EVALUATION REPORT

Evaluation of the Management and Oversight of the Class B Ship Acquisition Program by NOAA's Office of Marine and Aviation Operations

REPORT NO. OIG-26-014-I

APRIL 2, 2026

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

UNITED STATES DEPARTMENT OF COMMERCE
Office of Inspector General
Office of Audit and Evaluation
Washington, DC 20230

April 2, 2026

MEMORANDUM FOR: Dr. Neil Jacobs
Under Secretary of Commerce for Oceans and Atmosphere
and NOAA Administrator
National Oceanic and Atmospheric Administration

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

SUBJECT: *Evaluation of the Management and Oversight of the Class B Ship Acquisition Program by NOAA's Office of Marine and Aviation Operations*
Report No. OIG-26-014-I

Attached is the final report on our evaluation of the management and oversight of the Class B ship acquisition program by the National Oceanic and Atmospheric Administration's Office of Marine and Aviation Operations. We will post the report on our website per the Inspector General Act of 1978, as amended (5 U.S.C. §§ 404, 420).

Within 60 calendar days, please provide an action plan addressing the report's recommendations, as required by Department Administrative Order 213-5.

We appreciate your staff's cooperation and professionalism during this evaluation.

Attachment

Evaluation of the Management and Oversight of the Class B Ship Acquisition Program by NOAA's Office of Marine and Aviation Operations

Evaluation Report OIG-26-014-I
April 2, 2026

What We Evaluated | Our objective was to assess the management and oversight of the Class B ship acquisition by the National Oceanic and Atmospheric Administration's (NOAA's) Office of Marine and Aviation Operations (OMAO).

Why This Matters | OMAO is overseeing the construction of new ships, known as Class B ships, to replace hydrographic survey ships that are nearing the end of their planned service lives.

Shipbuilding is a complex, multistage industrial process that requires structured oversight and controls at each phase. If the existing hydrographic survey ships are not replaced on time, NOAA has estimated a loss of 90 to 100 percent of its charting and mapping capability for the country's Pacific Islands and Tropical Pacific and West Coast regions by 2028.

What We Found | We found that OMAO's acquisition planning did not fully account for the resources, requirements, and processes that are necessary to perform Government Contract Quality Assurance (GCQA) management and oversight tasks for a new shipbuilding program.

Specifically, for its Class B ship construction, OMAO (1) did not fully develop and implement the necessary controls to conduct GCQA, (2) did not identify or develop the necessary personnel, skills, and experience to conduct GCQA, and (3) did not have a system or method to record and track quality deficiencies and observations. Correcting these issues is critical to ensure that the ship construction meets contract requirements and an acceptable level of quality.

What We Recommend | We made five recommendations to help OMAO implement its quality assurance program for ship construction, address shortfalls in workforce planning and technical oversight, and ensure that quality assurance oversight metrics during ship construction are tracked and stored. NOAA concurred with our recommendations and is working to implement them.

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Introduction

The National Oceanic and Atmospheric Administration's (NOAA's) Office of Marine and Aviation Operations (OMAO) operates four hydrographic survey ships that map the seafloor in the coastal regions around the United States and its island territories. The data collected by these ships is essential in the development and regular updating of navigation products and services that ensure the safe transit of vessels engaged in maritime commerce on America's oceans, coastal waters, and the Great Lakes.[1] Three of the four hydrographic survey ships will be at or will have already exceeded their planned service lives by 2028. OMAO is in the process of replacing these vessels by acquiring new ships. NOAA's Fleet Plan[2] labels these future vessels as Class B ships.[3]

If the existing hydrographic survey ships are not replaced on time, NOAA has estimated a loss of 90 to 100 percent of its charting and mapping capability for the country's Pacific Islands and Tropical Pacific and West Coast regions by 2028.[4] It further estimated that there will be a 60 to 89 percent loss of capability in the Northeast, Mid-Atlantic, Southeast Atlantic, and Gulf of America regions.[5]

At a Glance: NOAA Ocean Mapping

- NOAA survey data supports safe navigation and maritime commerce activities.
- NOAA maintains and updates over 1,000 charts covering 95,000 miles of shoreline and 3.4 million square nautical miles of water.
- NOAA-produced charts enable the movement of 1.3 billion metric tons of cargo valued at $1.8 trillion that enter and exit U.S. ports every year.

Figure 1 (on the next page) shows the regions where NOAA conducts charting and mapping missions.

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[1] NOAA's Office of Coast Survey conducts hydrographic surveys, creates charts to support safe navigation, distributes charts in multiple digital formats, provides emergency navigation response, develops models for storm surge with real-time data feeds, and tests new technologies to improve mapping efficiencies.

