our scope for which the terms and conditions designated equipment purchased on the award as GOE; see Table 1.

Table 1. Awards Tested During Audit

Recipient Type	Awards Open on 10/31/18 or Closed Between 5/1/15 and 10/31/18
SBIR/STTR Phase II Award Prior to December 16, 2014	432
FFRDC/Major Facilities	277
For-Profit Corporations (non SBIR/STTR)*	270
State or Local Governments	78
Awards with International Research Terms and Conditions or Foreign Grant General Conditions	26
Fixed Award Amounts	11

Source: NSF OIG-generated.

*For-profit corporations that did not receive SBIR/STTR Phase II Awards.



To identify for-profit recipients, we used the System for Award Management (SAM.gov), a U.S. Government website that allows entities to register to do business with the U.S. Government and provides specific business information about a registered entity, such as entity structure, business type, and entity type. We did not validate entities' self-identification in NSF's systems or SAM.gov or NSF's identification of fixed amount awards in its system. As such, there may be additional awards missing GOE codes that we did not identify for testing. Because most awards in our universe were missing the GOE code, we were able to conclude that NSF is not using codes consistently.

To determine whether NSF's internal controls were sufficient to identify awards with GOE and incorporate the correct terms and conditions, we reviewed NSF documents in eJacket, NSF's electronic end-to-end proposal and grant management system, for awards in our scope without NSF GOE codes. These documents included the award terms and conditions, amendments, budgets, and correspondence filed in the system. We also looked at FFRDCs and major facilities awards due to the large potential for equipment purchases on these types of awards. As appropriate, we spoke with NSF officials to confirm whether the NSF award system should have included the GOE code for the award we reviewed. We made recommendations in the report where we identified NSF could strengthen its internal controls. We did not identify any instances of fraud or illegal acts.

To assess whether NSF's internal controls were sufficient to monitor GOE on awards, we reviewed the records maintained by the Property Administrator in the Division of Administrative Services. These records consisted of correspondence and the annual inventory reports required by NSF and Federal guidance. To test dispositions of GOE at recipients, we selected a judgmental sample of 23 GOE dispositions from expired and current awards.

We also conducted a site visit at one major facility to obtain an understanding of NSF's oversight of the recipients' compliance with NSF and Federal requirements for GOE. We performed a limited review of GOE data from this facility, including inventory records, one GOE disposition (as part of our judgmental sample), and subrecipient records.

We conducted this performance audit between June 2018 and August 2019 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.

Elizabeth Kearns, Director, Audit Execution; Wendell Reid, Audit Manager; Darrell Drake, Senior Auditor; Ruth Gonzalez, Data Analytics Project Manager; Joseph Ferrell, Management Analyst; Elizabeth Argeris Lewis, Executive Officer and Communications Analyst; and Billy McCain, Independent Report Referencer, made key contributions to this report.



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