Independent Program Evaluation of National Institute of Standards and Technology (NIST) Pandemic Relief Program

FINAL REPORT NO. OIG-24-017-I

March 27, 2024

U.S. Department of Commerce
Office of Inspector General
Office of Audit and Evaluation

UNITED STATES DEPARTMENT OF COMMERCE
Office of Inspector General
Washington, D.C. 20230

March 27, 2024

MEMORANDUM FOR: Dr. Laurie E. Locascio
Under Secretary of Commerce for Standards and Technology
and Director, National Institute of Standards and Technology

FROM: Arthur L. Scott, Jr.
Assistant Inspector General for Audit and Evaluation

SUBJECT: *Independent Program Evaluation of National Institute of Standards and Technology (NIST) Pandemic Relief Program*
Final Report No. OIG-24-017-I

Attached is our final report on the evaluation of National Institute of Standards and Technology (NIST) grantees' and subrecipients' use of pandemic relief funds. The evaluation objective was to determine whether NIST grantees and subrecipients accounted for and expended pandemic relief funds provided under the Coronavirus Aid, Relief, and Economic Security Act and subsequent funding authorizations in accordance with federal laws and regulations.

We contracted with the Institute for Defense Analyses (IDA), an independent firm, to perform this evaluation. Our office oversaw the evaluation's progress to ensure that IDA performed it in accordance with the Council of the Inspectors General on Integrity and Efficiency's *Quality Standards for Inspection and Evaluation* (December 2020) and contract terms. However, IDA is solely responsible for the attached report and the conclusions expressed in it.

In its evaluation, IDA identified that multiple recipients spent more than the approved budgeted amounts by category or in new budget categories without receiving the required prior approval, resulting in questioned costs of approximately $2.55 million.

In addition, IDA made the following observations:

- NIST's technical oversight of awards encouraged process efficiencies where possible.
- NIST leveraged existing processes to expedite awards, program objectives were aligned with award activities, and NIST can improve oversight by tracking quantitative goals and progress toward goals in progress reports.

In its response to our draft report, NIST agreed with the recommendations. We look forward to reviewing NIST's action plan for implementing the recommendations. The bureau's formal response is included in appendix C of this report.

Pursuant to Department Administrative Order 213-5, please submit to us an action plan that addresses the recommendations in this report within 60 calendar days. This final report will be

posted on the Office of Inspector General's website pursuant to the Inspector General Act of 1978, as amended (5 U.S.C. §§ 404 & 420).

We appreciate the cooperation and courtesies extended to IDA by your staff during this evaluation. If you have any questions or concerns about this report, please contact me at (202) 577-9547 or Kelley Boyle, Division Director, at (202) 253-0856.

Attachment

INSTITUTE FOR DEFENSE ANALYSES

Independent Program Evaluation of National Institute of Standards and Technology (NIST) Pandemic Relief Program

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March 2024
IDA Product ID 3000948

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Other request for this document shall be referred to Office of Inspector General at the U.S. Department of Commerce, Washington, DC.

About This Publication

This work was conducted by the IDA Systems and Analyses Center under contract HQ0034-19-D-0001, Project EC-7-5069, "Independent Program Evaluations of the National Institute of Standards and Technology (NIST) and National Oceanic and Atmospheric Administration (NOAA) Pandemic Relief Programs," for the Office of the Inspector General, U.S. Department of Commerce. The views, opinions, and findings should not be construed as representing the official position of either the Department of Defense or the sponsoring organization.

Acknowledgments

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INSTITUTE FOR DEFENSE ANALYSES

IDA Product ID 3000948

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Report in Brief

Background

The Coronavirus Aid, Relief, and Economic Security (CARES) Act provided $66 million to the National Institute of Standards and Technology (NIST) to assist manufacturers to prevent, prepare for, and respond to COVID-19. Specifically, the CARES Act provided $50 million to the Manufacturing Extension Partnership (MEP) and $10 million to the National Network for Manufacturing Innovation Program (also known as Manufacturing USA). The American Rescue Plan (ARP) provided $150 million in additional funding to Manufacturing USA for projects that focus on research, development, and testbeds to prevent, prepare for, and respond to COVID-19. The funds provided to Manufacturing USA and the MEP centers were awarded through cooperative agreements to achieve these objectives.

Why We Did This Review

This report is part of a series of evaluations regarding the Department of Commerce (DOC) Office of Inspector General's (OIG's) review of oversight for pandemic funds. The DOC OIG tasked the Institute for Defense Analyses (IDA)—an independent organization—with performing this evaluation. Our objective is to determine whether NIST grantees and subrecipients accounted for and expended pandemic relief funds provided under the CARES Act and subsequent funding authorizations in accordance with federal laws and regulations. Specifically, this included determining: whether NIST officials had sufficient oversight of recipients; whether recipients were compliant with the conditions of the awards; whether costs claimed were allowable, allocable, and reasonable; and whether grants were effective in achieving desired outcomes of timeliness and COVID-19 impact mitigation.