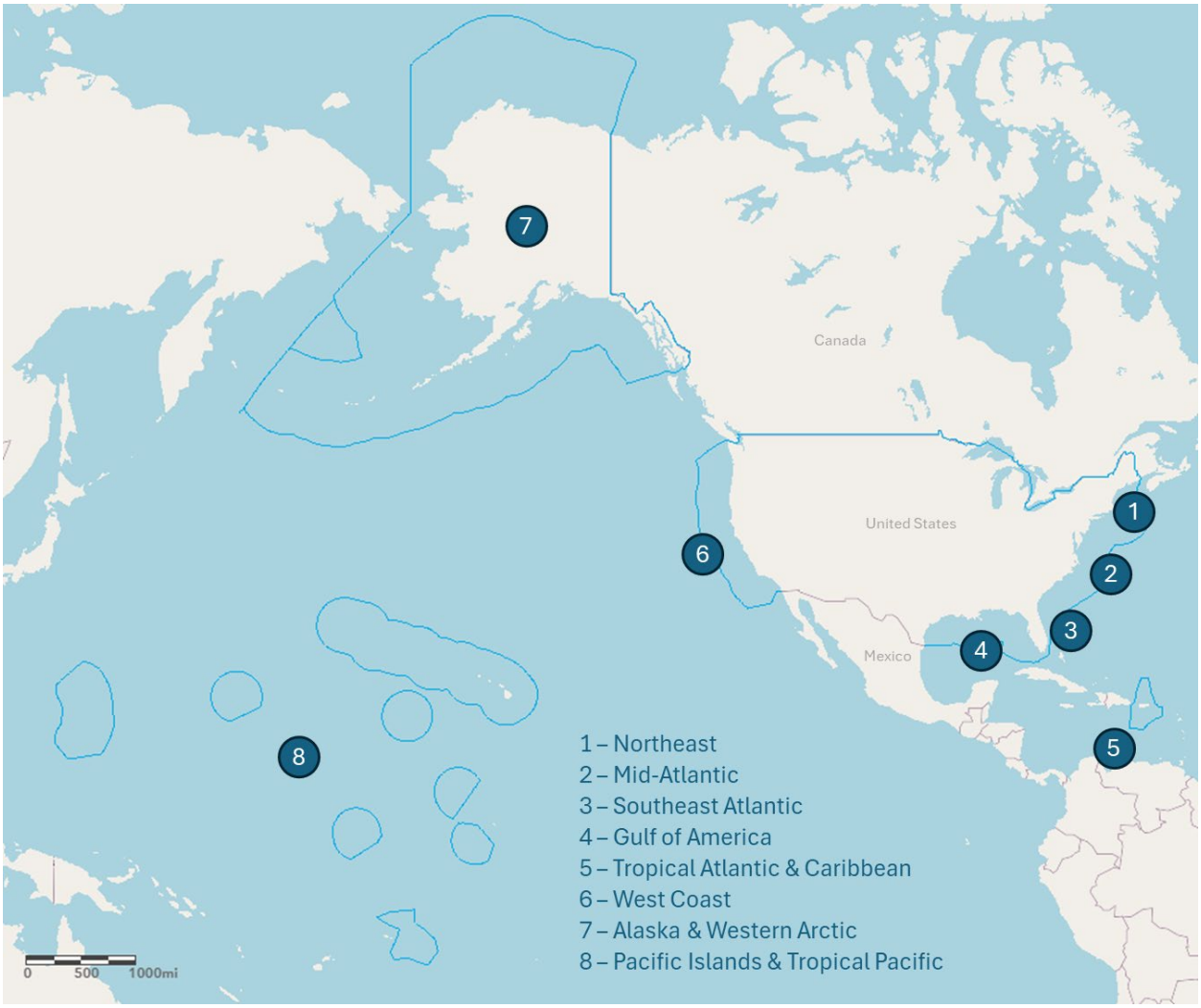
[2] U.S. Department of Commerce, National Oceanic and Atmospheric Administration. October 31, 2016. *The NOAA Fleet Plan: Building NOAA's 21st Century Fleet.*

[3] The Fleet Plan categorizes NOAA's new ships into four classes: Class A – Oceanographic Monitoring, Research, and Modeling; Class B – Charting and Mapping; Class C – Fisheries/Coastal Science; and Class D – Fisheries High Endurance.

[4] *The NOAA Fleet Plan*, 26.

[5] Ibid.

Figure 1. NOAA's Charting and Mapping Regions



Source: OIG derived from information in the NOAA Fleet Plan (2016)

Construction of Class B Ships Is Underway

In 2024, we reported on NOAA's fleet and the risks associated with its fleet recapitalization efforts.[6] We found that OMAO had been proactive in attempting to address some risks. However, program oversight remained a concern, and further improvements were needed to ensure effective management of fleet recapitalization efforts.

[6] Commerce OIG. March 12, 2024. *Management Alert: NOAA Must Take Action to Address Significant Ship Fleet Recapitalization Risks,* OIG-24-016-I.

To address its future fleet needs and to recapitalize its aging ships, OMAO has acquisition programs for two classes of ships—Class A and Class B. Both classes of ships are under contract and being built at Thoma-Sea Marine Constructors in Houma, Louisiana.

Through an interagency agreement (IAA) between NOAA and the U.S. Navy, Naval Sea Systems Command (NAVSEA) is leading the design and construction of the Class A ships under an assisted acquisition model. NAVSEA awarded the contract for detailed design and construction of the Class A ships to Thoma-Sea in 2020, and construction started in June 2022. At the shipyard, the construction is being overseen by NAVSEA's Supervisor of Shipbuilding, Conversion, and Repair (SUPSHIP), Gulf Coast (SSGC), which performs contract administration and quality assurance oversight, with support from OMAO personnel.

NOAA awarded a contract to Thoma-Sea in June 2023 for the detailed design and construction of two Class B ships. OMAO is the contracting and technical authority overseeing the acquisition of these ships. OMAO's Platform and Infrastructure Acquisition Division (PIAD) provides engineering services, technical support, and acquisition program management. This division is responsible for directing NOAA's major system acquisitions for ships, aircraft, small boats, and facilities. Construction started on the first Class B ship on March 14, 2025.

