Report No. DODIG-2025-151

~~CUI~~

INSPECTOR GENERAL

U.S. Department of Defense

SEPTEMBER 4, 2025

(U) Audit of the Navy's Management of the MQ-4C Triton Unmanned Aircraft Program's Operational Capabilities

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INDEPENDENCE ★ INTEGRITY ★ EXCELLENCE ★ TRANSPARENCY

~~CUI~~


INSPECTOR GENERAL
INTEGRITY
EFFICIENCY
DEPARTMENT OF DEFENSE

(U) Results in Brief

(U) Audit of the Navy's Management of the MQ-4C Triton Unmanned Aircraft Program's Operational Capabilities

September 4, 2025

(U) Objective

(U) The objective of this audit was to assess the effectiveness of the Navy's management of the MQ-4C Triton unmanned aircraft program's operational capabilities.

(U) Background

(U) The MQ-4C Triton is an unmanned aircraft that supports global naval and joint operations by collecting, processing, and distributing geospatial intelligence and signals intelligence (SIGINT) data to tactical and information operations centers.

(U) The Navy awarded Northrop Grumman a $1.16 billion contract for the MQ-4C Triton program in April 2008, with the first flight taking place in May 2013. The Navy plans to procure 27 total aircraft, of which 20 had been delivered as of March 2025.

(U) Findings

~~(CUI)~~ The Navy did not effectively manage the operational capabilities of the MQ-4C Triton unmanned aircraft program. Specifically, Persistent Maritime Unmanned Aircraft Systems Program Office (PMA-262) did not correct [redacted] developmental testing and evaluation (DT&E) deficiencies, [redacted] of which precluded the Navy from conducting initial operational test and evaluation (IOT&E). PMA-262 also did not correct [redacted] operational testing and evaluation (OT&E) deficiencies reported in the interim OT&E reports. This occurred because the Navy determined that the MQ-4C Triton was beneficial to the fleet despite the open deficiencies and therefore declared Initial Operational Capability (IOC) in August 2023 before conducting IOT&E.

(U) Findings (cont'd)

~~(CUI)~~ As a result, according to Northrop Grumman representatives, 20 MQ-4C Tritons were delivered to the Navy as of March 2025. These aircraft have deficiencies that could prevent them from accomplishing missions. The Navy has also spent $83.1 million to retrofit two MQ-4C Triton unmanned aircraft to the latest version and will need to spend additional money to further retrofit the MQ-4C Triton to correct the open deficiencies. Furthermore, the Navy's legacy airborne SIGINT platform was retired in November 2024 without verifying the MQ-4C Triton's SIGINT capabilities as operationally effective and suitable leaving the DoD with a potential capability gap.

(U) Recommendations

(U) We recommend that the Assistant Secretary of the Navy (Research, Development, and Acquisition):

- (U) direct PMA-262 to meet the entrance criteria for IOT&E;
- (U) direct PMA-262 to evaluate the remaining deficiencies and determine whether they need to be resolved and, if so, develop and implement a plan to correct the deficiencies; and
- (U) develop and implement guidance to limit the circumstances when acquisition programs can declare IOC before conducting IOT&E.

(U) Management Comments and Our Response

(U) The Deputy Assistant Secretary of the Navy (Air/Ground Programs) agreed or partially agreed with the recommendations. Of the three recommendations, one is closed and the remaining two are resolved but will remain open. We will close the two recommendations when we verify that management has implemented corrective actions.

(U) Please see the Recommendations Table on the next page for the status of the recommendations.

(U) Recommendations Table

(U) Management	Recommendations Unresolved	Recommendations Resolved	Recommendations Closed
Assistant Secretary of the Navy (Research, Development, and Acquisition)	None	1a and 1b	1c (U)

(U) Note: The following categories are used to describe agency management's comments to individual recommendations.

- **(U) Unresolved** – Management has not agreed to implement the recommendation or has not proposed actions that will address the recommendation.
- **(U) Resolved** – Management agreed to implement the recommendation or has proposed actions that will address the underlying finding that generated the recommendation.
- **(U) Closed** – The DoD OIG verified that the agreed upon corrective actions were implemented.

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September 4, 2025

MEMORANDUM FOR AUDITOR GENERAL, DEPARTMENT OF THE NAVY

SUBJECT: (U) Audit of the Navy's Management of the MQ-4C Triton Unmanned Aircraft Program's Operational Capabilities (Report No. DODIG-2025-151)

(U) This final report provides the results of the DoD Office of Inspector General's audit. We previously provided copies of the draft report and requested written comments on the recommendations. We considered management's comments on the draft report when preparing the final report. These comments are included in the report.

(U) Of the three recommendations in this report, we consider one recommendation closed because management took action sufficient to address the recommendation.

(U) The Deputy Assistant Secretary of the Navy (Air/Ground Programs) responding for the Assistant Secretary of the Navy (Research, Development, and Acquisition) agreed to address the remaining two recommendations presented in the report; therefore, we consider the recommendations resolved and open. We will close the recommendations when you provide us documentation showing that all agreed-upon actions to implement the recommendations are completed. Therefore, please provide us within 90 days your response concerning specific actions in process or completed on the recommendations. Send your response to either [redacted] if unclassified or [redacted] if classified SECRET.

(U) If you have any questions, please contact me at [redacted].