Approach

The IDA evaluation was conducted in accordance with the Blue Book Standards issued by the Council of the Inspectors General on Integrity and Efficiency. We evaluated the execution of CARES Act and ARP funds given to Manufacturing USA and MEP, reviewing relevant laws, policies, and guidance. We conducted numerous interviews with relevant stakeholders—including NIST officials and award recipients—as well as with the Government Accountability Office (GAO). We obtained direct access to the universe of award files (71 awards), reviewed award documentation, award application information,

and data containing expenditures. We assessed the information, identified deficiencies, and developed recommendations. While the CARES Act funds have been completely spent, as of November 2023, spending of ARP funds continues. This evaluation reviewed some aspects of several ARP awards but focuses largely on completed CARES Act awards.

Finding and Observations

Finding I: Multiple recipients spent more than the approved budgeted amounts by category or in new budget categories without receiving the required prior approval resulting in questioned costs of approximately $2.55 million

- Recipients spent funds in amounts inconsistent with their approved budgets without first seeking budget revision approvals from NIST.
- Without NIST-approved revised budgets, recipient funds were expended without NIST's analysis and approval of how the funding would be spent.
- About $2.55 million in award funding is questioned. This issue affects 13 awards and represents 5.2 percent of the approximately $50 million that went to MEP centers.

Observation I: NIST's technical oversight of awards encouraged process efficiencies where possible

- As part of its COVID response, NIST embedded subject matter experts in several Manufacturing USA project teams to provide real-time situational awareness and to assist recipients.
- NIST brought together three recipients to collaborate on research when they would have otherwise been competitors.

Observation II: NIST leveraged existing processes to expedite awards; program objectives were aligned with award activities, and NIST can improve oversight by tracking quantitative goals and progress toward goals in progress reports

- NIST and recipients expedited the award process and spent funds more quickly than the average for CARES Act funding across all agencies by leveraging existing processes. Overall, 83 percent of NIST CARES Act MEP and Manufacturing USA funding was spent by September 2021, while only 67 percent of overall CARES Act funds had been spent.
- NIST aligned program objectives with quantitative goals for award activities, which were largely achieved.
- Manufacturers self-reported $265 million in cost savings and over 12,000 jobs created (IDA did not validate these survey results).

Recommendations

The following two recommendations stem from Finding I. We recommend that the Under Secretary of Commerce for Standards and Technology and Director of NIST ensure NIST's Director of Grants Management:

1. Reviews expenditures above the approved budgets for the 13 awards with questioned costs and addresses any instances where recipients did not adhere to federal laws and regulations.
2. Implements a financial oversight process to ensure award recipients seek budget revision approvals for any changes above the allowable threshold or any spending in new budget categories.

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1. Introduction

This report is part of a series of the Department of Commerce (DOC) Office of Inspector General's (OIG's) evaluations regarding oversight for pandemic funds. The DOC OIG tasked the Institute for Defense Analyses (IDA)—an independent firm—to perform this particular evaluation.

Our objective was to determine whether National Institute of Standards and Technology (NIST) grantees and subrecipients accounted for and expended pandemic relief funds provided under the Coronavirus Aid, Relief, and Economic Security (CARES) Act and subsequent funding authorizations in accordance with federal laws and regulations. Specifically, the scope included determining whether NIST officials had sufficient oversight of recipients; whether recipients were compliant with the conditions of the awards; whether costs claimed were allowable, allocable, and reasonable; and whether grants were effective in achieving desired outcomes of timeliness and mitigating COVID-19's impact. More information on objectives of the evaluation can be found in Appendix A, which also contains detail on this evaluation's scope and methodology.

This evaluation builds on a 2021 DOC OIG evaluation on NIST pandemic relief funds, which produced three major findings:

- "NIST was proactive in implementing the requirements of the CARES Act"
- "NIST mitigated challenges faced during implementation of the CARES Act"
- "NIST met the established industrial technology services (ITS) funding obligation milestones"[1]

A. Background

The CARES Act was signed into law on March 27, 2020, to respond to the coronavirus disease 2019 (COVID-19) outbreak and its impact on the economy, public health, state and local governments, individuals, and businesses. The CARES Act provided $66 million to NIST to assist manufacturers to prevent, prepare for, and respond to COVID-19.[2] Of the $66 million, approximately $50 million was awarded through the

[1] DOC OIG Report OIG-21-032-I, *NIST Was Effective in Implementing the Requirements for Awarding Funds Under the CARES Act*, August 5, 2021.

[2] Pub. L. No. 116-136, 134 Stat. 511.

Manufacturing Extension Partnership (MEP) through noncompetitive awards, while approximately $10 million went to Manufacturing USA institutes through a combination of competitive and noncompetitive awards.[3] The remaining $6 million was used to support internal testing research and is out of scope of this evaluation.[4] The funds provided to Manufacturing USA and the MEP centers were awarded through cooperative agreements to achieve the CARES Act's objectives. Both Manufacturing USA and the MEP program assist U.S. manufacturers through public-private partnerships and are headquartered at NIST; they both support U.S. industry to manufacture American-made products that compete in the global marketplace.[5]

The American Rescue Plan[6] (ARP) Act provided $150 million in additional funding for projects that focus on research, development, and testbeds to prevent, prepare for, and respond to coronavirus.[7] This funding went to small businesses through the Small Business Innovation Research (SBIR) program and Manufacturing USA institutes.

