

# **Navy John Lewis (TAO-205) Class Oiler Shipbuilding Program: Background and Issues for Congress**

Updated January 12, 2026

**Congressional Research Service**

<https://crsreports.congress.gov>

R43546

## Summary

The John Lewis (TAO-205) class oiler shipbuilding program is a program to build a new class of 20 fleet oilers for the Navy. The Navy procured the first TAO-205 in FY2016, and a total of 10 TAO-205s have been procured through FY2025. (The 10<sup>th</sup> was procured in FY2024, and no TAO-205s were procured in FY2025.) The first TAO-205 entered service in 2022, and a total of four were in service as of December 2024.

The Navy's proposed FY2026 budget requests the procurement of two more TAO-205s. An issue for Congress is whether to approve, reject, or modify the Navy's FY2026 request for the TAO-205 program. Congress's decisions on this issue could affect Navy capabilities and funding requirements and the U.S. shipbuilding industrial base.

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## Introduction

This report provides background information and issues for Congress on the John Lewis (TAO-205) class oiler shipbuilding program, a program to build a new class of 20 fleet oilers for the Navy. The Navy procured the first TAO-205 in FY2016, and a total of 10 TAO-205s have been procured through FY2025. (The 10<sup>th</sup> was procured in FY2024, and no TAO-205s were procured in FY2025.) The first TAO-205 entered service in 2022, and a total of four were in service as of December 2024.

The Navy's proposed FY2026 budget requests the procurement of two more TAO-205s. An issue for Congress is whether to approve, reject, or modify the Navy's FY2026 request for the TAO-205 program. Congress's decisions on this issue could affect Navy capabilities and funding requirements and the U.S. shipbuilding industrial base.

A separate CRS report discusses the Navy's program to procure a new class of light oilers (i.e., smaller oilers) that would supplement the Navy's TAO-205s.<sup>1</sup>

## Background

### Navy Fleet Oilers

#### Role of Fleet Oilers

The primary role of Navy fleet oilers is to transfer fuel to Navy surface ships that are operating at sea, so as to extend the operating endurance of these surface ships and their embarked aircraft. Fleet oilers also provide other surface ships with lubricants, fresh water, and small amounts of dry cargo. Fleet oilers transfer fuel and other supplies to other surface ships in operations called underway replenishments (UNREPs). During an UNREP, an oiler steams next to the receiving ship and transfers fuel by hose (see **Figure 1**, **Figure 2**, and **Figure 3**).<sup>2</sup>

Oilers are one kind of Navy UNREP ship; other Navy UNREP ships include ammunition ships, dry cargo ships, and multiproduct replenishment ships. The Navy's UNREP ships are known more formally as the Navy's combat logistics force (CLF). Most of the Navy's CLF ships are operated by the Military Sealift Command (MSC).

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<sup>1</sup> CRS In Focus IF11674, *Navy Light Replenishment Oiler (TAOL) Program: Background and Issues for Congress*, by Ronald O'Rourke.

<sup>2</sup> The Navy states that

A typical connected replenishment starts when a warship makes an "approach" on a CLF ship. The CLF ship maintains steady course and speed while the "customer ship" approaches and comes alongside the CLF ship, matching course and speed. The distance between the two ships is usually between 120-200 feet. The CLF ship then passes heavy metal wires, to the customer ship, that are connected at the replenishment stations. These wires are placed under tension to support fuel hoses for refueling operations or trolleys that move pallets of provisions, ammunition, or other cargo from ship to ship. Ships with flight decks can also receive provisions and ammunition via vertical replenishment. During this evolution a helicopter transfers cargo in external sling loads, or in the case of mail or passengers, inside the helicopter.

(Statement of Mr. F. Scott DiLisio, Director, Strategic Mobility / Combat Logistics Division, Office of the Chief of Naval Operations, on the Logistics and Sealift Force Requirements and Force Structure Assessment Before the House Armed Services Committee Seapower and Projection Forces Subcommittee, July 30, 2014, p. 3.)