Carmen J. Malone
Assistant Inspector General for Audit
Acquisition, Contracting, and Sustainment

(U) Contents

(U) Introduction

(U) Objective

(U) The objective of this audit was to assess the effectiveness of the Navy's management of the MQ-4C Triton unmanned aircraft program's operational capabilities. See the appendix for a discussion of the scope and methodology and prior audit coverage related to the audit objective.[1]

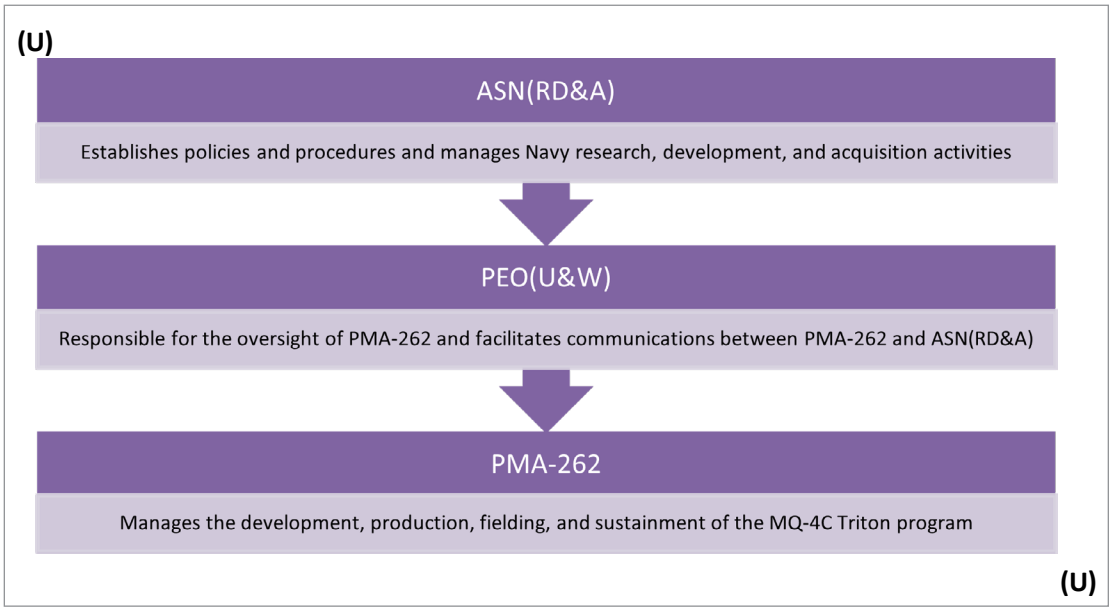
(U) Background

(U) The Assistant Secretary of the Navy (Research, Development, and Acquisition) (ASN[RD&A]) has the authority and accountability for all acquisition functions and programs in the Navy. ASN(RD&A) establishes policies and procedures and is required to manage the research, development, and acquisition activities for the Navy in accordance with the DoD 5000 Series Directives. The ASN(RD&A) serves as the milestone decision authority on the MQ-4C Triton program.

(U) Program Executive Office, Unmanned Aviation and Strike Weapons (PEO[U&W]), is responsible for the oversight of the Persistent Maritime Unmanned Aircraft Systems Program Office (PMA-262) and facilitates communications between PMA-262 and ASN(RD&A). The PMA-262 manages the MQ-4C Triton program. PMA-262 is responsible for managing the development, production, fielding, and sustainment of all persistent maritime unmanned aircraft systems. According to PMA-262 officials, the Naval Air Systems Command (NAVAIR) supports the MQ-4C Triton by supplying resources, people, knowledge, and expertise. See Figure 1 for the key decision authorities for the MQ-4C Triton unmanned aircraft program.

[1] (U) This report contains information that has been redacted because it was identified by the Department of Defense as Controlled Unclassified Information (CUI) that is not releasable to the public. CUI is Government-created or owned unclassified information that allows for, or requires, safeguarding and dissemination controls in accordance with laws, regulations, or Government-wide policies.

(U) Figure 1. Key Decision Authorities for the MQ-4C Triton Unmanned Aircraft Program



(U) Source: Navy.

(U) The MQ-4C Triton is a high-altitude, long-endurance Intelligence, Surveillance, and Reconnaissance (ISR) unmanned aircraft program that provides signals intelligence (SIGINT), communications relay, and search and rescue operations. This aircraft supports global naval and joint operations by collecting, processing, and distributing geospatial intelligence, including imagery and track data, and SIGINT data to tactical and information operations centers.

(U) Geospatial intelligence is the exploitation and analysis of physical and geographic imagery. SIGINT is intelligence derived from electronic signals and systems used by foreign targets, such as communications systems, radars, and weapons systems.

(U) The MQ-4C Triton is operated from ground stations that are staffed by five-crewmembers including an air vehicle operator, tactical coordinator, two mission payload operators, and one SIGINT coordinator. The Navy awarded Northrop Grumman a $1.16 billion contract for the MQ-4C Triton program in April 2008, with the first flight in May 2013. According to the 2022 Selected Acquisition Report on the FY 2024 President's Budget for the MQ-4C Triton Unmanned Aircraft System, the Navy plans to procure 27 total aircraft. According to Northrop Grumman officials, 20 aircraft have been delivered as of March 2025. See Figure 2 for a picture of the MQ-4C Triton unmanned aircraft in flight.

(U) Figure 2. MQ-4C Triton Unmanned Aircraft in Flight
(U) Source: NAVAIR.

(U) MQ-4C Triton Developmental Testing

(U) The MQ-4C Triton program started Developmental Testing and Evaluation (DT&E) in June 2012. DT&E is conducted to verify whether the system's design is satisfactory and whether all technical specific and contract requirements have been met. The Air Test and Evaluation Squadron Two Zero (VX-20) is the Navy activity responsible for the DT&E of the MQ-4C Triton. VX-20 conducts the DT&E based on a detailed test and evaluation plan.

(U) The Test and Evaluation Master Plan (TEMP) documents the overall structure of testing activities for the objectives and thresholds in the Capabilities Development Document (CDD). The CDD specifies capability requirements known as Key Performance Parameters (KPPs), Key System Attributes (KSAs), and other related information necessary to support capabilities development. A KPP is a performance parameter considered critical or essential to the development of an effective military capability. KPPs must be met for a system to meet its operational goals. A KSA provides an additional level of capability performance below the KPP level.