Surveyor (figure 2) is the lead ship of the Class B ships (known as "first-in-class"). Building the lead ship of a new class is uniquely challenging because it typically involves new designs, technologies, and production processes. Oversight and management of the shipbuilding process and adherence to contract requirements by the shipowner are essential to ensure quality and avoid schedule delays, cost growth, and design changes.

To minimize the impacts of these challenges, ship buyers rely on long-established practices such as well-defined requirements, risk-informed staffing and contracting strategies, early planning, and strong onsite oversight during construction.

Figure 2. Future NOAA Class B Ship *Surveyor* as of July 21, 2025

Length – 267 ft.
Beam – 56 ft.
Draft – 17.4 ft.
Displacement – 3,500 long tons

Source: NOAA

Ensuring Quality Requirements Are Met in Government Contracts

Federal and Department of Commerce acquisition regulations require agencies to ensure that contracted goods and services are delivered on time, within budget, and in compliance with quality standards. The Federal Acquisition Regulation (FAR) assigns contract administration offices the responsibility to ensure Government Contract Quality Assurance (GCQA) is conducted that verifies contractor performance and compliance with contract requirements.[7] The Commerce Acquisition Regulation (CAR) further directs Commerce operating units to develop internal instructions to support effective GCQA, as appropriate.[8] These oversight requirements are critical to protecting government interests, ensuring accountability, and reducing the risk of cost overruns, schedule delays, and quality deficiencies. This is particularly important in complex acquisition programs such as shipbuilding.

Shipbuilding is a complex, multistage industrial process that requires structured oversight and controls at each phase. These phases include pre-contracting, contract award, design and planning, and construction, with each phase dependent on the work completed in the previous stage. This framework is consistent across both commercial and government shipbuilding efforts.

The U.S. Government Accountability Office (GAO) has conducted numerous audits of Navy shipbuilding, including comparisons to commercial shipbuilding practices to identify the root causes of recurring quality issues and potential solutions.[9] GAO found that weaknesses in oversight such as late defect detection, insufficient quality assurance planning, and unqualified inspection personnel contributed to costly rework, construction delays, and reduced ship performance. GAO emphasized that best practices such as rigorous quality assurance oversight, including early integration of oversight during material receipt and ship construction, could improve outcomes and lower lifecycle costs.[10] By applying best practices from both Navy and commercial shipbuilding, NOAA can strengthen its newly adopted GCQA program to ensure consistent oversight during ship construction.

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[7] See FAR §§ 42.302(a)(38) (noting that contracting officers normally delegate the listed functions to a contract administration office) and 46.102(b), (c).

[8] CAR Subparts 1346.4, 1346.6.

[9] GAO, May 13, 2009, *High Levels of Knowledge at Key Points Differentiate Commercial Shipbuilding from Navy Shipbuilding,* GAO-09-322; GAO, November 19, 2013, *Navy Shipbuilding: Opportunities Exist to Improve Practices Affecting Quality,* GAO-14-122.

[10] GAO. November 19, 2013. *Navy Shipbuilding: Opportunities Exist to Improve Practices Affecting Quality,* GAO-14-122, 2, 11, 32–33, 45, 55, 57, 62, 64, 75.

To guide its oversight and management of NOAA's Class A ship program, SSGC uses the SUPSHIP Operations Manual (SOM) and locally developed standard operating procedures that implement SOM requirements. The SOM provides guidance on key positions, organizational structure, stakeholder relationships, and responsibilities related to GCQA for new ship construction. See appendix 1 for a further explanation of how the Navy and commercial shipowners ensure the quality of ships while under construction.

➤ Objective

Our objective was to assess OMAO's management and oversight of the Class B ship acquisition.

Appendix 2 details our scope and methodology.

Findings and Recommendations

Summary: We found that OMAO's acquisition planning did not fully account for the resources, requirements, and processes that are necessary to perform GCQA management and oversight tasks for a new shipbuilding program. OMAO partially developed and implemented controls only after construction of the Class B ships had already begun, but those efforts were generalized and require further maturation. During the course of our evaluation, OMAO took steps to improve its management and oversight of the Class B program by issuing a policy on quality assurance and initiating a quality assurance program. However, OMAO must address several remaining deficiencies to ensure effective GCQA for the Class B program. Specifically:

- OMAO did not fully develop and implement the necessary controls to conduct GCQA for Class B ship construction.
- OMAO did not identify or develop the technical experience, certifications, qualifications, and workforce needed to conduct GCQA for Class B ship construction.
- OMAO did not identify a method to record and track observations and deficiencies during Class B ship construction.

Correcting these deficiencies is critical to ensure that the ship construction meets contractual specifications and requirements, as well as an acceptable level of quality. If deficiencies are not corrected, the ships are at a higher risk of schedule delays, an inability to meet mission requirements, and lifecycle cost growth due to undetected and uncorrected defects in construction.

OMAO Did Not Fully Develop and Implement the Necessary Controls to Conduct GCQA for Class B Ship Construction

Effective quality assurance oversight during construction is essential to ensure that ships meet contractual requirements. A robust quality assurance program, especially in complex environments like shipbuilding, includes elements such as written procedures, surveillance plans, and deficiency tracking to ensure that work is performed to required standards. These elements help manage risk, establish accountability, and ensure work meets contract specifications.