Although the role of fleet oilers might not be considered as glamorous as that of other Navy ships, fleet oilers are critical to the Navy's ability to operate in forward-deployed areas around the world on a sustained basis. The U.S. Navy's ability to perform UNREP operations in a safe and efficient manner on a routine basis is a skill that many other navies lack. An absence of fleet oilers would significantly complicate the Navy's ability to operate at sea on a sustained basis in areas such as the Western Pacific or the Indian Ocean/Persian Gulf region. The Navy states that

the ability to rearm, refuel and re-provision our ships at sea, independent of any restrictions placed on it by a foreign country, is critical to the Navy's ability to project warfighting power from the sea.

As the lifeline of resupply to Navy operating forces underway, the ships of the Navy's Combat Logistic Force (CLF) enable Carrier Strike Groups and Amphibious Ready Groups to operate forward and remain on station during peacetime and war, with minimal reliance on host nation support.<sup>3</sup>

## TAO Designation

Navy fleet oilers carry the designation TAO (also typed as T-AO). The T means the ship is operated by MSC with a mostly civilian crew; the A means it is an auxiliary ship of some kind; and the O means that it is, specifically, an oiler.

**Figure 1. Fleet Oiler Conducting an UNREP**



**Source:** Navy photo accessed May 5, 2014, at [http://www.navy.mil/view\\_image.asp?id=163895](http://www.navy.mil/view_image.asp?id=163895). The Navy states that the photo is dated October 24, 2013, and shows the oiler *Tippecanoe* (TAO-199) extending its fuel probe to

<sup>3</sup> Statement of Mr. F. Scott DiLisio, Director, Strategic Mobility/Combat Logistics Division, Office of the Chief of Naval Operations, on the Logistics and Sealift Force Requirements and Force Structure Assessment Before the House Armed Services Committee Seapower and Projection Forces Subcommittee, July 30, 2014, pp. 2-3.

the Aegis cruiser USS *Antietam* (CG-54), a part of the *George Washington* (CVN-73) Carrier Strike Group, in the South China Sea.

**Figure 2. Fleet Oiler Conducting an UNREP**



**Source:** Cropped version of Navy photo accessed May 5, 2014, at [http://www.navy.mil/view\\_image.asp?id=61415](http://www.navy.mil/view_image.asp?id=61415). The Navy states that the photo is dated July 13, 2008, and shows the oiler *Leroy Grumman* (TAO-195) refueling the frigate *Underwood* (FFG-36) during an exercise with the *Iwo Jima* (LHD-7) Expeditionary Strike Group in the Atlantic Ocean.

**Figure 3. Fleet Oiler Conducting an UNREP**



**Source:** Cropped version of Navy photo accessed May 5, 2014, at [http://www.navy.mil/view\\_image.asp?id=1737](http://www.navy.mil/view_image.asp?id=1737). The Navy states that the photo is dated June 19, 2002, and shows the oiler *Walter S. Diehl* (TAO-193), at center, conducting simultaneous UNREPs with the aircraft carrier *John F. Kennedy* (CV-67) and the Aegis destroyer *Hopper* (DDG-70). CV-67, a conventionally powered carrier, has since retired from the Navy, and all of the Navy's aircraft carriers today are nuclear powered. Even so, Navy oilers continue to conduct UNREPs with Navy aircraft carriers to provide fuel for the carriers' embarked air wings.



## Existing Kaiser (TAO-187) Class Oilers

The Navy's older fleet oilers—the ships that are to be replaced by TAO-205s—are Henry J. Kaiser (TAO-187) class ships (**Figure 4**), or Kaiser-class oilers for short.<sup>4</sup>

**Figure 4. Kaiser (TAO-187) Class Fleet Oiler**



**Source:** Cropped version of U.S. Navy image accessed April 14, 2014, at <http://www.navy.mil/management/photodb/photos/130703-N-TG831-240.jpg>. (The oilers shown in **Figure 1**, **Figure 2**, and **Figure 3** are also Kaiser-class oilers.)