(U) VX-20 identifies deficiencies during DT&E. A DT&E deficiency is a technical issue or discrepancy in the design, material, construction, or software that may result in a malfunction, failure, or unsatisfactory performance. During DT&E, a deficiency is categorized into five parts: Part **I, Part *I, Part I, Part II, and Part III. Each part determines the severity and timing to correct each deficiency. See Table 1 for deficiency classifications for DT&E.

(U) Table 1. Deficiencies Classifications for Developmental Testing

(U) Deficiency Type	Deficiency Definition
Part **I	Mission risk that would preclude accomplishment of primary and secondary mission to such a degree as to prohibit further flights or testing of the system.
Part *I	Mission risk that critically impacts accomplishment of primary and secondary mission that should be corrected before operational deployment or other specific phase of mission employment.
Part I	Seriously impacts accomplishment of primary or secondary mission. Should be corrected when possible.
Part II	Moderate impact to mission accomplishment. Should be corrected when possible.
Part III	No significant impact on mission accomplishment. Should be avoided in future designs. **(U)**

(U) Source: NAVAIR.

(U) MQ-4C Triton Operational Testing

(U) The Navy conducted limited Operational Testing and Evaluation (OT&E) on the MQ-4C Triton in July 2023 and October 2024. OT&E is a field test under realistic conditions to determine the effectiveness and suitability of systems in combat. OT&E is performed according to the approved TEMP and tests the KPPs and KSAs as defined in the CDD.

(U) The Air Test and Evaluation Squadron ONE (VX-1) is the Navy activity that conducts OT&E with the Operational Test and Evaluation Force (OPTEVFOR). Navy Instruction 5000.2G states that OPTEVFOR must conduct OT&E of Navy major capability acquisition programs.[2] OPTEVFOR is required to conduct OT&E for Marine Corps, Navy, and Joint acquisition programs to provide an independent and objective evaluation of the operational effectiveness and suitability.

(U) During OT&E, OPTEVFOR and VX-1 test the system for established capabilities that include the KPPs and KSAs. OPTEVFOR could identify deficiencies during OT&E. According to the OPTEVFOR test reporting handbook an OT&E deficiency is defined as an issue lacking necessary quality, capability or elements that does not meet a normal standard. See Table 2 for the OT&E deficiency classifications used by OPTEVFOR.

[2] (U) Secretary of the Navy Instruction 5000.2G, "Department of the Navy Implementation of the Defense Acquisition System and the Adaptive Acquisition Framework," April 8, 2022. The entity referred to in the Navy Instruction as Commander OPTEVFOR (COMOPTEVFOR), but in May 2022 it was renamed as OPTEVFOR.

(U) Table 2. OT&E Deficiency Classifications Used by OPTEVFOR

(U) Deficiency Type	Deficiency Definition
Severe	Precludes mission accomplishment.
Major 1	Critical impact on mission accomplishment.
Major 2	Serious impact on mission accomplishment.
Major 3	Moderate impact on mission accomplishment.
Minor	No significant impact on mission impact. (U)

(U) Source: OPTEVFOR.

(U) The Director Operational Test and Evaluation (DOT&E) is the principal official and adviser to the Secretary of Defense on all DoD matters related to OT&E, live fire test and evaluation of DoD systems, and services acquired through the Defense acquisition system. DoD Directive 5141.02 provides that the DOT&E has the authority to approve the TEMP for operational test events of acquisition systems solely under DOT&E oversight including Initial Operational Test and Evaluation (IOT&E).[3] DOT&E has reported on the MQ-4C Triton program since FY 2012 except for FY 2020.[4]

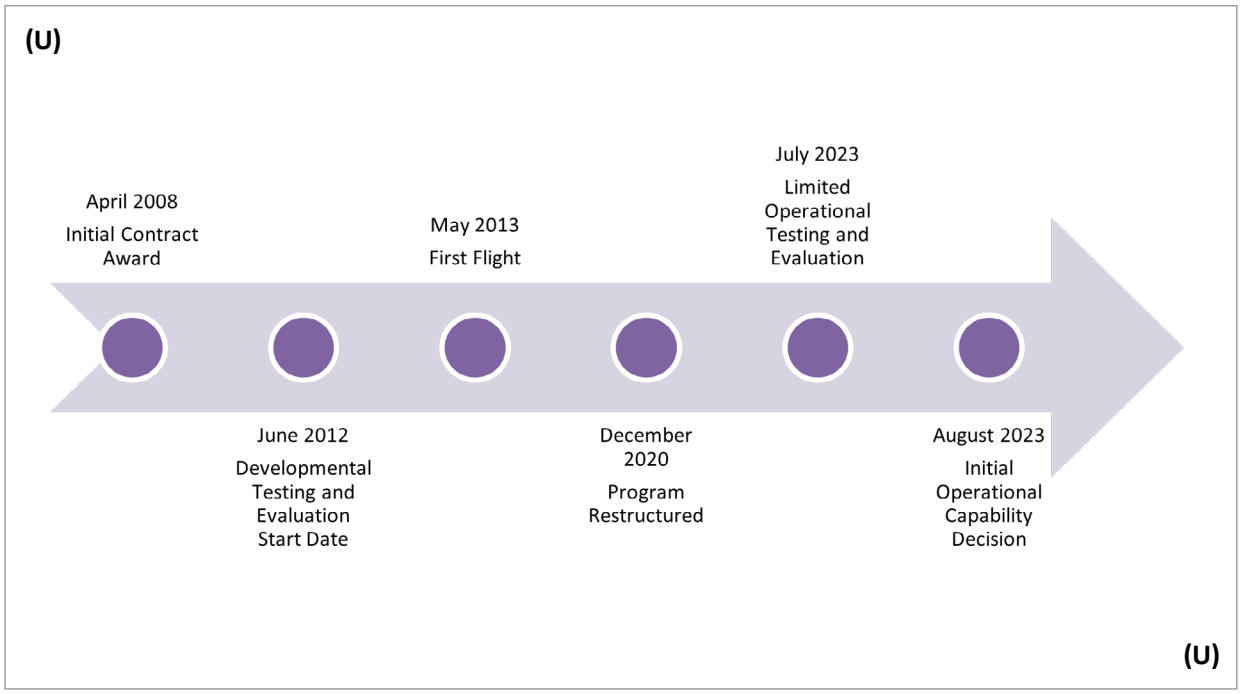
(U) IOT&E is conducted to determine whether systems are operationally effective and suitable. Operational effectiveness is the measurement of the overall ability of a system to accomplish a mission when used by representative personnel in the environment planned or expected for use of a system. Operational suitability is the degree to which a system can be satisfactorily fielded considering reliability, availability, safety, and other requirements.