Quality deficiencies that are not identified and corrected during construction can have long-term consequences, including reduced mission performance, increased lifecycle costs, and shortened service life. Commercial ship buyers and the Navy both assign dedicated quality assurance personnel to shipyards to identify deficiencies and verify contract compliance.

OMAO has previously developed multiple ship construction-related policy documents, such as its *Fleet Acquisition Handbook* and *Fleet Introduction Plan*. These documents define roles, responsibilities, and key milestones from project initiation through delivery. However, these documents do not require acquisition programs to include quality specifications in contracts or as source selection criteria, or to perform quality assurance oversight during the construction phase. As a result, OMAO did not take quality-related requirements into consideration during its acquisition planning when it designed and staffed the Class B program.

Early in this evaluation, we found that OMAO did not have a quality assurance policy or program in place. Consequently, the Class B program lacked both documented procedures for conducting GCQA and a ship-specific surveillance plan informed by a risk-based assessment. These are necessary internal controls for ensuring quality in ship construction. In interviews, OMAO leadership acknowledged this gap. We presented this finding, as well as the next two findings, to OMAO leadership in a meeting in early February 2025. Following the meeting, OMAO pledged to respond quickly and to address internal control weaknesses related to quality assurance for the Class B ship acquisition.

Construction of the Class B ships began on March 14, 2025, prior to any formal quality assurance policy or program guidance being in place. PIAD issued its policy on quality assurance on April 15, 2025. It subsequently established its quality assurance program (QAP) for ship construction on May 30, 2025. These actions represent meaningful progress toward establishing a formal quality framework and demonstrate a commitment to strengthening oversight. Although PIAD has issued the policy and program requirements, it still must develop and implement the standard operating procedures that its QAP mandates. The development and implementation of procedures is a critical element of effective program controls.[11] Without these procedures, oversight personnel lack clear direction on how to conduct inspections, document and track deficiencies, and tailor oversight to Class B construction. The procedures also provide a framework to enable effective workforce planning.

[11] GAO. September 2014. *Standards for Internal Control in the Federal Government,* GAO-14-704G. See Principle 10, Design Control Activities, which states that controls must be designed based on the entity's objectives and the risks to achievement of those objectives, and that control activities (policies, procedures, techniques, etc.) are the actions taken to address related risks.

PIAD's QAP also mandates that each program establish a ship-specific surveillance plan. However, PIAD has not yet developed ship-specific surveillance plans in accordance with the criteria outlined in its new policy documents. As noted above, these plans are essential for ensuring quality; they translate policy into action by identifying which activities will be observed, when and how surveillance will occur, and who is responsible for execution. In both commercial and Navy shipbuilding programs, such plans are used to ensure that oversight is proactive, risk informed, and responsive to contractor performance and quality trends. A surveillance plan and standard operating procedures are necessary for the effective implementation of GCQA.

The development of a surveillance plan is a process that typically requires many months to complete. It includes a detailed review of the shipyard's quality assurance plan; identifies material, production, and process risks that require oversight; and is subsequently used to identify and assign personnel and other resources that are required for execution. Development of the surveillance plan typically begins early in the contract period, and it is finalized prior to the start of construction.

Without a tailored surveillance plan for Class B ship construction, quality oversight efforts remain generalized, increasing the likelihood that OMAO may not perform adequate oversight for high-risk construction activities and that resources may not be optimally allocated. A tailored surveillance plan would typically identify critical inspection points, outline surveillance methods and frequencies, assign responsibilities to qualified personnel, and establish procedures for documenting and resolving deficiencies. Without these structured elements, OMAO's ability to detect quality issues early and enforce compliance with contract requirements throughout the construction lifecycle is significantly weakened.[12]

➤➤ Without controls in place for conducting GCQA during shipbuilding, OMAO's ability to detect quality issues early and enforce compliance with contract requirements is significantly weakened. ➤➤

OMAO encountered several challenges that limited its ability to implement GCQA at the start of Class B ship construction. OMAO officials said that staffing constraints in PIAD and the program management office were a contributing factor. Although PIAD personnel possess significant expertise in ship operations, ship repair, and system design, they have less direct experience with shipbuilding and shipbuilding oversight. We discuss this further in the next finding.

[12] In comparison, see appendix 1 for a description of the Navy's and commercial shipowners' quality assurance practices for new ship construction.

Further, OMAO did not retain institutional knowledge from past shipbuilding programs. When asked, OMAO officials said that they did not have a knowledge management system that would enable them to retain information and lessons learned from past shipbuilding programs. As a result, OMAO had limited ability to apply prior experience when planning oversight for the Class B program. NOAA's last new ship was delivered in 2013, and only a few staff involved in that effort remain, none of whom had direct roles in construction oversight. Because shipbuilding is infrequent at OMAO, it has had few opportunities to build and maintain expertise in this area. This lack of experience has made it harder to identify risks and develop effective oversight controls.

OMAO also did not seek to leverage available external expertise to develop a surveillance plan. The Class A and Class B ships are similar in size and scope of construction, and both are being built at the same shipyard. OMAO did not recognize and fully capitalize on this opportunity to leverage SSGC's GCQA planning efforts and contractor performance data. Had OMAO taken advantage of this opportunity, it could have developed and implemented a surveillance plan prior to the start of Class B construction.