The Kaiser-class oilers were procured between FY1982 and FY1989 and entered service between 1986 and 1996. The ships were built by Avondale Shipyards of New Orleans, LA, a shipyard that eventually became part of the shipbuilding firm Huntington Ingalls Industries (HII). HII subsequently wound down Navy shipbuilding operations at Avondale, and the facility no longer builds ships. (HII continues to operate two other shipyards that build Navy ships.) Kaiser-class oilers have an expected service life of 35 years; the first ship in the class reached that age in 2021. Fourteen Kaiser-class oilers remained in service as of the end of FY2024, and the Navy's FY2025 30-year (FY2025-FY2054) shipbuilding plan calls for retiring seven of them during the period FY2025-FY2029.

## TAO-205 Program

### Program Name

TAO-205 is the Navy's next oiler after TAO-204, which is the final Kaiser-class oiler. On January 6, 2016, then-Secretary of the Navy Ray Mabus announced that the TAO-205 class ships will be named for "people who fought for civil rights and human rights,"<sup>5</sup> and that the first ship in the class, TAO-205, which was procured in FY2016, was being named for Representative John

<sup>4</sup> The oilers shown in **Figure 1**, **Figure 2**, and **Figure 3** are also Kaiser-class oilers.

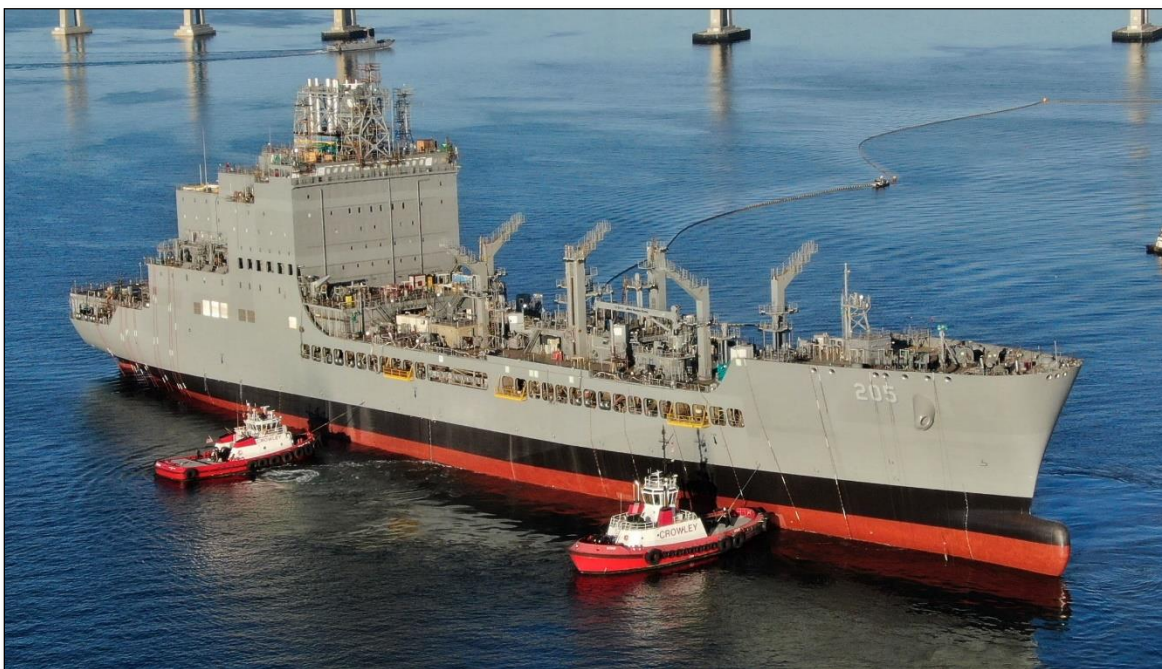
<sup>5</sup> Valerie Insinna, "Navy to Name Next Generation Oilers for Civil Rights Icons," *Defense Daily*, January 7, 2016. For more on the names of TAO-205 class ships, see CRS Report RS22478, *Navy Ship Names: Background for Congress*, by Ronald O'Rourke.