(U) The Navy declared Initial Operational Capability (IOC) in August 2023. IOC is the first time the capability is achieved and refers to the point when a new system is ready for deployment and operational use in the real world. IOC for each program is defined in the CDD. The Navy defined IOC for the MQ-4C Triton as having two SIGINT capable aircraft and support systems to operationally support the ISR mission. See Figure 3 for the timeline of key program events.

[3] (U) DoD Directive 5141.02, "DOT&E," February 2, 2009.

[4] (U) The 2021 DOT&E Annual Report stated that in December 2020, the Navy restructured the MQ-4C Triton program to enable the delivery of incremental capabilities in support of the EP-3E retirement. Therefore, DOT&E did not report on it in FY 2020.

(U) Figure 3. Timeline of Key Program Events



(U) Source: Navy and DOT&E.

(U) Finding

(U) Navy Did Not Effectively Manage the MQ-4C Triton Operational Capabilities

~~(CUI)~~ The Navy did not effectively manage the operational capabilities of the MQ-4C Triton unmanned aircraft program. Specifically, PMA-262 did not correct [redacted] DT&E deficiencies, [redacted] of which preclude the Navy from conducting IOT&E. PMA-262 also did not correct [redacted] OT&E deficiencies reported in the interim operational test reports. This occurred because the Navy determined that the MQ-4C Triton was beneficial to the fleet despite the open deficiencies and therefore declared IOC in August 2023 before conducting IOT&E.

(U) As a result, according to Northrop Grumman representatives, 20 MQ-4C Tritons were delivered to the Navy as of March 2025. These aircraft have deficiencies that could prevent them from accomplishing missions. The Navy has also spent $83.1 million to retrofit two MQ-4C Triton unmanned aircraft to the latest version and will need to spend additional money to further retrofit the MQ-4C Triton to correct the open deficiencies. Furthermore, the Navy's legacy airborne SIGINT platform was retired in November 2024 without verifying the MQ-4C Triton's SIGINT capabilities as operationally effective and suitable leaving the DoD with a potential capability gap.

(U) MQ-4C Triton Has Outstanding Deficiencies

~~(CUI)~~ VX-20 began conducting DT&E for the MQ-4C Triton beginning in June 2012. According to VX-20, [redacted] deficiencies are still open and relevant to the latest version of the MQ-4C Triton aircraft as of February 2025. See Table 3 for type and number of open DT&E deficiencies.

~~(CUI)~~ Table 3. Type and Number of Open DT&E Deficiencies

~~(CUI)~~ Deficiency Type	Number of Open Deficiencies
Part **I	[redacted]
Part *I	[redacted]
Part I	[redacted]
Part II	[redacted]
Part III	[redacted]
Total	[redacted] ~~(CUI)~~

(U) Source: VX-20.

~~(CUI)~~ Of the [redacted] deficiencies, VX-20 identified [redacted] Part **I and Part *I deficiencies that preclude or critically impact accomplishment of the mission for the MQ-4C Triton. For example, the Navy identified [redacted]. This deficiency has been classified as a Part *I, and VX-20 recommended this to be corrected before operational development or mission deployment. The Test Reporting Manual states that systems with Part **I and Part *I deficiencies should not be recommended for IOT&E.[5] As a result, DOT&E did not approve the MQ-4C Triton to proceed into IOT&E until the [redacted] Part **I and Part *I developmental deficiencies are resolved. The remaining [redacted] Part I, II, III deficiencies are also still open.

(U) DOT&E approved the Navy to conduct limited portions of the test plan as integrated testing. Integrated testing is the collaborative planning and execution of testing between DT&E and OT&E activities to provide shared data for independent analysis, evaluation, and reporting. The goal of integrated testing is to produce credible qualitative and quantitative data useful to addressing developmental, sustainment, and operational issues.

~~(CUI)~~ PMA-262 also did not correct [redacted] OT&E deficiencies reported in the interim OT&E reports. The Navy and OPTEVFOR conducted a limited OT&E and produced interim reports in July 2023 and October 2024. Interim reports can be used when a portion of a test phase is completed, and a significant delay occurs in finishing the whole test phase. OPTEVFOR reported [redacted] OT&E deficiencies for the MQ-4C Triton, all of which remain open. See Table 4 for type and number of OT&E Open Deficiencies.

~~(CUI)~~ Table 4. Type and Number of OT&E Open Deficiencies

~~(CUI)~~ Deficiency Type	Number of Open Deficiencies
Severe	[redacted]
Major 1	[redacted]
Major 2	[redacted]
Major 3	[redacted]
Minor	[redacted]
Total	[redacted] ~~(CUI)~~

(U) Source: OPTEVFOR.

