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Department of Defense
OFFICE OF PREPUBLICATION AND SECURITY REVIEW

Selected Acquisition Report (SAR)



T-AO 205 John Lewis Class Fleet Replenishment Oiler (T-AO 205 Class)

FY 2024 President's Budget

**Defense Acquisition Visibility Environment
(DAVE)**

Table of Contents

Acronyms and Abbreviations 3

Program Information 5

Responsible Office 5

Mission and Description 6

Executive Summary 7

Schedule 8

Performance 10

Acquisition Budget Estimate 14

Unit Cost 16

Risks 18

Low Rate Initial Production 19

Contracts 20

Deliveries and Expenditures 37

Operating and Support Costs 38

Common Acronyms and Abbreviations

\$B - Billions of Dollars
\$K - Thousands of Dollars
\$M - Millions of Dollars
ACAT - Acquisition Category
Acq O&M - Acquisition-Related Operations and Maintenance
ADM - Acquisition Decision Memorandum
APB - Acquisition Program Baseline
APPN - Appropriation
APUC - Average Procurement Unit Cost
BA - Budget Authority/Budget Activity
Blk - Block
BY - Base Year
CAPE - Cost Assessment and Program Evaluation
CARD - Cost Analysis Requirements Description
CDD - Capability Development Document
CLIN - Contract Line Item Number
CPD - Capability Production Document
CY - Calendar Year
DAB - Defense Acquisition Board
DAE - Defense Acquisition Executive
DAMIR - Defense Acquisition Management Information Retrieval
DoD - Department of Defense
DSN - Defense Switched Network
EMD - Engineering and Manufacturing Development
EVM - Earned Value Management
FMS - Foreign Military Sales
FOC - Full Operational Capability
FRP - Full Rate Production
FY - Fiscal Year
FYDP - Future Years Defense Program
ICE - Independent Cost Estimate
Inc - Increment
IOC - Initial Operational Capability
JROC - Joint Requirements Oversight Council
KPP - Key Performance Parameter
LRIP - Low Rate Initial Production
MDA - Milestone Decision Authority
MDAP - Major Defense Acquisition Program
MILCON - Military Construction
N/A - Not Applicable
O&M - Operations and Maintenance
O&S - Operating and Support
ORD - Operational Requirements Document
OSD - Office of the Secretary of Defense
PAUC - Program Acquisition Unit Cost
PB - President's Budget

- PE - Program Element
- PEO - Program Executive Officer
- PM - Program Manager
- POE - Program Office Estimate
- RDT&E - Research, Development, Test, and Evaluation
- SAR - Selected Acquisition Report
- SCP - Service Cost Position
- TBD - To Be Determined
- TY - Then Year
- U.S. - United States
- UCR - Unit Cost Reporting
- USD(A&S) - Under Secretary of Defense (Acquisition and Sustainment)
- USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)

Program Information

Program Name

T-AO 205 John Lewis Class Fleet Replenishment Oiler

DoD Component

Navy

Responsible Office

Program Manager

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Mission and Description

The JOHN LEWIS (T-AO 205) Class Fleet Replenishment Oiler program will recapitalize the T-AO 187 Class for a total of 20 ships. The United States requires military forces that can operate for long periods of time around the globe. The Navy can provide sustained military presence and operations far from the Continental United States (CONUS) with little or no reliance on host governments for basing and logistics in the immediate vicinity of operations. Such operations rely primarily on the ships of the Navy's Combat Logistics Force (CLF) for the resupply of fuel, food, ammunition, repair parts, and other consumables during underway (at-sea) replenishment events. A critical supply item provided by the CLF, in both peace and war, is fuel to power the ships and aircraft of the Fleet. All of the Navy's CLF ships can provide fuel to Navy ships. However, the CLF's 15 T-AO 187 Class, because of their capacity and their numbers, are the backbone of the fuel delivery system. The existing CLF consists of 29 ships: two Fast Combat Support Ships (T-AOE 6 Class) built primarily to service aircraft carriers and their accompanying surface combatants; 12 Dry Cargo/Ammunition Ships (T-AKE 1 Class) built to replace the Navy's single product ammunition ships and dry cargo ships; and 15 T-AO 187 Class ships. The T-AO 187s represent about half of the number of CLF ships, but account for 75 percent of the CLF's at-sea refueling capacity.

Executive Summary

T-AO 205 Class

Program Highlights Since Last Report

The Lead Hull (T-AO 205) was delivered on July, 26 2022, and Operational Test and Evaluation will begin in April 2023. The second ship, T-AO 206, was launched in November 2021 and is now 99.61% complete. Builders Sea Trials completed in February 2023 and Acceptance Trials are planned for April 2023, for an anticipated May 2023 delivery. Launch of the third ship, T-AO 207, was October 28, 2022 and it was christened January 21, 2023. It is now 92.2% complete. Start of construction for the fourth ship, T-AO 208, was May 2021 and is 68.6% complete. Start of construction for the fifth ship, T-AO 209, was October 2022 and is 36% complete. Start of construction for the sixth ship, T-AO 210, is expected to commence in March 2023. On June 28, 2022, the Navy awarded a contract modification to General Dynamics, National Steel and Shipbuilding Company (NASSCO) for Long Lead time Material procurement for the seventh and eighth ships, T-AO 211 and T-AO 212. On August 4, 2022, the Navy awarded a contract modification to General Dynamics, NASSCO, for the Detailed Design and Construction (DD&C) of T-AO 211 & 212, with an option for the ninth ship, T-AO 213. The FY 2023 Consolidated Appropriations Act funded one ship in FY 2023, and PB 2024 requests one ship in FY 2024, no ships in FY 2025 and two ships in FY 2026. FY 2023 and PB 2024 include Cost to Complete (CTC) for T-AO 206 through 210 to fund the government responsible portion of the shipbuilding contract overrun, Economic Price Adjustment (EPA) bills and increases for Government Furnished Equipment (GFE) due to obsolescence and non-recurring engineering. Delivery dates have been updated to reflect an Over Target Schedule (OTS) negotiated with the shipbuilder. Requirements for Modular Open System Architecture (MOSA) were developed after T-AO Milestone B decision.