Lewis,<sup>6</sup> making TAO-205 one of a limited number of Navy ships that have been named for people who were living at the time that the naming announcement was made.<sup>7</sup> TAO-205 class ships consequently are known as John Lewis-class oilers. On June 27, 2025, Secretary of Defense Pete Hegseth announced that the Department of the Navy would change the name of the second ship in the class, TAO-206, from *Harvey Milk* to *Oscar V. Peterson*. Secretary of the Navy John Phelan changed the ship's name the same day.<sup>8</sup>

## Ship Design and Capabilities

TAO-205s (Figure 5 and Figure 6) have capabilities similar to those of the Kaiser-class ships. To guard against oil spills, TAO-205s are double-hulled, like modern commercial oil tankers, with a space between the two hulls to protect the inner hull against events that puncture the outer hull. (The final Kaiser-class ships are double-hulled, but earlier ships in the class are single-hulled.)

**Figure 5. John Lewis (TAO-205)**



**Source:** Cropped version of photograph accompanying National Steel and Shipbuilding Company, “General Dynamics NASSCO Launches First Ship in the T-AO Fleet Oiler Program for the U.S. Navy,” January 13, 2021.

**Note:** Launching is when a ship that is under construction is put into the water for the final phases of its construction.

<sup>6</sup> “Secretary of the Navy Ray Mabus Names Fleet Replenishment Oiler,” *Navy News Service*, January 6, 2016; Sam LaGrone, “SECNAV Mabus Names First TAO(X) Next Generation Oiler After Rep. John Lewis,” *USNI News*, January 6, 2016; “Navy to Name New Oiler after Civil Rights Icon,” *Military.com*, January 6, 2020; Valerie Insinna, “Navy to Name Next Generation Oilers for Civil Rights Icons,” *Defense Daily*, January 7, 2016.

<sup>7</sup> Representative Lewis died on July 17, 2020. For more on Navy ships named for people who were living at the time that the naming announcement was made, see CRS Report RS22478, *Navy Ship Names: Background for Congress*, by Ronald O'Rourke.

<sup>8</sup> For further discussion of the change in the ship's name, see CRS Report RS22478, *Navy Ship Names: Background for Congress*, by Ronald O'Rourke.



**Figure 6. John Lewis (TAO-205)**



**Source:** Cropped version of photograph accompanying Team Ships Public Affairs, “USNS John Lewis Conducts Builder’s Trials,” Naval Sea Systems Command, February 7, 2022.

## **Planned Total Procurement Quantity**

### ***Planned Total Procurement Quantity of 20***

The required number of oilers largely depends on the numbers and types of other surface ships (and their embarked aircraft) to be refueled, and the projected operational patterns for these ships and aircraft. Navy plans call for procuring a total of 20 TAO-205s, and for supplementing these 20 ships with 13 additional light replenishment oilers (TAOLs) that are to be smaller and individually less expensive than TAO-205s. As noted earlier, another CRS report discusses the TAOL program in more detail.<sup>9</sup>

## **Annual Procurement Quantities and Number in Service**

The Navy procured the first TAO-205 in FY2016, and a total of 10 TAO-205s have been procured through FY2025 in annual procurement quantities for the period FY2016-FY2025 of 1-0-1-2-2-0-2-1-1-0. The first TAO-205 was delivered to the Navy on July 26, 2022; the second on July 11, 2023; the third on May 7, 2024; and the fourth on December 10, 2024.

## **Unit Procurement Cost**

Under the Navy’s FY2026 budget submission, the two TAO-205s to be procured in FY2026 have an average estimated procurement cost of more than \$900 million each.

## **Builder**

TAO-205s are being built by General Dynamics/National Steel and Shipbuilding Company (GD/NASSCO) of San Diego, CA, a shipyard that builds Navy auxiliaries, DOD sealift ships, and commercial cargo ships.