As a result of these combined factors, construction began without key internal controls in place, including a quality assurance policy, standard operating procedures, and a ship-specific surveillance plan. Consequently, program personnel relied primarily on participation in contractor-led inspections rather than establishing a robust onsite presence grounded in continuous surveillance, early risk identification, and independent verification of compliance with contractual requirements. In the absence of defined procedures and a surveillance plan, the program remains at risk of inconsistent oversight and delayed detection of quality issues.

Recommendations

We recommend that the NOAA Deputy Under Secretary for Operations ensure that:

1. OMAO establishes standard operating procedures to support the QAP for ship construction for the Class B program.
2. OMAO establishes a ship-specific surveillance plan in accordance with the QAP.
3. OMAO establishes an enterprise-wide acquisition knowledge management system to record and track programmatic, contracting, and technical lessons learned for the Class B program that can be implemented for subsequent classes of new ships or other major acquisitions.

➤ OMAO Did Not Identify or Develop the Technical Experience, Certifications, Qualifications, and Workforce Needed to Conduct GCQA for Class B Ship Construction

OMAO was not prepared to carry out effective GCQA at the start of Class B ship construction due to key shortfalls in workforce planning and technical training. Skilled trades play a vital role in shipbuilding. Disciplines such as welding, electrical work, and coatings application require individuals with specific certifications and a deep understanding of industry standards. Likewise, government personnel performing GCQA should possess equivalent qualifications and experience to effectively perform surveillance and ensure contractor compliance with quality and technical specifications in the contract.

Both the Navy and commercial shipowners assign personnel with significant experience, certifications, and qualifications to conduct oversight and surveillance during the construction of new ships. OMAO did not do so for its Class B ship acquisition. Without experienced and technically qualified personnel conducting GCQA, there is an increased risk that construction defects may go undetected, and the government risks missing or inadequately documenting other instances of nonconformance with contractual requirements. If defects go undetected during construction, they become "built into" the ship, potentially adversely impacting ship and system performance needed to meet mission requirements, increasing maintenance costs, shortening service life, and increasing lifecycle costs.

During the acquisition planning process, program offices should identify the necessary personnel, skills, and experience that are essential to planning and managing an acquisition through its lifecycle. Further, NOAA policy requires offices to undertake competency-based workforce planning activities to systematically identify human capital needs to support NOAA's strategic mission. PIAD has not conducted a comprehensive workforce analysis to identify the requisite experience, certifications, and qualifications needed to perform GCQA for the Class B ships, or the number of personnel needed to perform GCQA of multiple vessels simultaneously—both of which are key elements of a staffing plan for the Class B program. PIAD has also not leveraged external expertise or best practices to inform its planning to ensure adequate staffing for GCQA. While PIAD has developed an organizational chart of positions that it believes are required to adequately support the program, it did not provide any evidence of a workforce analysis to support this staffing construct, a training plan, or a list of minimum qualifications.

During the milestone review process, OMAO said that its staffing would replicate the Navy's personnel assigned to the shipyard. The Navy has assigned a program manager's

representative and a test and trials manager for Class A ship construction. The observations recorded in the Technical Support Management (TSM)[13] system indicated that at least 30 additional SSGC personnel were assigned to conduct inspections that required specialized skills and qualifications.[14] In comparison, we found that PIAD has assigned four personnel to the shipyard: a program manager's representative, a test and trials manager, and two quality assurance oversight personnel. The time of the four personnel is split, however, between the Class A and Class B programs.[15] Additionally, two of these staff are assigned as the program manager's representative and the test and trials manager—neither are assigned to a quality assurance oversight role. Further, until PIAD completes workforce analysis, it is highly likely that it will not have adequate personnel with the certifications and qualifications necessary to provide effective oversight of ship construction.

We found that a contributing factor to the absence of a GCQA staffing plan is the lack of a Class B ship-specific surveillance plan, as discussed in the previous finding. Without a surveillance plan and subsequent analysis to determine the skills required to execute the plan, we have low confidence in the ability of positions identified in OMAO's organizational chart to achieve the intended outcome. OMAO also missed an opportunity to collaborate with the Navy during the Class A program to identify gaps in its workforce experience to effectively perform GCQA. This collaboration could have assisted OMAO in developing staffing and training requirements, as well as building GCQA experience.

Recommendation

We recommend that the NOAA Deputy Under Secretary for Operations ensure that:

4. OMAO conducts a workforce analysis that identifies the skills, certifications, and qualifications needed to support Class B ship construction in accordance with NOAA policy.

[13] TSM is the SUPSHIP system of record for quality assurance and engineering data during ship construction and repair. It is used to ensure issues are documented, assigned, and closed in a controlled workflow.

[14] These 30 personnel are not assigned full time to the shipyard or the Class A program and support multiple programs. See appendix 1 for further information on how the Navy conducts quality assurance for shipbuilding programs.

[15] OMAO personnel have been assisting the Navy with oversight on the Class A program.