The Department of Commerce sponsors the National Institute for Innovation in Manufacturing Biopharmaceuticals (NIIMBL), which received $8.9 million and $83 million of funding from CARES Act and ARP, respectively, through noncompetitive awards. NIIMBL's mission is to accelerate biopharmaceutical innovation, support the development of standards that enable more efficient and rapid manufacturing capabilities, and educate and train a world-leading biopharmaceutical manufacturing workforce, fundamentally advancing U.S. competitiveness in this industry.[8]

Table 1 summarizes the funding distribution across entities for CARES Act and ARP funds.

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3 Pub. L. No. 116-136, 134 Stat. 511.

4 Department of Commerce CARES Act Implementation Plan, June 2020.

5 Manufacturing USA, *About Us*, https://www.manufacturingusa.com/about-us, accessed October 24, 2023.

6 Pub. L. No. 117-2, Section 7501.

7 *MFG USA Report to Congress: Fiscal Year 2021*, https://www.manufacturingusa.com/reports/mfg-usa-report-congress-fiscal-year-2021#:~:text=Under%20the%20American%20Rescue%20Plan,for%2C%20and%20respond%20to%20coronavirus, accessed October 24, 2023.

8 NIIMBL – National Institute for Innovation in Manufacturing Biopharmaceuticals, About NIIMBL. https://niimbl.my.site.com/s/about-niimbl, accessed October 24, 2023.

Table 1. Summary of NIST CARES Act and ARP Funds, in $Millions

	CARES Act ($M)	ARP ($M)
MEP Center Awards	**49.1**	**0.0**
Manufacturing USA Institute Awards	**9.8**	**136.8**
NIIMBL	*8.9*	*83.0*
Other Institutes	*0.9*	*53.8*
SBIR Awards	**0.0**	**3.2**
Fees/Not awarded	**1.1**	**10.0**
NIST Internal (not in scope)	**6.0**	**0.0**
Total Funding	**66.0**	**150.0**

The 51 CARES Act awards to MEP centers ranged from $91,000 to $6.1 million. Two CARES Act funded awards were made to Manufacturing USA institutes: one to NIIMBL, and one to America Makes. The 14 ARP awards made through Manufacturing USA ranged from almost $300,000 to $83 million. The 4 awards made through the SBIR program were each about $800,000.

2. Findings and Recommendations

This chapter provides the findings and recommendations resulting from the evaluation. Appendix A outlines the evaluation's objectives, scope, and methodology. Appendix B summarizes questioned costs. Chapter 3 contains a summary of NIST's response to the draft report with NIST's formal comments included in Appendix C.

A. Finding I: Multiple recipients spent more than the approved budgeted amounts by category or in new budget categories without receiving the required prior approval resulting in questioned costs of approximately $2.55 million

Award recipients spent funds in amounts that were inconsistent with their approved budgets without seeking prior budget revisions resulting in questioned costs of approximately $2.55 million. This issue manifested in two variations.

In one variation, award expenditures for several awards were inconsistent with the awards' NIST-approved budgets by expense categories, and the cumulative transfer of funds across direct cost categories was more than the 10 percent threshold allowance. CARES Act awards followed the DOC Standard Terms and Conditions[9] and 2 C.F.R. § 200.308.[10] Both authorities required nonfederal entities to request prior approval from the grants officer for transfers of funds among direct cost categories when the cumulative amount of such direct costs transfers exceeds 10 percent of the total in the latest approved budget.

As an example, a particular MEP general ledger indicated expenses of about $700,000 above the approved budget in three categories, which was over 30 percent cumulative difference. Twelve MEP awards exhibited this issue, amounting to approximately $2.54 million (of approximately $50 million awarded to MEP centers). NIST oversight did not identify discrepancies between the approved budget category amounts and the actual expenses, as this matter is not part of its award review.

Relatedly, five recipients each spent over $1,000 of their funding in budget categories that were not included in the NIST-approved budget, nor did they seek a budget revision from NIST, as required. In addition to the above language, DOC Standard Terms and

[9] Department of Commerce Financial Assistance Standard Terms and Conditions, April 30, 2019.

[10] https://www.ecfr.gov/current/title-2/subtitle-A/chapter-II/part-200/subpart-D/section-200.308.

Conditions[11] also states that "this transfer authority does not authorize the recipient to create new budget categories within an approved budget without grants officer approval." As an example, a particular MEP center provided expense information that indicated expenses of about $120,000 in the categories of personnel and fringe benefits, yet these two categories were not approved expense categories in their budget application and award documentation. In total, there was $679,154 in expenditures across five awards exhibiting this particular issue.

Some awards exhibited both the budget transfer issue and the unapproved budget category issue; thus, the stated totals for the two issues are not additive. Out of the $679,154 for the unapproved budget category issue, $664,715 is already accounted for in the budget category transfer threshold issue ($2.54 million). Therefore, the total questioned costs for the two issues is about $2.55 million.