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<sup>9</sup> See CRS In Focus IF11674, *Navy Light Replenishment Oiler (TAOL) Program: Background and Issues for Congress*, by Ronald O'Rourke.

## Block Buy Contracts

The first six TAO-205s (TAOs 205 through 210) were procured under a block buy contract awarded to GD/NASSCO that was authorized by Section 127 of the FY2016 National Defense Authorization Act (NDAA) (S. 1356/P.L. 114-92 of November 25, 2015).<sup>10</sup> In August 2022, the Navy awarded GD/NASSCO a contract modification for two additional ships (TAOs 211 and 212). In May 2023, the Navy awarded GD/NASSCO a contract modification for a third additional ship (TAO-213).

The next eight TAO-205s (TAOs 214 through 221) are being procured under a block buy contract that was authorized by Section 128 of the FY2023 NDAA (H.R. 7776/P.L. 117-263 of December 23, 2022). The contract was awarded to GD/NASSCO on September 13, 2024. Regarding the estimated savings from this block buy contract, the Navy states:

The block-buy [contract] provided significant savings of 6.2% (\$491M) as compared to annual contracts at the PB 2025 profile. These savings are realized at the shipbuilder and tier one subcontractor level due to the stable, high-level demand signal provided by the block-buy contract structure. A multi-year procurement [MYP] [contract]<sup>11</sup> could augment those savings further by allowing lower-level suppliers to benefit from economic order quantities associated with a greater number of awarded ships on contract ([as] opposed to only a strong demand signal as provided by the block-buy). These savings were estimated

<sup>10</sup> It was earlier estimated that the block buy contract would reduce the procurement cost of the second through sixth TAO-205s by an average of about \$45 million each, compared to costs under the standard or default DOD approach of annual contracting. The Senate Armed Services Committee, in its report (S.Rept. 114-49 of May 19, 2015) on the FY2016 National Defense Authorization Act (S. 1376), stated

**Fleet replenishment oiler program (sec. 118)**

The committee recommends a provision [Section 118] that would grant the Secretary of the Navy contracting authority to procure up to six fleet replenishment oilers (T-AO(X)). This new ship class is a nondevelopmental recapitalization program based on existing commercial technology and standards. The ship design is considered to be low risk by the Navy, with the design scheduled to be complete prior to the start of construction on the lead ship. This provision would generate an estimated \$45.0 million in savings per ship compared to annual procurement cost estimates. In addition, the provision would provide a long-term commitment to the shipbuilder and vendors, which would enable workforce stability and planning efficiency. (Pages 11-12)

The committee print that includes the legislative text and joint explanatory statement for the enacted FY2016 National Defense Authorization Act (S. 1356/P.L. 114-92 of November 25, 2015) stated

*Fleet replenishment oiler program (sec. 127)*

The Senate amendment contained a provision (sec. 118) that would grant the Secretary of the Navy contracting authority to procure up to six fleet replenishment oilers (T-AO (X)). This new ship class is a non-developmental recapitalization program based on existing commercial technology and standards. The ship design is considered to be low risk by the Navy, with the design scheduled to be complete prior to the start of construction on the lead ship. This provision would enable an estimated \$45.0 million in savings per ship, for ships 2–6, for a total of \$225.0 million in savings compared to current annual procurement cost estimates.

(114<sup>th</sup> Congress, 1<sup>st</sup> Session, Committee Print No. 2, *National Defense Authorization Act for Fiscal Year 2016, Legislative Text and Joint Explanatory Statement to accompany S. 1356, P.L. 114-92, November 2015*, Printed for the use of the Committee on Armed Services of the House of Representatives, p. 608).

The Navy stated that about \$35 million of the \$45 million in per-ship savings will come from using advance procurement (AP) funding for batch-ordering TAO-205 components. The Navy states that this use of AP funding could have occurred under annual contracting, and that the savings that are intrinsic to the block buy contract are thus about \$10 million per ship. (Source: Navy briefing on TAO-205 program for CRS and CBO, April 12, 2019.)