OMAO Did Not Identify a Method to Record and Track Observations and Deficiencies During Class B Ship Construction

Documentation is required for an effective internal control system.[16] Commercial and government shipowners like the Navy use data collection systems to gather, track, and store quality assurance oversight metrics during ship construction. Construction deficiencies, which can number in the thousands, require resolution before the shipowner accepts delivery of a ship, and NOAA must have a robust system to ensure that those deficiencies are corrected. Additionally, shipowners can use this data to gain insight into quality trends in the shipbuilder's performance, which allows for a more efficient application of resources to conduct oversight while also informing decisions related to contract compliance. Government shipowners can then use this data to evaluate contractor performance.[17]

Effective contract administration requires the maintenance of adequate records that reflect government contract quality assurance actions. These records include (1) the number of observations made by government quality inspectors, along with the number and type of defects, and (2) decisions regarding the acceptability of products, as well as the action(s) to correct defects.[18]

At the start of this evaluation, we found that OMAO did not have any system or mechanism in place to record quality deficiencies and observations, such as the Navy's TSM system. When we asked about this, OMAO officials said they did not have such a system because they did not have the money to develop a proprietary system like the Navy. They also felt that the Navy's system was too difficult to use. In addition, OMAO did not seek assistance from the Navy to determine the best practices for recording, tracking, and resolving deficiencies that were identified during oversight and surveillance activities.

Construction started on the Class B ships without a system in place to record and track defects and observations. Since that time, PIAD has developed a form to record

[16] GAO. September 2014. *Standards for Internal Control in the Federal Government,* GAO-14-704G, 19. The level of detail is dependent on the scope and complexity of the operational processes the entity performs.

[17] The government uses the Contractor Performance Assessment Reporting System (CPARS) to provide these evaluations. Previous CPARS evaluations are also used to determine a contractor's past performance as part of the contract source selection process.

[18] FAR § 46.104(c), "Contract administration office responsibilities."

construction defects,[19] but it still lacks a means to record observations and track identified deficiencies through resolution.

While OMAO has made some progress on this issue, the lack of a means to record and track observations will limit its ability to develop trend data, take action based on those trends, and provide fully informed input on contractor performance. Because this solution was implemented after material was received at the shipyard and after the start of construction, there is a risk that program personnel missed defects and deficiencies early in the construction of the first Class B ship. This increases the likelihood that OMAO will accept a ship that may not be fully mission capable and may have a diminished service life, increased lifecycle cost, or reduced operational readiness.

Recommendation

We recommend that the NOAA Deputy Under Secretary for Operations ensure that:

5. OMAO identifies and implements a means to record observations and track construction deficiencies through resolution.

[19] The QAP for ship construction that was signed on May 30, 2025, includes a Quality Deficiency Report form to notify the contractor of conditions that do not conform with contractual requirements. PIAD stores each report in an online database to track completion.

Summary of NOAA's Response and OIG Comments

NOAA reviewed a draft version of this report and responded to our findings and recommendations. In its response, NOAA concurred with all of our recommendations and described actions it has taken or plans to take to address them. With respect to recommendation 4, we believe that the actions NOAA described in its response may be incomplete, as explained below. NOAA's complete response, which also includes general comments, is included in this report as appendix 3.

Draft Report Recommendation 4:
[Ensure that] OMAO conducts a workforce analysis that identifies the skills, certifications, and qualifications needed to support Class B ship construction in accordance with NOAA policy.

NOAA concurred with the draft recommendation and stated that it had "developed a specialized staffing plan and approach to support, administer, and monitor the progress and construction under Class B." It emphasized that "NOAA is a very lean organization" and therefore "must develop staffing strategies that can be right-sized to fit [its] programs and budgets." It also provided details about current and planned staffing levels to support the Class B acquisition.

OIG Comment:
We will await NOAA's action plan to meet this recommendation. However, we are concerned that NOAA's response did not indicate an intent to complete a skills-based workforce analysis to inform its staffing plan. As articulated in the report, NOAA policy requires offices to undertake competency-based workforce planning activities to systematically identify human capital needs. A workforce analysis should identify the requisite experience, certifications, and qualifications needed to perform GCQA for the Class B ships. Without adequate, competent personnel, there is an increased risk of undetected construction defects and contractual nonconformance, which can negatively affect the ability to meet mission requirements, increase maintenance costs, increase lifecycle costs, and shorten service life.

We appreciate NOAA's response to the report and its cooperation during this evaluation. We are pleased that NOAA concurs with our recommendations and look forward to receiving NOAA's action plan with details on its corrective actions.

Appendix 1. U.S. Navy and Commercial Shipowner Quality Assurance Practices

Below we highlight GAO's reporting on quality assurance actions and consequences for both Navy and commercial shipbuilding.[20] We also include information contained in the SOM and data provided to us by OMAO.

GCQA is a subset of quality assurance, performed by the U.S. government, and is focused on government oversight to ensure contract compliance. Commercial ship buyers typically rely on their own quality assurance oversight programs, which are tailored to project needs and are supported by contractual terms. Commercial ship buyers plan and execute this quality assurance oversight in collaboration with the shipyard. Unlike government contracts, where independent surveillance (GCQA) is mandated by the FAR,[21] commercial ship buyers ensure quality through contract provisions, inspections by experts, and close working relationships with the builder rather than through formal, independent oversight.

