



Office of the Inspector General

SOCIAL SECURITY ADMINISTRATION

Audit Report

Contract with Johns Hopkins University Applied Physics Laboratory for Analysis of the Social Security Administration's Disability Process

062325 April 2025



Office of the Inspector General

SOCIAL SECURITY ADMINISTRATION

MEMORANDUM

Date: April 17, 2025

Refer to: 062325

To: Leland Dudek
Acting Commissioner

From: Michelle L. Anderson *Michelle L. Anderson*
Assistant Inspector General for Audit

Subject: Contract with Johns Hopkins University Applied Physics Laboratory for Analysis of the Social Security Administration's Disability Process

The attached final report presents the results of the Office of Audit's review. The objectives were to determine whether the Social Security Administration procured services from the Johns Hopkins University Applied Physics Laboratory in accordance with applicable regulations and received value from the goods and services for which it contracted.

Please provide within 60 days a corrective action plan that addresses each recommendation. If you wish to discuss the final report, please call me or have your staff contact Mark Searight, Deputy Assistant Inspector General for Audit.

Attachment

Contract with Johns Hopkins University Applied Physics Laboratory for Analysis of the Social Security Administration's Disability Process 062325



April 2025

Office of Audit Report Summary

Objectives

To determine whether the Social Security Administration (SSA) procured services from the Johns Hopkins University Applied Physics Laboratory (JHU/APL) in accordance with applicable regulations and received value from the goods and services for which it contracted.

Background

SSA administers the Disability Insurance and Supplemental Security Income programs under which SSA adjudicates disability determinations and decisions for which it issues benefits to millions of beneficiaries annually. JHU/APL is a not-for-profit, university-affiliated research center that solves complex research, engineering, and analytical problems that present critical challenges to our nation.

In July 2020, SSA awarded JHU/APL a \$13 million sole-source, cost-reimbursement contract. This contract had four task orders with a period of performance from July 2020 through October 2023. The contract objective was for JHU/APL to identify opportunities for policy improvement and increase efficiency and accuracy in administering the Agency's disability programs. The contract included 10 deliverables.

Results

SSA procured services from JHU/APL in accordance with the Federal Acquisition Regulation and SSA's acquisition manuals, and JHU/APL provided SSA the goods and services for which it contracted.

Although SSA received the goods and services for which it contracted, as of the date of our review, it had only implemented 2 of the 10 contract deliverables and lacked metrics to measure their effects on the efficiency and accuracy of its disability programs. In addition, SSA had no formal plan that showed estimated timeframes and needed resources to implement the remaining goods and services procured under the contract. Absent a clear implementation plan with estimated dates, needed resources, and metrics for measuring whether the disability programs improved because the contract deliverables were implemented, SSA risks having spent \$13 million without achieving meaningful improvements in customer service for its disability programs – the very issues the contract was intended to address.

Recommendations

We recommend SSA:

1. Establish metrics to determine whether its implemented deliverables are improving the efficiency and accuracy of the Agency's disability programs, as intended.
2. Establish a plan of when and how it will implement the remaining deliverables provided under the contract, as well as how SSA will track progress of the implementation to determine whether the analyses, prototypes and recommendations provided in those deliverables improve SSA's disability programs.

SSA agreed with Recommendation 2 and disagreed with Recommendation 1, citing a retroactive analysis to develop metrics would not be an effective use of resources.

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ABBREVIATIONS

ALJ	Administrative Law Judge
FAR	Federal Acquisition Regulation
JHU/APL	Johns Hopkins University Applied Physics Laboratory
JOFOC	Justification for Other than Full and Open Competition
NAVSEA	Naval Sea Systems Command
OIG	Office of the Inspector General
SSA	Social Security Administration
U.S.C.	United States Code

OBJECTIVES

To determine whether the Social Security Administration (SSA) procured services from the Johns Hopkins University Applied Physics Laboratory (JHU/APL) in accordance with applicable regulations and received value from the goods and services for which it contracted.

BACKGROUND

SSA administers the Disability Insurance and Supplemental Security Income programs under which SSA adjudicates disability determinations and decisions for which it issues benefits to millions of beneficiaries annually.¹ JHU/APL is a not-for-profit, university-affiliated research center that solves complex research, engineering, and analytical problems that present critical challenges to our nation.