One recipient who should have submitted a budget revision appeared to understand that a budget revision was required, but cited time constraints and the need to pivot funds quickly to other categories at the end of the award as reasons for not submitting a budget revision. According to NIST, it is incumbent upon the recipient to request budget revision approvals. If the recipient does not seek a budget revision and obtain approval from the NIST grants officer, NIST indicated that the lack of request could be considered material non-compliance and that enforcement action could be imposed on the recipient.

NIST did not consistently compare actual expenditures with approved cost categories and amounts. Prior to approving CARES Act awards, NIST reviewed each applicant's budget and justification to ensure that the costs as stated in the application were allocable, allowable, and reasonable. After the award was made, the MEP CARES Act recipients were required to submit quarterly progress reports to NIST, including technical progress and financial estimates, which NIST reviewed. NIST does not consistently review costs incurred at the budget category level, though may request additional documentation if budgetary or financial concerns are identified.[12]

The total amount of funds spent without NIST's prior review and approval was approximately $2.55 million, which occurred over 13 MEP center awards. Because these expenditures were not reviewed and approved by NIST, the funds spent were unallowable according to DOC and federal regulations. As a result, it is unclear whether the funds were spent for the intended purpose. Thus, $2.55 million of expenditures are considered questioned costs. We recommend that the Under Secretary of Commerce for Standards and Technology and Director of NIST ensure NIST's Director of Grants Management:

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[11] Department of Commerce Financial Assistance Standard Terms and Conditions.

[12] NIST does reconcile total award amounts. After an award was complete, NIST's grant award close-out process reconciled the total budget with total actual expenditures.

Recommendation 1: *Reviews expenditures above the approved budgets for the 13 awards with questioned costs and addresses any instances where recipients did not adhere to federal laws and regulations.*

Recommendation 2: *Implements a financial oversight process to ensure award recipients seek budget revision approvals for any changes above the allowable threshold or any spending in new budget categories.*

B. Observation I: NIST's technical oversight of awards encouraged process efficiencies where possible

Despite the financial issues in Finding I, we found elements of technical oversight that could be beneficial in the future. Recipients are required to submit technical progress reports periodically. IDA sampled and evaluated these reports for MEP and Manufacturing USA awards. NIST did indeed review and approve all technical reports sampled. Furthermore, IDA found that the technical oversight by NIST and NIIMBL achieved process efficiencies as discussed in this section.

1. NIST embedded subject matter experts in each NIIMBL project team to provide real-time situational awareness and assist the recipients

OMB Memorandum M-20-21[13] with subject, "Implementation Guidance for Supplemental Funding Provided in Response to the Coronavirus Disease 2019 (COVID-19)" indicates that agencies should: balance the imperatives of expediency and good stewardship; ensure that qualified, skilled, and appropriately trained personnel are overseeing awards; and streamline regulations and internal processes. These considerations are consistent with OMB's core principles of mission achievement, expediency, and transparency and accountability.

Interviews indicated that NIST anticipated numerous data requests for NIIMBL. Due to the number of new projects simultaneously launched to address COVID-19 and the urgency of responding to the pandemic, NIST indicated that they embedded subject matter experts (SMEs) in each NIIMBL project team to reduce typical communication lags between NIST and NIIMBL, which could potentially take several weeks or more. By embedding SMEs and taking other anticipatory actions, NIST provided nearly real-time situational awareness to assist the recipients with technical expertise and gained for itself almost real-time situational awareness of NIIMBL projects, thereby expediting information flow.

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[13] Office of Management and Budget, April 10, 2020, *Implementation Guidance for Supplemental Funding Provided in Response to the Coronavirus Disease 2019 (COVID-19).*

Embedded SMEs also aligned technical expertise within the projects, providing project teams access to measurement science expertise and, in one example, valuable help regarding the likely sources of failure in an experiment. Interviews indicated both NIST and NIIMBL found this arrangement to be helpful; NIIMBL stated it lowered its burden and strengthened its relationship with NIST.

2. NIST and NIIMBL brought together three recipients to collaborate on research when they would have otherwise been competitors

OMB Memorandum M-20-21[14] states that "to the extent … programs overlap among common recipients, agencies should take additional steps to ensure the integrity of these payments, reduce burden on recipients, and promote operational efficiency." This OMB guidance also discusses the need to regularly communicate with and encourage coordination among state and local governments, tribes, and nonprofit entities for financial assistance.[15]

NIIMBL indicated that there were three NIIMBL projects that overlapped in one particular content area. After identifying this area of potential synergy, NIST indicated that NIST and NIIMBL brought together these three project teams to coordinate efforts on their related projects and to rapidly produce and support research. Interviewees stated that although teams were hesitant to engage with competitors, the three teams worked together and built trust. By sharing individual findings, setbacks, and key lessons learned, the researchers ensured that the other teams avoided similar pitfalls and proceeded with the most successful pathways.