[5] (U) NAVAIR M-3905.1, "Test Reporting Manual," May 22, 2017.

~~(CUI)~~ OPTEVFOR identified [redacted] severe deficiency in the interim reports. A severe deficiency prevents the accomplishment of a requirement designated as critical to achieve a KPP which precludes mission accomplishment. Additionally, OPTEVFOR identified [redacted] major deficiencies in the interim reports. Major deficiencies have a significant impact on mission accomplishment and are described as critical, serious, or moderate depending on the deficiency level.

~~(CUI)~~ For example, the [redacted]. During intelligence gathering missions, [redacted]. This [redacted] deficiency has been classified as a major 1 and OPTEVFOR recommended this be corrected as soon as possible.

(U) Navy Determined That the MQ-4C Triton Was Beneficial to the Fleet Without Conducting Initial Operational Testing and Evaluation

(U) The Navy determined that the MQ-4C Triton was beneficial to the fleet despite the open deficiencies and declared IOC in August 2023 before conducting IOT&E. In January 2023, PEO (U&W) certified that the MQ-4C Triton was ready for IOT&E. Navy officials acknowledged that deficiencies were found in previous testing that precluded IOT&E but determined the MQ-4C Triton was still beneficial to Service members.

(U) PEO (U&W) stated that the uncorrected deficiencies would have no impact on the adequacy of OT&E. Additionally, Navy officials said that waiting for full OT&E results can cause delays in the delivery of capabilities to the field. During the testing process, deficiencies were identified, documented, and briefed to the users. According to the Navy, it developed a comprehensive corrective action plan and fixed the DT&E deficiencies. Therefore, the Navy decided to declare IOC for the MQ-4C Triton in August 2023, but it had not completed IOT&E.

~~(CUI)~~ Although PEO (U&W) certified IOT&E readiness, DOT&E did not approve the MQ-4C Triton program IOT&E test plan, citing immature SIGINT systems and related deficiencies that precluded operationally representative testing. DOT&E sent the Navy a memorandum in January 2023 identifying four SIGINT-related criteria that had to be met for IOT&E. In [redacted], DOT&E reiterated the following criteria in subsequent memorandums.

- ~~(CUI)~~ [redacted].
- ~~(CUI)~~ [redacted].

- ~~(CUI)~~ [redacted].
- ~~(CUI)~~ [redacted].

~~(CUI)~~ According to Navy officials, as of January 2025 all deficiencies preventing DOT&E's approval of IOT&E were successfully corrected. However, DOT&E and VX-20 did not agree that the [redacted] critical Part *I and Part **I deficiencies were corrected. Additionally, the Navy did not demonstrate whether the SIGINT capabilities were achieved and validated by OPTEVFOR in an operational environment.

~~(CUI)~~ DOT&E did not approve the MQ-4C Triton for IOT&E based upon the immaturity of the SIGINT systems in January 2023, [redacted], and [redacted]. DOT&E stated that it would not approve IOT&E until critical deficiencies were corrected. DOT&E reported in its FY 2024 annual report that the operational effectiveness of the MQ-4C Triton for its primary SIGINT missions remained unknown.

~~(CUI)~~ As of February 2025, DOT&E had not approved the MQ-4C Triton program to proceed with IOT&E because the Navy did not meet the IOT&E entrance criteria, specifically stating that the SIGINT system deficiencies were not adequately addressed. Therefore, the ASN(RD&A) should direct PMA-262 to meet the entrance criteria for IOT&E by correcting the [redacted] critical developmental testing deficiencies and achieving the SIGINT capabilities on the MQ-4C Triton.

~~(CUI)~~ Additionally, the remaining [redacted] DT&E and [redacted] OT&E deficiencies are still open and relevant to the latest version of the MQ-4C Triton aircraft. Secretary of the Navy Instruction 5000.2G states that programs should develop plans to address testing deficiencies.[6] PMA-262 is responsible for correcting identified testing deficiencies. However, these deficiencies are still open. The ASN(RD&A) should direct PMA-262 to evaluate the remaining [redacted] DT&E and [redacted] OT&E deficiencies and determine whether the deficiencies need to be resolved. If the deficiencies need to be resolved, PMA-262 should develop and implement a plan to correct the deficiencies that impact mission accomplishment.

(U) Navy Programs Declaring IOC before IOT&E

(U) The Navy has declared IOC before conducting IOT&E on several acquisition programs. The Government Accountability Office (GAO) has highlighted the negative impact of declaring IOC before IOT&E. The GAO's 2017 assessment stated that declaring IOC without completing IOT&E risks fielding systems that may be found to be ineffective or unsuitable for missions. The GAO assessment added that such programs risk finding deficiencies in testing that may need to be corrected, which could add to a program's cost and schedule.

[6] (U) Secretary of the Navy Instruction 5000.2G, "Department of the Navy Implementation of the Defense Acquisition System and the Adaptive Acquisition Framework," April 8, 2022.

(U) Additionally, the GAO's 2022 assessment stated that committing to production without testing a production-representative article increased the risk of identifying problems when testing did occur that may require costly and time-intensive retrofits to the units already produced. For example, the Navy's Littoral Combat Ship program had declared IOC before IOT&E and was plagued by challenges during deployments. OT&E found that it remained unable to demonstrate the operational capabilities needed to perform its mission.

(U) The DoD OIG has also reported concerns with declaring IOC before conducting IOT&E. For example, the DoD OIG audited the MQ-25 Stingray and determined that the Navy had intended to declare IOC before IOT&E; however, the DoD OIG recommended against this course of action. The GAO and DoD OIG have found that the Navy declared IOC before conducting IOT&E in multiple acquisition programs. Therefore, the ASN(RD&A) should develop and implement guidance to limit the circumstances when acquisition programs can declare IOC before conducting IOT&E.