SSA became aware of JHU/APL's capabilities in health missions through the Naval Sea Systems Command's (NAVSEA) medical disability determination project.² Upon learning JHU/APL was conducting the Navy's disability determination project, SSA identified similarities in key aspects, objectives, characteristics, and goals that aligned with its own disability process and Agency initiatives. As a result, in 2019, SSA and NAVSEA entered into an inter-agency agreement³ under which NAVSEA agreed to issue, on SSA's behalf, an approximately \$2 million task order to JHU/APL to analyze SSA's procedures for adjudicating disability claims.⁴

Sole-Source Contract with Johns Hopkins

SSA wished to maintain its working relationship with JHU/APL beyond the expiration date of the NAVSEA task order. Therefore, in July 2020, SSA awarded a \$13 million, sole-source, cost-reimbursement contract (number 28321320D00060009) to JHU/APL. This contract had four task orders with a period of performance from July 2020 through October 2023. Under the contract, JHU/APL was to identify opportunities for policy improvement and increase the efficiency and accuracy in SSA's administration of its disability programs. The contract included 10 deliverables.

- **Case Complexity:** JHU/APL developed algorithms and machine-learning models that could calculate a case's complexity score to help prioritize cases. These models use such factors as information in medical records, work history, and the claimant's age.
- **Centralized Scheduling Unit Support:** JHU/APL helped SSA explore technology and process solutions to make scheduling hearings more efficient at a centralized level.
- **Claimant Timeline Visualization:** JHU/APL developed the prototype of a web application that could expedite file review by capturing a claimant's medical and employment history

¹ 42 U.S.C. §§ 401-434 and §§ 1381-1385.

² NAVSEA is one of the Navy's six systems commands. NAVSEA designs, builds, delivers, and maintains ships, submarines, and systems for the Navy.

³ The inter-agency agreement process and the *Economy Act* allow agencies to transfer funds to other agencies to procure supplies and services when it is more economical to do so.

⁴ The scope of our audit does not include the review of this task order.

and displaying them on a timeline to help administrative law judges (ALJ) quickly and easily visualize the claimant's medical and employment histories.

- **Dynamic Value Model:** JHU/APL developed a uniform model of how SSA could develop, prototype, demonstrate, and integrate new products.
- **ALJ Professional Practice Index:** JHU/APL developed the prototype of a dynamic web application that could display a comprehensive set of indicators designed to increase transparency and promote organizational insight into the ALJs' work-cycle and allows judges and Agency management to reliably detect and address factors that affect the quality and timeliness of the disability adjudication process.
- **Language Technologies Exploration:** JHU/APL developed algorithms and models to systematically process and evaluate a large number of recorded disability hearings. SSA could use these tools to spot trends and issues within disability hearings that take place before an ALJ, such as implications of testimony about activities of daily living, impact of testimony related to medical evidence, or spotting local/regional/national trends regarding critical issues such as detecting fraud.
- **Predictive Analytics:** JHU/APL developed two models: the intake and procedural models. These models can predict claim processing times with a given degree of certainty based on a variety of factors. The intake model can predict total claim processing time. The procedural model can predict the remaining claim processing time as claims move through the various statuses in the disability process.
- **Pre-hearing Review:** JHU/APL conducted research to assess the potential for leveraging technology to standardize the pre-hearing review process. This evaluation aimed to determine whether technology solutions could assist in identifying key evidence and legal requirements necessary for producing legally sufficient decisions.
- **Process Measures:** JHU/APL analyzed cases as they moved through different stages; each stage is controlled by different people, such as legal assistants, ALJs, and decision writers. JHU/APL's research aims to increase active time and efficiency and ensure cases are moving to the next level to cut out the inactive time.
- **Legal Assistant Professional Practice Index:** JHU/APL developed a dynamic web application to enhance legal assistants' access to, and visibility into, their own work. This application leverages data visualizations to improve efficiency and streamline workflows.

Federal Acquisition Regulations System

The Federal Acquisition Regulations System was established for the codification and publication of uniform policies and procedures for acquisition by all executive agencies. The Federal Acquisition Regulations System consists of the Federal Acquisition Regulation (FAR), which provides the primary guidance, and agency acquisition regulations that implement or supplement the FAR. In addition to the FAR, we also considered SSA's acquisition manuals issued under the Administrative Instructions Manual System, which is SSA's official medium for issuing policies, procedures, standards, and instructions on administrative subjects.