NIIMBL indicated that this arrangement allowed all three teams to accelerate progress and, ultimately, to be successful. By insisting on and nurturing collaboration early on, the teams potentially shortened the time needed to achieve success. Interviews indicated that factors contributing to the success of this concept included the research scientists' familiarity with each other from being part of the NIIMBL community of scientists, and their sense of doing whatever it took to help the greater good during the global pandemic.

Participants stated that this approach could be beneficial in the future when the objective is known and there may be multiple paths to the solution.

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[14] Office of Management and Budget.

[15] Office of Management and Budget.

C. Observation II: NIST leveraged existing processes to expedite awards; program objectives were aligned with award activities, and NIST can improve oversight by tracking quantitative goals and progress toward goals in progress reports

1. NIST and recipients expedited funds more quickly than the overall CARES Act average by leveraging existing processes

OMB Memorandum M-20-21 discusses the importance of agencies awarding and distributing funds in an expedient manner.[16] OMB also directs agencies to leverage and continue to employ existing financial transparency and accountability mechanisms wherever possible.[17] NIST indicated in interviews that the award for the noncompetitive Request for Application (RFA) for NIIMBL in CARES Act was made about four months faster than pre-COVID average awards (2 months versus 6 months), whereas the competitive award for CARES Act was made more than six months faster (3 months versus 9.5 months). Overall, 83 percent of NIST CARES Act MEP and Manufacturing USA funding was spent by September 2021, whereas only 67 percent of overall CARES Act funds had been spent.[18]

NIST and recipients were able to expedite funds by leveraging existing processes in executing CARES Act funds. NIST indicated that they also made use of rolling submission reviews, rather than waiting for the application window to close. As a result, funding to recipients moved quickly, which facilitated assistance to manufacturers for COVID-19 impact mitigation.

2. NIST aligned program objectives with quantitative goals for award activities, which were largely achieved; manufacturers self-reported cost savings

OMB Memorandum M-20-21 indicates that federal managers and recipients should use data and evidence to achieve program objectives.[19] The MEP program objective in the request for application is to "assist manufacturers to prevent, prepare for, and respond to coronavirus, with a focus on assistance to small- and medium-sized manufacturers (SMEs) and rural manufacturers, and will not require matching funds." The RFA also aligned the objective with quantitative goals (e.g., number of manufacturers contacted).

Goals for award activity of sampled projects aligned with overall program objectives. MEP centers often exceeded quantitative goals, and manufacturers reported cost savings.

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16 Office of Management and Budget.

17 Office of Management and Budget.

18 Based on calculations from data on USAspending.gov, accessed August 29, 2023.

19 Office of Management and Budget.

Sampled MEP centers reported goals totaling about 30,000 manufacturers contacted in their applications; all MEP centers self-reported that they exceeded their goals (a combined total of over 100,000 manufacturers contacted). Other quantitative goals included numbers of supplier matching activities, MEP Center multi-engagements, and assessments. Out of a sample of 46 goals, 37 of these goals were exceeded. IDA did not validate the self-reported metrics. We suggest NIST continues to require that proposals align with program objectives and include outcomes and quantitative measures where possible. We also suggest that the progress reports should start tracking the progress toward overall quantitative goals.

The noncompetitive RFA for MEP required applicants to identify project evaluation metrics (e.g., number of manufacturers to be contacted) for award activities. NIST provided feedback to better align project goals for award activities with objectives. NIST also developed a template for using quantitative metrics for award activities in progress reports.

NIST continues to conduct an annual survey to measure the effects of MEP funding. A third party is used to conduct the survey; effects are self-reported from the MEP client companies. NIST aggregates self-reported effects for companies benefitting from CARES Act funding (these companies may have been receiving benefits from base-level MEP funding as well). The companies benefitting from CARES Act funding self-reported savings of approximately $265 million and over 12,000 jobs created.[20]

[20] Calculations are based on data provided by MEP as of September 20, 2023. IDA did not validate these survey results.

3. Summary of Agency Response

NIST provided a response to the draft report on March 1, 2024. NIST agrees with both recommendations and will provide a formal action plan upon issuance of this report. Appendix C contains NIST's formal comments. NIST also provided technical comments on the report. IDA considered these comments and made changes where appropriate.

Appendix A.
Objective, Scope, and Methodology

Our objective was to determine whether National Institute of Standards and Technology (NIST) grantees and subrecipients accounted for and expended pandemic relief funds provided under the Coronavirus Aid, Relief, and Economic Security (CARES) Act and subsequent funding authorizations in accordance with federal laws and regulations. The scope of the evaluation includes funds designated for NIST to prevent, prepare for, and respond to coronavirus under the CARES Act and the American Rescue Plan (ARP) from March 2020 through the end of September 2022. The Institute for Defense Analyses (IDA) team focused on four subobjectives evaluating whether:

- Department of Commerce (DOC) operating units had sufficient oversight and monitoring of grant recipients (NIST officials followed laws and guidance with sufficient oversight of recipients)
- Grant recipients complied with grant terms and conditions (Manufacturing Extension Partnership (MEP) and Manufacturing USA recipients executed grants consistent with laws and guidance)
- Costs claimed were allowable, allocable, and reasonable under the grant awards (execution of funding for grant projects complied with the conditions of the awards)
- Grants were effective in achieving desired outcomes—namely, timeliness and COVID-19 impact mitigation