(U) The MQ-4C Triton Was Fielded and the Legacy Aircraft Retired Without Conducting Initial Operational Testing

~~(CUI)~~ According to Northrop Grumman representatives, 20 MQ-4C Triton aircraft were delivered to the Navy as of March 2025. These aircraft have deficiencies that could prevent them from accomplishing missions. Based on the August 2024 interim summary report from VX-20, the MQ-4C Triton was [redacted] for the [redacted] due to new and previously documented critical deficiencies.

~~(CUI)~~ According to the DOT&E FY 2024 annual report, the MQ-4C Triton is not likely to be operationally suitable. OPTEVFOR also reported in its interim reports that the MQ-4C Triton was [redacted]. Specifically, the MQ-4C Triton was only available to conduct the intelligence mission [redacted] of the time and was [redacted] during OT&E. The Navy has also spent $83.1 million to retrofit two MQ-4C Triton unmanned aircraft to the latest version and will need to spend additional money to further retrofit the MQ-4C Triton to correct the open deficiencies.

(U) The 20 aircraft delivered to the Navy may also require retrofitting depending on the results of IOT&E, which has yet to be completed. Making critical production decisions without completing IOT&E increases the risk that the MQ-4C Triton program potentially will not meet operational capability requirements.

(U) Navy's Decision to Prematurely Retire the EP-3E ARIES II

(U) Before the MQ-4C Triton, the Navy used the EP-3E ARIES II aircraft to fulfill SIGINT needs. The Public Law stated that the Navy could not retire or prepare to retire the EP-3E ARIES II until it could provide an equivalent or superior capability.[7]

(U) The Navy defined IOC for the MQ-4C program as having two SIGINT capable aircraft and support systems and stated that failure to achieve IOC as planned could adversely impact the Navy's ISR aircraft inventory and delay retirement of the legacy aircraft. The Navy declared IOC for the MQ-4C Triton in August 2023 without:

- (U) conducting IOT&E and the EP-3E ARIES II was subsequently retired in November 2024;
- (U) proving the MQ-4C Triton's SIGINT capability as operationally effective and suitable; and
- (U) having the minimum required two SIGINT capable aircraft.

(U) Therefore, the DoD may have a SIGINT capability gap.

(U) Recommendations, Management Comments, and Our Response

(U) Recommendation 1

(U) We recommend that the Assistant Secretary of the Navy (Research, Development, and Acquisition):

a. **~~(CUI)~~ Direct PMA-262 to meet the entrance criteria for Initial Operational Test and Evaluation by correcting the [redacted] critical developmental testing deficiencies and achieving the Signals Intelligence capabilities on the MQ-4C Triton.**

b. **~~(CUI)~~ Direct PMA-262 to evaluate the remaining [redacted] developmental and [redacted] operational testing deficiencies and determine whether the deficiencies need to be resolved. If the deficiencies need to be resolved, PMA-262 should develop and implement a plan to correct the deficiencies that impact mission accomplishment.**

(U) Assistant Secretary of the Navy (Research, Development, and Acquisition) Comments

(U) The Deputy Assistant Secretary of the Navy (Air/Ground Programs) (DASN(A/G)), responding for the ASN(RD&A), agreed with the recommendations. The DASN(A/G) stated that PMA-262 is on track to release software in September 2025 that will correct remaining deficiencies and has prioritized satisfying entrance criteria

[7] (U) Public Law 111-383, "National Defense Authorization Act for FY 2011," January 7, 2011.

(U) for IOT&E to demonstrate the MQ-4C Triton critical technology capabilities. The DASN(A/G) also stated that the completion of IOT&E is contingent on OPTEVFOR validation and accreditation of the critical technology testing, which is expected by November 2025. Additionally, PMA-262 has been continuously evaluating deficiencies identified during the developmental and operational test events and real-world missions. The DASN(A/G) further stated that since achieving IOC in August 2023, the program has corrected all the prioritized deficiencies identified in the currently fielded MQ-4C Triton and the program has a plan to address the remaining discrepancies with emphasis on those that impact mission accomplishment and satisfy entrance criteria for IOT&E.

(U) Our Response

(U) Comments from the DASN(A/G) addressed the specifics of the recommendations; therefore, the recommendations are resolved but will remain open. We will close the recommendations once the ASN(RD&A) provides documentation that confirms the MQ-4C Triton has met the entrance criteria for IOT&E, achieved the SIGINT capabilities and has implemented plans to correct the deficiencies that impact mission accomplishment.

c. (U) Develop and implement guidance to limit the circumstances when acquisition programs can declare Initial Operational Capability before conducting Initial Operational Test and Evaluation.

(U) Assistant Secretary of the Navy (Research, Development, and Acquisition) Comments

(U) The DASN(A/G), responding for ASN(RD&A), partially agreed with the recommendation. The Navy acknowledged the value of completing IOT&E prior to a program's declaration of IOC and agreed to limit instances of deviation from this standard. However, the DASN(A/G) stated that no additional guidance is needed and they will continue to exercise their program milestone decision authority in compliance with DoD Instruction 5000.02. The DASN(A/G) also stated that they can "tailor-in" the regulatory information for the program's execution. Additionally, the DASN(A/G) stated that the milestone decision authority approves the tailored structure of programs after taking into consideration the complexity, risk, security, and urgency to satisfy validated capability requirements. The milestone decision authority resolves any implementation issues with other regulatory authorities as required by them.

(U) Our Response

(U) Comments from the DASN(A/G) met the intent of the recommendation. Although the Navy partially agreed, they acknowledged the value of completing IOT&E prior to a program's declaration of IOC and agreed to limit instances of deviation from this standard; therefore, the recommendation is closed.