Navy Shipbuilding

- **Oversight Structure:** The Navy's quality assurance is managed by NAVSEA through its SUPSHIP offices, which are responsible for contract administration and quality oversight at shipyards.
- **Planning and Execution:** Oversight planning begins at contract award, allowing time to review contractor procedures and determine appropriate staffing levels. The contracts typically require the shipyard to deliver its quality assurance plan and supporting procedures several months prior to the start of construction. SUPSHIP offices then use the shipyard's quality assurance plan and procedures to develop their surveillance plans and subsequent staffing, training, and certification requirements for the workforce that will conduct GCQA. For example, SUPSHIP Gulf Coast assigned over 30 quality assurance specialists to the NOAA Class A program to conduct surveillance, inspections, and evaluations.
- **Inspection Activities:** The Navy employs both surveillance (scheduled and unscheduled) and formal inspections, referred to as callouts. Surveillance focuses on in-process work and compliance with the shipyard's quality assurance plans, while formal inspections involve observing specific tests or actions. The Navy also

[20] GAO, May 13, 2009, *High Levels of Knowledge at Key Points Differentiate Commercial Shipbuilding from Navy Shipbuilding,* GAO-09-322; GAO, November 19, 2013, *Navy Shipbuilding: Opportunities Exist to Improve Practices Affecting Quality,* GAO-14-122.

[21] See FAR §§ 42.302(a)(38) and 46.102(c).

participates in material receipt and storage inspections in the months prior to the start of construction. For the Class A program, as of September 30, 2024, construction was 69 percent complete for *Oceanographer* and 60.9 percent complete for *Discoverer*. Inspection data provided for the period from August 23, 2021, to October 4, 2024, showed that SSGC completed 1,923 observation documents, including 1,485 restricted observations.[22] These documents captured a total of 1,213,581 individual observations.

- **Challenges:** Oversight during construction can vary in specialization and consistency. Additionally, the Navy has accepted ships with numerous uncorrected deficiencies at delivery, leading to increased post-delivery work and costs.

Commercial Shipbuilding

- **Contractual Quality Requirements:** Commercial shipowners structure shipbuilding contracts to clearly define quality requirements, including inspection points, acceptance criteria, and warranty provisions. This is done in partnership and agreement with the shipyard prior to contract award. Progress payments are often tied to meeting these standards. Additionally, the progress payments are likely to be backloaded to pay out at delivery, as much as 60–80 percent of the total value, to ensure that the shipyard meets quality standards upon delivery.
- **Inspection Activities:** Commercial shipowners deploy dedicated, trained inspection teams to monitor construction onsite and enforce quality through roaming patrols and formal inspections. These teams dedicate up to 50 percent of their time to general surveillance as opposed to contractor-scheduled inspection.
- **Early Detection:** A high level of surveillance is planned for early construction stages to identify and address quality issues promptly, reducing the cost and time required for corrections.
- **Deficiency Management:** Although minor deficiencies may be permitted at delivery, there is a formal agreement on specific actions to correct them, ensuring accountability and timely resolution.

[22] Restricted observations must be performed by qualified or certified personnel who have the necessary experience, such as for welding, coatings, or electrical work. Both government and commercial quality assurance practices rely on personnel with appropriate training and experience to ensure inspections are conducted competently and in accordance with technical standards.

➤ Comparative Analysis

Both the Navy and commercial shipbuilders recognize the importance of quality assurance in ship construction. However, differences exist in implementation:

- **Consistency:** Commercial practices emphasize consistent oversight with dedicated inspection teams, whereas Navy oversight can vary in personnel and specialization, with a stronger emphasis on formal contractor-scheduled inspections.
- **Accountability:** Commercial contracts often include mechanisms that tie payments to quality standards, promoting accountability. The Navy's approach tends to be time and event phased, which creates challenges in enforcing financial accountability for quality issues.
- **Deficiency Resolution:** Commercial shipbuilders aim to resolve defects before delivery, while the Navy has accepted ships with outstanding deficiencies, leading to additional post-delivery work.

The GAO audits highlight areas where the Navy's quality assurance practices could benefit from adopting commercial best practices, such as consistent oversight, clear contractual quality requirements, and proactive deficiency management. Implementing these practices in shipbuilding programs may enhance ship quality, reduce costs, and improve delivery timelines.

Appendix 2. Scope and Methodology

Our evaluation objective was to assess OMAO's management and oversight of the Class B ship acquisition. To satisfy our objective, we reviewed OMAO's project management plan to identify the program controls that were established for the Class B program, including staffing and technical certifications to meet the unique requirements of shipbuilding, and the design of OMAO's oversight structure to comply with FAR requirements for contract administration. We further compared OMAO's controls, staffing, and oversight design with best practices used by other organizations that build specialized ships as well as standards for internal controls. Additionally, we reviewed OMAO's risk management practices and related program documentation to analyze effectiveness in controlling cost and schedule growth.

To assess contract administration and oversight of the Class B acquisition, we:

- Interviewed the onsite SUPSHIP and OMAO representatives to gain understanding of day-to-day activities at the shipbuilder's facility.
- Interviewed the NOAA and OMAO officials involved in contracting and program management decisions.
- Compared the Class A contract administered by the Navy with the Class B contract administered by NOAA.
- Reviewed applicable acquisition regulations and requirements.
- Requested NOAA and OMAO policies and procedures used for oversight and quality assurance.
- Reviewed GAO reports on shipbuilding oversight planning and best practices.