To conduct its evaluation, the IDA team:

- Reviewed relevant law, policies, and guidance, including
  - Coronavirus Aid, Relief, and Economic Security Act, Public Law 116-136, March 27, 2020
  - American Rescue Plan Act of 2021, Public Law 117-2, March 11, 2021
  - Department of Commerce CARES Act Implementation Plan, June 2020
  - Department of Commerce Grants and Cooperative Agreements Manual, (October 24, 2016), Interim Change 1, January 25, 2018
  - Department of Commerce Financial Assistance Standard Terms and Conditions, April 30, 2019

  - Office of Management and Budget (OMB) Memo M-20-21, Implementation Guidance for Supplemental Funding Provided in Response to the Coronavirus Disease 2019 (COVID-19), April 10, 2020

- Conducted interviews with NIST officials from MEP, Manufacturing USA, and the Grants Management Division. We interviewed the Department of Commerce's Director of the Commerce Performance Excellence Office. IDA also interviewed officials from the National Institute for Innovation in Manufacturing Biopharmaceuticals (NIIMBL), the California Manufacturing Technology Consulting (CMTC) MEP center, and the Government Accountability Office (GAO)
- Obtained access to the NIST Grants Management Information System (GMIS) containing the universe of cooperative agreements awarded by NIST for CARES Act and ARP
- Reviewed recipient award documentation, award application documentation, and data containing expenditures
- Compared sample application and award documentation to the relevant laws and guidance to determine whether the recipients complied with the grant terms and conditions. IDA reviewed funds from final progress reports submitted to NIST to review how funds were spent. IDA also reviewed closeout documentation for sampled applications that have been completed
- We assessed the reliability of data used in this evaluation by performing electronic testing, reviewing existing information about the data and the system that produced them, interviewing agency officials and relevant personnel knowledgeable about the data, and following up on questions related to data reliability. We determined that the data were sufficiently reliable for the purposes of this report.
- Conducted many follow-up emails with NIST and recipients where there were clarifying questions or follow-up on any concerns about particular awards
- Identified deficiencies and developed recommendations

IDA's evaluation examined a judgment sample of awards. Factors considered in developing our judgment sample included sample awards from a variety of cost categories, potential indicators of incorrect payments, payment amounts, and award amounts. We collected a judgment sample of general ledger and financial data from six MEP centers, NIIMBL (CARES Act and ARP), and four ARP-funded awards. These awards totaled approximately $123 million: about $22 million in CARES Act funds and about $101 million in ARP funds. While the CARES Act funds have been expended, spending of ARP

funds is ongoing as of November 2023. This evaluation reviewed some aspects of several ARP awards, but focuses largely on completed CARES Act awards.

We conducted our work from August 2022 through November 2023 at IDA Headquarters in Alexandria, VA. The review was conducted in accordance with the Quality Standards for Inspection and Evaluation (December 2020) issued by the Council of the Inspectors General on Integrity and Efficiency.[1] Those standards require that the evidence supporting the evaluation's finding, conclusion, and recommendations be sufficient, competent, and relevant and should lead a reasonable person to sustain the findings and recommendations. We judge that our work and the evidence obtained adhere to these standards. Table A-1 shows a cross-walk between the Council of the Inspectors General on Integrity and Efficiency (CIGIE) Blue Book Standards and the Institute for Defense Analyses (IDA) standards and practices.

Table A-1. Alignment of CIGIE Blue Book and IDA Standards and Practices

CIGIE Blue Book Standard	IDA Independent Evaluation Standards and Practices
Independence	
1.1 Inspectors and inspection organizations must be independent, both in fact and appearance, in matters relating to inspection work.	IDA's work is characterized by integrity and objectivity. This level of independence requires that IDA remain free from organizational conflicts of interest, and that its staff be free of personal conflicts of interest.
1.2 Inspectors must document all known threats to independence or document that there are no known threats to their independence for each inspection they are assigned to conduct.	IDA requires employees to disclose any potential conflicts of interest and institutes a conflict-of-interest screening process. Assigned IDA staff also sign independence declarations prior to beginning work.

[1] Council of the Inspectors General on Integrity and Efficiency, *Quality Standards for Inspection and Evaluation,* December 2020, https://www.ignet.gov/sites/default/files/files/QualityStandardsforInspectionandEvaluation-2020.pdf, accessed 5/24/2023.