(U) Appendix

(U) Scope and Methodology

(U) We conducted this performance audit from September 2024 through July 2025 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

(U) This report was reviewed by the DoD Components associated with this oversight project to identify whether any of their reported information, including legacy FOUO information, should be safeguarded and marked in accordance with the DoD CUI Program. In preparing and marking this report, we considered any comments submitted by the DoD Components about the CUI treatment of their information. If the DoD Components failed to provide any or sufficient comments about the CUI treatment of their information, we marked the report based on our assessment of the available information.

(U) To assess the effectiveness of the Navy's management of the MQ-4C Triton unmanned aircraft program's operational capabilities, we interviewed officials from the following Components to identify their roles and responsibilities and obtained documentation for the performance capabilities of the MQ-4C Triton.

- (U) Office of the Under Secretary of Defense for Acquisition and Sustainment
- (U) DOT&E
- (U) ASN(RD&A)
- (U) Director, Air Warfare, Office of the Chief of Naval Operations
- (U) U.S. Fleet Forces Command
- (U) NAVAIR
- (U) PEO(U&W)
- (U) Commander, Patrol, and Reconnaissance Group
- (U) PMA-262
- (U) OPTEVFOR
- (U) VX-1
- (U) VX-20
- (U) Northrop Grumman

(U) We reviewed the CDD to establish the criteria for IOC. We reviewed DT&E deficiency reports, OT&E interim reports, and OT&E deficiency letters to determine the quantity and severity of deficiencies. We reviewed DOT&E annual reports and memorandums to determine the status of the MQ-4C Triton testing and barriers to IOT&E. We also reviewed internal Navy and DoD memorandums to determine the rationale for declaring IOC. We reviewed the following laws and DoD and Navy guidance related to capabilities and testing.

- (U) Public Law 111-383, "NDAA for Fiscal Year 2011," January 7, 2011
- (U) DoD Directive 5000.01, "The Defense Acquisition System," September 9, 2020 (Incorporating Change 1, July 28, 2022)
- (U) DoD Directive 5141.02, "DOT&E," February 2, 2009
- (U) DoD Instruction 5000.02, "Operation of the Adaptive Acquisition Framework," January 23, 2020 (Incorporating Change 1, June 8, 2022)
- (U) DoD Instruction 5000.89, "Test and Evaluation," November 19, 2020
- (U) Secretary of the Navy Instruction 5000.2G, "Department of the Navy Implementation of the Defense Acquisition System and the Adaptive Acquisition Framework," April 8, 2022
- (U) NAVAIR M-3905.1, "Test Reporting Manual," May 22, 2017
- (U) OPTEVFOR, "Test Reporting Handbook," Version 2.0, February 4, 2021
- (U) OPTEVFOR Instruction 3980.2J, "Operational Test and Evaluation Manual," Version 1.0, October 20, 2021

(U) Internal Control Assessment and Compliance

(U) We assessed internal controls and compliance with laws and regulations necessary to satisfy the audit objective. In particular, we assessed internal controls related to monitoring and risk assessment to determine the effectiveness of the Navy's management of the MQ-4C Triton unmanned aircraft program's operational capabilities. However, because our review was limited to these internal control components and underlying principles, it may not have disclosed all internal control deficiencies that may have existed at the time of this audit.

(U) Use of Computer-Processed Data

(U) We did not use computer-processed data to perform this audit.

(U) Prior Coverage

(U) During the last 5 years, the GAO issued five reports discussing the MQ-4C Triton. Unrestricted GAO reports can be accessed at http://www.gao.gov.

(U) GAO

(U) Report No. GAO-23-106059, "Weapon Systems Annual Assessment – Programs Are Not Consistently Implementing Practices That Can Help Accelerate Acquisitions," June 8, 2023

(U) The GAO reported that the program office began IOT&E in January 2023, but it may not have allowed sufficient time to identify design issues ahead of IOC. The GAO identified a DOT&E recommendation to provide more time for discovery and correction of deficiencies.

(U) Report No. GAO-22-105230, "Weapon Systems Annual Assessment – Challenges to Fielding Capabilities Faster Persist," June 8, 2022

(U) The GAO expressed concern regarding the failure to complete timely testing and the overlap of development, production and testing. The GAO reported that all these factors contribute to risk.

(U) Report No. GAO-21-222, "Weapon Systems Annual Assessment – Updated Program Oversight Approach Needed," June 8, 2021

(U) The GAO reported that design difficulties led to a breach in development cost and IOC thresholds. The GAO also reported that according to the Defense Contract Management Agency, flight testing may be shorted or subdivided in order for the program to achieve (then-planned) IOC in August 2022.

(U) Report No. GAO-20-439, "Defense Acquisitions Annual Assessment – Drive to Deliver Capabilities Faster Increases Importance of Program Knowledge and Consistent Data for Oversight," June 3, 2020

(U) The GAO noted that the MQ-4C Triton achieved baseline operational capability in January 2020, which was later than the planned September 2019 milestone. Additionally, the program experienced a $196.2 million increase in development cost growth.

(U) Report No. GAO-19-336SP, "Weapon Systems Annual Assessment – Limited Use of Knowledge-Based Practices Continues to Undercut DoD's Investments," May 7, 2019

(U) GAO's 17th annual assessment of the DoD's portfolio of 82 major weapon system acquisition programs. The GAO found that the MQ-4C Triton is continuing to improve wing manufacturing processes which poses risk to the production schedule, quality and cost.