<sup>11</sup> For more on MYP and block buy contracts, see CRS Report R41909, *Multiyear Procurement (MYP) and Block Buy Contracting in Defense Acquisition: Background and Issues for Congress*, by Ronald O'Rourke.

to achieve an additional 1% - 2% savings on top of the block-buy [contract], but required a large upfront investment in the ships' acquisition [funding profile,] which was deemed none [sic: non or not] cost-effective within the broader Navy budget constraints. Any new savings gained from a multi-year procurement [contract] would need to be negotiated with the shipbuilder.<sup>12</sup>

## **Legislation Regarding U.S. Content Requirement for Certain Components**

Section 845 of the FY2021 NDAA (H.R. 6395/P.L. 116-283 of January 1, 2021) amended 10 U.S.C. 2534 (a statute subsequently renumbered as 10 U.S.C. 4864) to include U.S. content requirements for certain components of TAO-205 class ships.

## **FY2026 Funding Request**

The Navy's proposed FY2026 budget requests funding for the procurement of two more TAO-205s.

## **Issues for Congress**

### **FY2026 Funding Request**

One issue for Congress is whether to approve, reject, or modify the Navy's FY2026 funding request for the TAO-205 program. In considering this issue, a key question is how many TAO-205s to procure in FY2026.

### **Block Buy Contract vs. Multiyear Procurement (MYP) Contract**

Another issue for Congress is whether to convert the current block buy contract for procuring TAO-205s into a multiyear procurement (MYP) contract. As discussed earlier, the Navy estimates that this could reduce the collective cost of the TAO-205s being procured under the contract by 1% to 2%, but would alter the procurement funding profile for the ships by increasing the amount of procurement funding needed in the near term, so as to finance up-front batch orders—called Economic Order Quantity (EOQ) purchases—of selected components for the ships. As discussed earlier, converting the block buy contract into an MYP contract would require negotiating with the shipbuilder on the terms of the new MYP contract.

## **Issues Discussed in June 2025 GAO Report and January 2025 DOT&E Report**

### **June 2025 GAO Report**

A June 2025 GAO report—the 2025 edition of an annual GAO report assessing major DOD acquisition programs—stated the following about the TAO-205 program:

#### **Current Status**

Since our last assessment, the program delivered the third ship (T-AO 207). The next seven ships are all tracking to deliver to the rebaselined schedule that we previously reported.

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<sup>12</sup> Navy information paper on TAO 205 class block-buy vs. multiyear procurement savings, October 1, 2025, provided to CRS and CBO by Navy Office of Legislative Affairs, December 4, 2025.

In September 2024, the program awarded a contract for eight ships using specific authority granted by Congress. The Navy expects this contracting approach to save money over contracting for each ship individually. However, there is still an increased average cost per ship because, per program officials, the program is experiencing higher material pricing following the COVID-19 pandemic and is allowing for a fair profit for the shipbuilder and suppliers.

Some key events, such as Initial Operational Test and Evaluation, were delayed since our last report. Program officials stated that these delays are affected by the availability of other fleet ships to participate in testing. The program office stated that T-AO completed its final significant test event in December 2024, a 16-month delay from the previous estimate. The program expects this delay to push planned initial operational capability from February 2024 to March 2025 and the full-rate production decision from March 2024 to July 2026. However, program officials noted that they expect the lead ship to be available to support the fleet in 2025. This availability includes overseas deployment, even if initial operational capability is further delayed due to more testing delays.

Program officials noted that user feedback from the lead ship drove improvements, such as modification of the ship's water purification system to one that worked better.