CIGIE Blue Book Standard	IDA Independent Evaluation Standards and Practices
Competence	
2.1 Inspectors assigned to perform an inspection must collectively possess the professional competency to address the inspection objectives and perform the inspection.	IDA researchers—90 percent of whom have earned advanced degrees—solve challenging scientific and technical problems. For each project, research teams with the appropriate experience and technical backgrounds are assembled from across the Institute's divisions. IDA's flat organization and culture of internal collaboration allow researchers to come together to staff project teams.
2.2 Inspectors must complete a minimum of 40 hours of training every 2 years. If an inspection organization has special circumstances, such as but not limited to, part-time employees or employees on extended leave, it may authorize an exemption to this requirement.	IDA has a generous annual professional development program that ensures staff remain at the forefront of their disciplines.
2.3 The inspection organization must track each inspector's completed training.	IDA tracks completion of staff training.
Planning	
3.1 Inspection organizations must have a basis or rationale for the selection of inspection topics.	The Department of Commerce (DOC) Office of Inspector General (OIG) chose the topic of the evaluation. In an August 17, 2022 memorandum to the NIST director, OIG announced that it was initiating the evaluation, which would be performed by IDA as an independent evaluation.
3.2 Inspectors must coordinate proposed inspections with appropriate organizations as determined by the inspection organization.	OIG and IDA participated in an entrance conference with NIST conducted on October 12, 2022.
3.3 Inspectors must research the operation, program, policy, or entity to be inspected.	IDA staff fully researched all relevant operations, programs, policies, and entities to inform their evaluation work.
3.4 Inspectors must identify the criteria where applicable to the operation, program, policy, or entity being inspected, as appropriate, to meet the inspection objectives.	IDA staff researched all criteria relevant to this evaluation.
3.5 Inspectors must prepare a written inspection plan for each inspection that includes the objective(s), scope, and methodology.	IDA developed a written evaluation plan as a deliverable to the DOC OIG in support of this evaluation that outlined the objectives, scope, and methodology. IDA also briefed the plan to the DOC OIG.

CIGIE Blue Book Standard	IDA Independent Evaluation Standards and Practices
Evidence Collection and Analysis	
4.1 Inspectors must collect and analyze evidence consistent with inspection objectives and related to the operation, program, policy, or entity being inspected.	IDA findings and conclusions arise directly from the results of evidence-based and data-driven analyses.
4.2 Inspectors must include relevant evidence collected and analysis performed in inspection documentation.	IDA saved documentation generated during the evaluation used to support findings, conclusions, and recommendations.
4.3 Evidence must sufficiently and appropriately support inspection findings and provide a reasonable basis for conclusions.	IDA findings and conclusions arise directly from the results of evidence-based and data-driven analyses. IDA work ensures that sufficient evidence is provided so that any reasonably informed person will concur with the findings, conclusions, and recommendations provided.
4.4 Inspection organizations must protect controlled unclassified information and classified information.	A general “need-to-know” is established in connection with IDA performance of projects. Access to classified or controlled unclassified information (CUI) documents and publications and the security clearances necessary to complete the project are obtained through the IDA contracting officer’s representative, unless otherwise instructed.
4.5 If inspectors suspect fraud or other illegal acts, they must promptly present such information to their supervisors for review and possible referral to the appropriate investigative office.	IDA promptly reports any findings that may indicate the possibility of fraud or other illegal acts and abuse to the relevant investigative office.
Reporting	
5.1 Inspectors must state the following in all inspection reports: the objective(s), scope, and methodology of the inspection; the inspection results, including findings, conclusions, and recommendations, as appropriate; and the inspection was conducted in accordance with the Council of the Inspectors General on Integrity and Efficiency’s Quality Standards for Inspection and Evaluation.	IDA made sure that final reports included all required elements to fulfill CIGIE Blue Book standards.
5.2 Inspectors must base report findings, conclusions, and recommendations on the evidence collected and the analysis conducted during the inspection.	IDA's findings, conclusions, and recommendations were based upon the evidence and analysis conducted during the inspection.
5.3 Reports must include enough information to allow a reasonable person to sustain findings, conclusions, and recommendations.	IDA's final report included sufficient details such that a reasonably informed person would sustain the findings, conclusions, and recommendations.

CIGIE Blue Book Standard	IDA Independent Evaluation Standards and Practices
5.4 Any recommendations made in a report must be addressed to the appropriate officials who have the authority to act on them.	Final recommendations were addressed to appropriate officials who have the authority to act on them.
5.5 Draft inspection reports that receive formal comments from management officials of the inspected entity on report findings, conclusions, and/or recommendations must include those comments, or a summary, in the final report.	The report will follow OIG approval protocols and provide NIST the opportunity to comment.
5.6 Inspection reports must be distributed to the appropriate officials responsible for acting on the findings and recommendations.	The final report will be distributed appropriately by the DOC OIG.
Follow-Up	
6.1 For each recommendation, inspection organizations must solicit agreement or disagreement and planned corrective actions to the report recommendations from management officials in writing.	The DOC OIG will send the report to NIST for review and will coordinate written responses from NIST. NIST's response will be included as an appendix of the report.
6.2 An inspection organization must monitor inspected entities' progress toward implementation of recommendations.	The DOC OIG is responsible for monitoring NIST's progress toward implementation of recommendations.
Quality Control	
7.1 Inspection organizations must implement a system of quality control that provides the inspection organization with reasonable assurance that the organization and its personnel follow the Blue Book when conducting inspections.	IDA undergoes a stringent and rigorous peer-review process of all deliverables, ensuring that its research products are of the highest quality.
7.2 Inspection organizations must provide supervision over the inspection work performed.	DOC OIG staff exercised oversight authority over the contents of the report by reviewing indexing and report wording. DOC OIG's oversight ensured that CIGIE and DOC OIG standards were fully met.
7.3 Inspection organizations that are members of CIGIE must undergo an external peer review in accordance with CIGIE requirements.	DOC OIG undergoes periodic peer review in accordance with CIGIE requirements.
7.4 Inspection organizations must take action to ensure report users do not continue to rely on a distributed report that is later found to contain findings and conclusions that are not supported by sufficient and appropriate evidence or significant errors.	DOC OIG and IDA would act if a distributed report were found to contain significant errors.