To assess the technical experience, certifications, qualifications, and workforce needed to conduct oversight of Class B ship construction, we:

- Analyzed observation data from the TSM system, the enterprise solution for document and content management used by the Navy and the shipbuilder.
- Reviewed the SUPSHIP operations manual to identify roles, responsibilities, and training requirements used in oversight of shipbuilding at the contractor's facility.
- Reviewed GAO reports on shipbuilding oversight planning and best practices.
- Reviewed organizational charts and evidence of training completed by OMAO personnel.

To assess OMAO's system to record and track internal control performance, observations made, and deficiencies found during Class B ship construction, we:

- Learned about the system used by the Navy and the number of defects by reviewing GAO's 2013 report on its audit of Navy shipbuilding program.
- Reviewed the FAR and GAO's *Standards for Internal Control in the Federal Government* for records and documentation requirements and compared these with Class B program activities.
- Interviewed OMAO officials to determine the implementation of a system to record observations and deficiencies.

In addition, we assessed the internal controls that were significant to our objective by interviewing NOAA personnel and reviewing program documentation and activities. We identified weaknesses in internal controls related to control activities, as noted in the "Findings and Recommendations" section of this report.

We did not rely on computer-processed data to support our findings, conclusions, and recommendations. Although we could not independently verify the reliability of all the information we collected, we compared it with other available supporting documents to determine data consistency and reasonableness. We found the data to be sufficiently reliable to support our findings and conclusions.

We conducted our evaluation from July 2024 through December 2025 under the authority of the Inspector General Act of 1978, as amended (5 U.S.C. §§ 401–424), and Department Organization Order 10-13, as amended October 21, 2020.

We conducted this evaluation in accordance with *Quality Standards for Inspection and Evaluation* (December 2020) issued by the Council of the Inspectors General on Integrity and Efficiency. Those standards require that we plan and perform the evaluation to obtain sufficient and appropriate support to provide a reasonable basis for our findings and conclusions. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our evaluation objective.

Appendix 3. NOAA's Response

NOAA's response to our draft report begins on the next page.

Department of Commerce
National Oceanic and Atmospheric Administration
Draft Report Response to
Department of Commerce Office of Inspector General's
Evaluation of the Management and Oversight of the Class B Ship Acquisition Program by NOAA's Office of Marine and Aviation Operations
(2024-497, December, 2025)

General Report Comments

The Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) appreciates the opportunity to review the Department of Commerce Office of Inspector General's (DOC OIG) report on the Evaluation of the Management and Oversight of the Class B Ship Acquisition Program by NOAA's Office of Marine and Aviation Operations.

NOAA Response to Recommendations

The draft report made 5 recommendations pertaining to NOAA:

We recommend that the NOAA Deputy Under Secretary for Operations ensure that:

Recommendation 1: OMAO establishes standard operating procedures to support the Quality Insurance Plan (QAP) for ship construction for the Class B program.

Agency Response:
NOAA concurs with this recommendation. The Office of Marine and Aviation Operations (OMAO), Platform and Infrastructure Acquisition Division's (PIAD) is working to develop standard operating procedures to support the QAP. The expected completion date is March 20, 2026.

Recommendation 2: OMAO establishes a ship-specific surveillance plan in accordance with the QAP.

Agency Response:
NOAA concurs with this recommendation. In accordance with OMAO PIAD's QAP, a surveillance plan has been drafted and is in the final stages of approval with an expected completion date of February 28, 2026.

Recommendation 3: OMAO establishes an enterprise-wide acquisition knowledge management system to record and track programmatic, contracting, and technical lessons learned for the Class B program that can be implemented for subsequent classes of new ships or other major acquisitions.

Agency Response:
NOAA concurs with this recommendation and has completed and implemented this solution. OMAO established a lessons learned tracker for its Oceanographic Vessels (Class A) in 2021. This tracker has already been expanded to include the Charting and Mapping Vessels (Class B), the Fisheries and Coastal Science Vessels (Class C) and has already been shared across OMAO's other major aircraft and infrastructure acquisitions.

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Recommendation 4: OMAO conducts a workforce analysis that identifies the skills, certifications, and qualifications needed to support Class B ship construction in accordance with NOAA policy.

Agency Response:
NOAA concurs with this recommendation and has completed a specialized staffing approach to support Class B. With respect to Class B's staffing, the planned strategy has always been a multipronged strategy that includes federal staff, contract support, and other government agency expertise. OMAO's PIAD has developed a specialized staffing plan and approach to support, administer, and monitor the progress and construction under Class B. The onsite team currently has a staff of eight with a full staffing plan of 10 projected. Two additional contractors to conduct quality assurance were hired in 2025. Two additional contractors for test and trials are planned in 2027 as the program progresses to the Test and Trials phase. NOAA is a very lean organization and, as a result, must develop staffing strategies that can be right-sized to fit our programs and budgets. Given this, the need to hire and be fully staffed to support the program is critical.

Recommendation 5: OMAO identifies and implements a means to record observations and track construction deficiencies through resolution.

Agency Response:
NOAA concurs with this recommendation and has implemented a means to record and track construction deficiencies. Within the PIAD Quality Assurance Program for Ship Construction document, Appendix B contains a Quality Deficiency Report form that will be utilized to track and resolve deficiencies through performance of the contract. PIAD will be utilizing a secure shared drive in conjunction with this form for storage and record keeping of all deficiencies to communicate them with the contractor and track resolution. These issues and their resolutions will also be discussed and documented though regularly scheduled recurring meetings with program staff for both the government and the contractor to ensure that all parties are tracking and on the same page.

REPORT

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