RESULTS OF REVIEW

SSA procured services in accordance with FAR and SSA's acquisition manuals, and JHU/APL provided all 10 of the contract deliverables. Although SSA received the contract deliverables, as of the date of our review, SSA had only implemented 2 of 10 deliverables and lacked metrics to measure their effects on the efficiency and accuracy of the Agency's disability programs. In addition, SSA had no formal plan with estimated timelines and needed resources for implementing the remaining contract deliverables. Absent a clear implementation plan, with estimated timeframes, needed resources, and metrics for measuring whether the disability programs improved because the contract deliverables were implemented, SSA risks having spent \$13 million without achieving meaningful improvements in customer service for its disability programs – the very issues the contract was intended to address.

Sole-source Acquisition

The FAR requires that contracting officers promote and provide for full and open competition in soliciting offers and awarding Government contracts, unless an exception applies.⁵ One exception the FAR provides is the necessity to establish or maintain an essential engineering, research, or development capability provided by an educational or other nonprofit institution or a federally funded research and development center.⁶ SSA complied with this requirement by explaining the need to continue the research work provided by JHU/APL – a not-for-profit university affiliated research center – and that such work was critical to SSA's responsibility to enhance its administration of the disability program.

FAR also requires that agencies justify when they award a contract without full and open competition, and that the justification must describe the market research conducted and the results or a statement explaining why they did not conduct market research.⁷ SSA complied with this requirement by completing a Justification for Other than Full and Open Competition (JOFOC) document. This Justification explains that, although market research was not conducted, the contract would be sole-sourced to JHU/APL based on the need to continue JHU/APL's prior work. This prior work was also sole-sourced to JHU/APL through an inter-agency agreement with NAVSEA. JOFOC and other contract files did not address any actions SSA took to determine whether other contractors were available and/or capable of performing this prior work.

Additionally, FAR requires that the Justification be approved at the appropriate level.⁸ SSA complied with this requirement by having the JOFOC reviewed and concurred by contracting officials, the Deputy Associate Commissioner, the Competition Advocate Review Board, and the General Counsel. SSA also obtained final approval from a Senior Procurement Executive.

⁵ FAR 6.101(a).

⁶ FAR 6.302-3(a)(2)(ii) and 6.302(b)(2).

⁷ FAR 6.303 *Justifications*.

⁸ FAR 6.304 *Approval of the justification* and SSA's Acquisition Manual MRM 06.06 *Competition in Acquisitions*.

Contract Goods and Services

JHU/APL provided SSA all goods and services established under the contract. However, after more than 1 year of receiving the goods and services from JHU/APL, SSA had implemented only 2 of the 10 contracted deliverables:

- **Process Measures:** SSA stated the Process Measure deliverable had an immediate and ongoing impact on the way the Office of Hearings Operations processed cases helping to improve the disability process. For example, by applying the concepts JHU/APL provided, SSA determined excessive time was spent during a case's final stages. The analysis revealed the majority of delays occurred during the early phases, such as case preparation and evidence gathering. As a result, SSA shifted its focus to improving front-end processes. While SSA believes these concepts have improved productivity and efficiency, it has not established specific metrics to measure or confirm these outcomes.
- **Dynamic Value Model:** SSA reported it began implementing various concepts from this deliverable across multiple initiatives, including a peer review program that, as of the date of this review, was still in its early stages. While the Agency is using insights from this deliverable, it does not have metrics in place to evaluate the effect on Agency operations and has no immediate plans to develop them. Instead, SSA intends to rely on early participation of end users, survey feedback during the development process, and consistent adjustments and data-driven evaluations.

SSA had no formal plan to implement the remaining eight deliverables. Developing a structured framework with clear milestones and measurable goals would enable SSA to assess the effectiveness of these deliverables, prioritize resource allocation, and ensure accountability. SSA stated most of the analyses, prototypes, and recommendations provided under the contract were “. . . geared toward the future of Office of Hearings Operations and are contingent upon future agency funding and development.” Absent a clear implementation plan, with estimated dates, needed resources, and metrics for measuring whether the disability programs improved due to the implementation of the contracted deliverables, SSA runs the risk of having spent \$13 million without resolving customer service issues with its disability programs.