#### **Program Office Comments**

We provided a draft of this assessment to the program office for comment and incorporated the program's technical comments as appropriate. The program stated that T-AO 208 was delivered in December 2024, 3 months before the Navy's planned delivery. It said that T-AO 209-214 delivery dates remain stable and that T-AO 206 successfully completed the final test demonstration with a carrier and destroyer in December 2024, putting the program on track to declare initial operational capability. The program noted that despite continued material cost growth above projected market indices, overall cost performance is stabilizing as the program moves into serial production.<sup>13</sup>

### **January 2025 DOT&E Report**

A January 2025 report from DOD's Director, Operational Test and Evaluation (DOT&E)—DOT&E's annual report for FY2024—stated the following about the TAO-205 program:

#### **TEST ADEQUACY**

The Navy evaluated cyber survivability of T-AO 205 in FY23. Testing to assess T-AO 205's cyber survivability posture and the crew's ability to conduct their mission in a cyber-contested environment was conducted in accordance with the DOT&E-approved test plan and observed by DOT&E. Between April 2024 and September 2024, OPTEVFOR [the Navy's Operational Test and Evaluation Force] conducted IOT&E [Initial Operational Test and Evaluation] aboard USNS Harvey Milk (TAO 206) in accordance with the DOT&E-approved test plan and with DOT&E observation. This testing continued IOT&E detailed in the FY23 Annual Report. The Navy expects to complete IOT&E in FY25. Testing could not demonstrate transfer to all ship classes within the IOT&E test design due to their unavailability during test execution, as well as limited T-AO 206 crew manning that could not support one test. Some remaining test events may move to FOT&E [Follow-on Operational Test And Evaluation] after sufficient data are available to determine overall operational effectiveness and suitability.

In September 2024, the Navy provided a verification and validation report for the modeling and simulation (M&S) tool used to predict the vulnerability of the ship to threat weapons. As part of the accreditation of the M&S used in assessing ship survivability, the Navy

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<sup>13</sup> Government Accountability Office, *Weapon Systems Annual Assessment[:]* *DOD Leaders Should Ensure That Newer Programs Are Structured for Speed and Innovation*, GAO-25-107569, June 2025, p. 153.

identified that modeling limitations prevent a representative prediction of damage from underwater weapons. The Navy plans to provide a Total Ship Survivability Trial (TSST) Report in FY25. TSST is a shipboard trial which simulated the damage from weapon events to evaluate the ability of the ship to implement effective damage control and maintain mission capability. TSST was conducted aboard USNS John Lewis in July of 2023. The Navy plans to issue the Final Survivability Assessment Report (FSAR) for T-AO 205 in FY25. The FSAR is a compilation report that details the findings from all T-AO 205 LFT&E [Live Fire Test and Evaluation] tests and analysis over the course of the program, including TSST and predictions from M&S. As identified above, the M&S tool could not be fully accredited for its use in LFT&E analysis.

## **PERFORMANCE**

### **EFFECTIVENESS AND SUITABILITY**

Insufficient data are available to determine operational effectiveness and suitability of the TAO-205-class. T-AO 205-class has successfully demonstrated the capability to deliver fuel and cargo, including vertical replenishment with multiple aircraft types, to a subset of Navy ship classes within the IOT&E test design. Ship manning has not yet been sufficient to evaluate the most stressing operations for the T-AO 205-class. DOT&E will report operational effectiveness and suitability after completion of IOT&E that the Navy expects to occur in FY25.

### **SURVIVABILITY**

Analysis of platform survivability is ongoing. The M&S limitations are expected to constrain determination of ship survivability against underwater weapons. However, the findings of the FSAR and associated testing are expected to still support determination of LFT&E critical issues for the T-AO 205-class, including recommendations for potential design improvements for ship survivability against threat weapons. DOT&E will report platform and cyber survivability within a classified IOT&E report after completion of IOT&E that the Navy expects to occur in FY25.

## **RECOMMENDATION**

The Navy should:

1. Complete the remaining IOT&E as soon as feasible in FY25.<sup>14</sup>

## **TAO-205 Ship Self-Defense Equipment**

Another issue for Congress is whether to encourage or direct the Navy to build TAO-205s with more ship self-defense equipment than currently planned by the Navy. The issue relates to how changes in the international security environment might affect how the Navy operates and equips its underway replenishment ships. For additional background information on this issue, see **Appendix A**.

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<sup>14</sup> Director, Operational Test & Evaluation, *FY 2024 Annual Report*, January 2025, pp. 277-278.