(U) Management Comments

(U) Assistant Secretary of the Navy (Research, Development, and Acquisition)

DEPARTMENT OF THE NAVY
OFFICE OF THE ASSISTANT SECRETARY OF THE NAVY
(RESEARCH, DEVELOPMENT AND ACQUISITION)
1000 NAVY PENTAGON
WASHINGTON, DC 20350-1000

MEMORANDUM FOR OFFICE OF THE INSPECTOR GENERAL, DEPARTMENT OF DEFENSE

SUBJECT: Department of the Navy Response to Audit of the Navy's Management of the MQ-4C Triton Unmanned Aircraft Program's Operational Capabilities

This letter is in response to the Department of Defense Inspector General Draft Report, D2024-D000AT-0170, "Audit of the Navy's Management of the MQ-4C Triton Unmanned Aircraft Program's Operational Capabilities" dated July 2, 2025.

I appreciate the opportunity to comment on the draft report. I **CONCUR WITH COMMENTS** on recommendations 1.a. and 1.b., and **I PARTIALLY CONCUR** with recommendation 1.c. in the draft report. I have included my rationale in the attachment.

My point of contact for this matter is [redacted] who may be reached at [redacted]

Sincerely,

Robert D. Kimble
Deputy Assistant Secretary of the Navy
(Air/Ground Programs)

Attachment:
As Stated

(U) Assistant Secretary of the Navy (Research, Development, and Acquisition) (cont'd)

~~CUI~~

DoD IG DRAFT REPORT DATED JULY 2, 2025
D2024-D000AT-0170

(U) Audit of the Navy's Management of the MQ-4C Triton Unmanned Aircraft Program's Operational Capabilities

ASSISTANT SECRETARY OF THE NAVY (RESEARCH, DEVELOPMENT, AND ACQUISITION) COMMENTS TO DoDIG RECOMMENDATIONS

(U) Direct PMA-262 to meet the entrance criteria for Initial Operational Test and Evaluation by correcting the critical developmental testing deficiencies and achieving the critical technology capabilities on the MQ-4C Triton.

(U) ASN(RDA) RESPONSE:

PMA-262 continues to work with the test community to correct deficiencies and support ongoing Operational Test (OT) events—as recently as April 2025—using the latest software outfitted on fleet representative aircraft and ground control stations. PMA-262 is on track to release software in September 2025 that will correct remaining deficiencies and has prioritized those satisfying entrance criteria for IOT&E to demonstrate MQ-4C Triton critical technology capabilities. The completion of IOT&E requirements is contingent on Commander, Operational Test and Evaluation Force (COMOPTEVFOR) validation and accreditation of the critical technology test range, which is expected by November 2025.

(U) Direct PMA-262 to evaluate the remaining developmental and operational testing deficiencies and determine whether the deficiencies need to be resolved. If the deficiencies need to be resolved, PMA-262 should develop and implement a plan to correct the deficiencies that impact mission accomplishment.

(U) ASN(RDA) RESPONSE:

PMA-262 has been continuously evaluating deficiencies identified during developmental/operational test events and from MQ-4C operators executing real-world missions in support of Fleet commanders. Corrections of deficiencies and capability improvements are prioritized based on Fleet input and funding available to be included in the program's semiannual software release schedule. Since achieving Initial Operational Capability in August 2023, the program has corrected all of the prioritized deficiencies identified in the currently fielded Integrated Functional Capability (IFC)-4 configuration. The program has a plan to address the remaining discrepancies with emphasis being placed on those that impact mission accomplishment and satisfy entrance criteria for IOT&E.

~~CUI~~

(U) Assistant Secretary of the Navy (Research, Development, and Acquisition) (cont'd)

~~CUI~~

(U) Develop and implement guidance to limit the circumstances when acquisition programs can declare Initial Operational Capability before conducting Initial Operational Test and Evaluation

(U) ASN(RDA) RESPONSE:

The Navy partially concurs with this recommendation. We acknowledge the value in completing IOT&E prior to a program's declaration of IOC and agree with the intent of the recommendation to limit instances of deviation from this standard. However, no additional guidance is needed. ASN/RDA will continue to exercise program Milestone Decision Authority (MDA) as described in DoDI 5000.02. Further, as explained in DoDI 5000.85 in section 3.2 Flexible Implementation, program managers "tailor-in" the regulatory information used to describe the program's execution. The MDA approves the tailored structure of programs—after taking into consideration the characteristics of the capability being acquired, to include complexity, risk, security, and urgency to satisfy validated capability requirements—and resolves any implementation issues with other regulatory authorities as required.

~~CUI~~

(U) Acronyms and Abbreviations

(U) ASN(RD&A) (U) Assistant Secretary of the Navy (Research, Development, and Acquisition)
(U) DASN(A/G) (U) Deputy Assistant Secretary of the Navy (Air/Ground Programs)
(U) DOT&E (U) Director Operational Test and Evaluation
(U) DT&E (U) Developmental Testing and Evaluation
(U) GAO (U) Government Accountability Office
(U) IOC (U) Initial Operational Capability
(U) IOT&E (U) Initial Operational Test and Evaluation
(U) ISR (U) Intelligence, Surveillance, and Reconnaissance
(U) KPP (U) Key Performance Parameters
(U) KSA (U) Key System Attributes
(U) NAVAIR (U) Naval Air Systems Command
(U) OPTEVFOR (U) Operational Test and Evaluation Force
(U) OT&E (U) Operational Test and Evaluation
(U) PEO(U&W) (U) Program Executive Office, Unmanned Aviation and Strike Weapons
(U) PMA-262 (U) Persistent Maritime Unmanned Aircraft Systems Program Office
(U) SIGINT (U) Signals Intelligence
~~(CUI)~~ [redacted] ~~(CUI)~~ [redacted]
(U) TEMP (U) Test and Evaluation Master Plan
(U) VX-1 (U) Air Test and Evaluation Squadron ONE
(U) VX-20 (U) Air Test and Evaluation Squadron Two Zero


INSPECTOR GENERAL
INTEGRITY
EFFICIENCY
DEPARTMENT OF DEFENSE

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