CONCLUSIONS

Without metrics in place to evaluate its implemented deliverables, SSA lacks the ability to determine whether its \$13 million investment in these initiatives are actually improving efficiency and accuracy, as intended. Moreover, the absence of a formal plan to implement the remaining deliverables may limit SSA's ability to translate JHU/APL's research into meaningful improvements in customer service and operational support.

RECOMMENDATIONS

We recommend SSA:

1. Establish metrics to determine whether its implemented deliverables are improving the efficiency and accuracy of the Agency's disability programs, as intended.
2. Establish a plan of when and how it will implement the remaining deliverables provided under the contract, as well as how SSA will track progress of the implementation to

determine whether the analyses, prototypes and recommendations provided in those deliverables improve SSA's disability programs.

AGENCY COMMENTS

SSA agreed with Recommendation 2 but disagreed with Recommendation 1 (see Appendix B). Regarding Recommendation 1, SSA stated that, given the elimination of the hearings backlog and other improvements, a retroactive analysis to develop metrics would not be an effective use of resources.

OFFICE OF THE INSPECTOR GENERAL RESPONSE

Although the current situation has SSA in a better position, without metrics tied to the two implemented initiatives, SSA runs the risk of not knowing whether these two initiatives had a direct effect in improving its hearings operations. If SSA can confirm the elimination of the hearings backlog and other improvements resulted from the implementation of the deliverables, a retroactive analysis to develop metrics would not be necessary. However, SSA must ensure future initiatives include metrics to verify their effectiveness.

Appendix A – SCOPE AND METHODOLOGY

To accomplish our objectives, we:

- Reviewed applicable sections of the Federal Acquisition Regulation and Social Security Administration Acquisition Manuals.
- Reviewed contract file documentation.
- Identified the goods and services acquired under the contract and determined the status of their implementation/use.
- Interviewed Agency personnel involved in the issuance and administration of the contract.

The entities audited were the Offices of Budget, Finance and Management and Hearings Operations. We assessed the significance of internal controls necessary to satisfy the audit objectives. This included an assessment of the five internal control components, including control environment, risk assessment, control activities, information and communication, and monitoring. In addition, we reviewed the principles of internal controls associated with the audit objectives. We identified the following components and principles as significant to the audit objectives:

- Component 1: Control Environment
 - Principle 2: Exercise oversight responsibility.
 - Principle 3: Establish structure, responsibility, and authority.
- Component 5: Monitoring
 - Principle 16: Perform monitoring activities.

We conducted our review from December 2023 to August 2024 in Dallas, Texas. 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 findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix B – AGENCY COMMENTS




SOCIAL SECURITY

MEMORANDUM

Date: April 3, 2025 Refer To: TQA-1

To: Michelle L. Anderson
Assistant Inspector General

From: Chad Poist 
Acting Deputy Chief of Staff

Subject: Office of the Inspector General Draft Memorandum, "Contract with Johns Hopkins University Applied Physics Laboratory for Analysis of the Social Security Administration's Disability Process" (062325) - INFORMATION

Thank you for the opportunity to review the draft report. We disagree with the first recommendation. Given the elimination of the hearings backlog and other improvements, a retroactive analysis to develop metrics would not be an effective use of resources.

We agree with the second recommendation that a plan which includes tracking progress milestones for implementing deliverables is warranted if the agency decides to pursue the remaining deliverables. We will reevaluate the potential need to implement initiatives at the hearings level or elsewhere in the disability adjudication process.

Please let me know if I can be of further assistance. You may direct staff inquiries to Amy Gao, Director of the Audit Liaison Staff, at (410) 966-1711.

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Johns Hopkins University Applied Physics Laboratory (JHU/APL) Statement

The following statement is in response to the audit, Contract with Johns Hopkins University Applied Physics Laboratory for Analysis of the Social Security Administration's Disability Process, 062325, submitted by JHU/APL on April 25, 2025 pursuant to Pub. L. No. 117- 263, § 5274.

JHU/APL's Response

"JHU/APL does not have any comments for the audit."