Appendix B.
Potential Monetary Impact

This appendix estimates the potential monetary impact of the findings from this report in terms of questioned costs. The findings of the evaluation did not yield unsupported costs or funds that could be put to better use.

Questioned Costs

The questioned costs result from the two budget issues outlined in Finding I. In the first issue, the cumulative transfer of funds across direct cost categories was more than the 10 percent threshold allowance. Twelve awards to Manufacturing Extension Partnership (MEP) centers exhibited this issue, totaling approximately $2.54 million. The questioned dollar amounts for awards exhibiting this issue ranged from $30,707 to $704,790; the median was $184,422.

In the second category, five recipients spent over $1,000 of their funding in budget categories that were not included in the NIST-approved budget. In total, there were $679,154 in expenditures across five awards exhibiting this issue; the portion not already accounted for in the previous budget issue is $14,439. The questioned dollar amounts for awards over $1,000 exhibiting this issue ranged from $13,151 to $336,295; the median was $15,315.

The total questioned costs for both budget issues is $2,554,506. Table B-1 shows the elements of the questioned costs.

Table B-1. Elements of Questioned Costs

Category	Questioned Costs
Cumulative transfers across budget categories over 10 percent	2,540,067
Costs transferred to budget categories not in the approved budget	679,154
Total	2,554,506

Source: IDA evaluation of award financial data.

Appendix C.
Agency Response

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899-0001

February 28, 2024

TO: Arthur L. Scott Jr., Assistant Inspector General for Audit and Evaluation
Office of Inspector General

FROM: Laurie E. Locascio, Ph.D., NAE
Under Secretary of Commerce for Standards and Technology &
Director, National Institute of Standards and Technology

LAURIE LOCASCIO
Digitally signed by LAURIE LOCASCIO
Date: 2024.02.29 16:46:37 -05'00'

SUBJECT: Response to Draft Audit Report: *Independent Evaluation of NIST Grantees' and Subrecipients' Use of Pandemic Relief Funds*, January 29, 2024

Thank you for the opportunity to respond to the OIG draft report entitled *Independent Evaluation of NIST Grantees' and Subrecipients' Use of Pandemic Relief Funds*, January 29, 2024.

The auditors found that multiple recipients spent more than the approved budgeted amounts by category or in new budget categories without receiving the required prior approval resulting in questioned costs of approximately $2.55 million.

The auditors recommend that the Under Secretary of Commerce for Standards and Technology and Director of NIST ensure NIST's Director of Grants Management:

- **OIG's Recommendation #1:** Reviews expenditures above the approved budgets for the 13 awards with questioned costs and addresses any instances where recipients did not adhere to federal laws and regulations.
- **OIG's Recommendation #2:** Implements a financial oversight process to ensure award recipients seek budget revision approvals for any changes above the allowable threshold or any spending in new budget categories.

The Department agrees with the recommendations and will prepare a formal action plan upon issuance of OIG's final report.

If you have any questions, please contact, Amy Egan, Audit Liaison, at (301) 975-2819 or amy.egan@nist.gov .

Illustrations

Tables

Table 1. Summary of NIST CARES Act and ARP Funds, in $Millions 3

Table A-1. Alignment of CIGIE Blue Book and IDA Standards and Practices A-3
Table B-1. Elements of Questioned Costs B-1

References

2 C.F.R. Section 200.308.

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Pub. L. No. 116-136, 134 Stat. 511.

Pub. L. No. 117-2, Section 7501.

Abbreviations

ARP	American Rescue Plan
CARES	Coronavirus Aid, Relief, and Economic Security
CIGIE	Council of the Inspectors General on Integrity and Efficiency
CMTC	California Manufacturing Technology Consulting
COVID-19	Coronavirus Disease 2019
DOC	Department of Commerce
FFRDC	Federally Funded Research and Development Center
GAO	Government Accountability Office
GMIS	Grants Management Information System
IDA	Institute for Defense Analyses
ITS	Industrial Technology Services
MEP	Manufacturing Extension Partnership
NIIMBL	National Institute for Innovation in Manufacturing Biopharmaceuticals
NIST	National Institute of Standards and Technology
OIG	Office of Inspector General
OMB	Office of Management and Budget
RFA	Request for Application
SME	Subject Matter Expert
U.S.	United States

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