## Appendix A. TAO-205 Ship Self-Defense Equipment

This appendix provides additional background information on the issue of whether to encourage or direct the Navy to build TAO-205s with more ship self-defense equipment than currently planned by the Navy.

During the Cold War, the Navy procured underway replenishment ships to support a two-stage approach to underway replenishment in which single-product “shuttle” ships (such as oilers, ammunition ships, and dry stores ships) would take their supplies from secure ports to relatively safe mid-ocean areas, where they would then transfer them to multiproduct “station” ships called TAOEs and AORs. The TAOEs and AORs would then travel to Navy carrier strike groups operating in higher-threat areas and transfer their combined supplies to the carrier strike group ships. As a result, single-product shuttle ships were equipped with lesser amounts of ship self-defense equipment, and TAOEs and AORs were equipped with greater amounts of such equipment.

When the Cold War ended and transitioned to the post-Cold War era, threats to U.S. Navy ships operating at sea were substantially reduced. As a consequence, the amount of ship self-defense equipment on the TAOEs and AORs was reduced, and a single-stage approach to underway replenishment, in which oilers and dry stores ships took supplies from secure ports all the way to carrier strike group ships, was sometimes used.

Now that the post-Cold War era has transitioned to a new strategic environment featuring renewed great power competition with countries like China and Russia,<sup>15</sup> and a consequent renewal of potential threats to U.S. Navy ships operating at sea, the question is whether TAO-205s should be equipped with lesser amounts of ship self-defense equipment, like oilers were during both the Cold War and post-Cold War eras, or with greater amounts of ship self-defense equipment, like TAOEs and AORs were during the Cold War. Building TAO-205s with more ship self-defense equipment than currently planned by the Navy could increase TAO-205 procurement costs by tens of millions of dollars per ship, depending on the amount of additional ship self-defense equipment.

Section 1026 of the FY2016 National Defense Authorization Act (S. 1356/P.L. 114-92 of November 25, 2015) required an independent assessment of the Navy’s combat logistics force ships. The report was delivered to Congress in February 2016. A copy of the report was posted by the media outlet Politico on March 11, 2016. The report states the following:

The T-AO(X) will only have a limited capability to defeat a submarine launched torpedo attack and no capability to defeat a missile attack. When delivered, the TAO(X) will have:

—[the] NIXIE Torpedo Countermeasure System [for decoying certain types of torpedoes]

—[the] Advanced Degaussing System (Anti-Mine) [for reducing the ship’s magnetic signature, so as to reduce the likelihood of attack by magnetically fused mines]

When required, the T-AO(X) will also have ability to embark Navy Expeditionary Combat Command Expeditionary Security Teams (EST). The ESTs will embark with several crew served weapons and are designed to provide limited self-defense against a small boat attack.

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<sup>15</sup> For more on this transition, see CRS Report R43838, *Great Power Competition: Implications for Defense—Issues for Congress*, by Ronald O'Rourke.

The T-AO(X) will have Space, Weight, Power and Cooling (SWAP-C) margins for future installations of the following systems:

—[the] Close In Weapon System (CIWS) or SeaRAM (Rolling Airframe Missile) [for defense against missile attack]

—[the] Anti-Torpedo Torpedo Defense System (ATTDS) [for destroying torpedoes]

Even after the installation of a CIWS or ATTDS, if the T-AO(X) was to operate in anything other than a benign environment, the ship will require both air and surface escorts.

The decision to rely on [other] Fleet assets to provide force protection [i.e., defense against attacks] for the T-AO(X) was validated by the JROC [in June 2015].<sup>16</sup>

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<sup>16</sup> Department of the Navy, *Report to Congress on Requirements for the Fleet Replenishment Oiler, T-AO(X)*, February 2016 (with cover letter dated February 12, 2016), p. 8. The report was posted by Politico on March 11, 2016, at <http://static.politico.com/1e/e0/f26a9fb1471aacd5358c420fcf10/navy-oiler-report.pdf>, and accessed by CRS on March 15, 2016.