There are no significant software-related issues with this program.

History of Significant Developments Since Program Initiation

History of Significant Developments Since Program Initiation	
Date	Significant Development Description
Jan 2023	T-AO 207 was christened on January 21, 2023.
Oct 2022	Start of Integrated and Operational Post Delivery Test and Trials for T-AO 205 commenced on October 6, 2022. Start of construction for T-AO 209 commenced October 21, 2022. T-AO 207 launch occurred on October 28, 2022.
Aug 2022	FY 2022 Full Funding for the seventh and eighth ships, T-AO 211 and T-AO 212, was awarded on August 4, 2022.
Jul 2022	T-AO 205 delivered to the Navy on July 26, 2022.
Jun 2022	FY 2022 Long Lead Time Material Funding for the seventh and eighth ships, T-AO 211 and T-AO 212, was awarded on June 28, 2022.
Nov 2021	T-AO 206 launch occurred on November 6, 2021.
Oct 2021	GD NASSCO submitted cost proposal for the Detailed Design and Construction (DD&C) of T-AO 211 & T-AO 212.
May 2021	Start of construction for T-AO 208 commenced May 21, 2021
Jan 2021	T-AO 205 launch occurred on January 12, 2021.
Dec 2020	Start of construction for T-AO 207 commenced December 8, 2020.
Mar 2020	FY2020 Full Funding for the fifth ship, T-AO 209 and for the sixth ship, T-AO 210 was awarded on March 12, 2020. COVID-19 impacts began in March 2020, resulting in approximately 15% average reduction of workforce on-site and delays in ship construction.
Feb 2020	Keel laying for T-AO 206 was held on February 20, 2020.
Dec 2019	Start of construction for T-AO 206 commenced December 9, 2019
Dec 2018	FY 2019 Full Funding for the third and fourth ships, T-AO 207 and T-AO 208, and FY 2019 AP for the fifth ship, T-AO 209, was awarded on December 27, 2018.

Sep 2018	Start of construction for T-AO 205 commenced September 19, 2018
May 2018	Per a Navy (Research, Development, and Acquisition) ASN (RD&A) ADM dated May 16, 2018, add two ships to existing contract and increase the LRIP quantity from 6 to 8 ships.
Mar 2018	FY 2018 Full Funding for the second ship, T-AO 206 awarded on March 28, 2018.
Dec 2017	FY 2018 AP for the third ship, T-AO 207 was awarded on December 5, 2017.
Sep 2017	The T-AO 205 Class combined Milestone B/C approval ADM was signed by ASN (RDA) on September 22, 2017.
Jun 2017	FY 2017 Advance Procurement (AP) for the second ship, T-AO 206 awarded on June 5, 2017.
Jun 2016	The Navy awarded a competitive, block buy contract for six ships to General Dynamics, National Steel and Shipbuilding Company (GD NASSCO) on June 30, 2016. The Lead Ship, T-AO 205 was awarded on June 30, 2016.
Sep 2015	Per a USD(AT&L) Memorandum dated September 11, 2015, the MDA for the T-AO 205 program will be the Assistant Secretary of the Navy (Research, Development, and Acquisition) ASN (RD&A).
Jul 2015	Per a USD(AT&L) Memorandum dated June 18, 2015, the Navy received approval to release the Request for Proposals and pursue a combined Milestone B/C.
Jun 2015	The CDD was approved and validated by the Chief of Naval Operations and Joint Requirements Oversight Council (JROC) on June 16, 2015
Apr 2013	An Acquisition Decision Memorandum was signed by USD (AT&L) on April 5, 2013, which approved T-AO 205 Program entry at Milestone B.
Oct 2012	On October 10, 2012, the Navy Gate 3 Review approved the T-AO 205 Class threshold capabilities.
May 2012	At the Navy Gate 2 Review, held May 2, 2012, the Navy approved development of a Capability Development Document (CDD) and recommended a class of 17 ships based on a new design T-AO 205 Class with capabilities similar to the T-AO 187 Class.

Schedule

T-A O 205 Class

Events	Milestone Baseline Objective	Current Baseline Objective/Threshold		Current Estimate/Actual	Deviation
Detail Design and Construction (DD&C) Award Complete	Jun 2016	Jun 2016	Dec 2016	Jun 2016	
Milestone B	Sep 2017	Sep 2017	Mar 2018	Sep 2017	
Milestone C	Sep 2017	Sep 2017	Mar 2018	Sep 2017	
Delivery - Hull 16-01 Complete	Nov 2020	Jun 2021	Dec 2021	Jul 2022	Yes
IOT&E Complete - Hull 16-01 Complete	May 2021	Jun 2022	Dec 2022	Aug 2023	Yes
IOC - Hull 16-01 Complete	Jul 2021	Aug 2022	Feb 2023	Feb 2024	Yes
FOC Complete	Jan 2036	Jan 2040	Jul 2040	Jan 2040	

Notes

Acronyms:

FOC – Full Operational Capability

IOT&E – Initial Operational Test and Evaluation

The Lead Hull, T-AO 205, was delivered July 26, 2022 and Obligation Work Limiting Date (OWLD) is September 2023. The Estimate for IOT&E is based on the current Post Delivery Test and Trials schedule. Integrated and Operational Testing began in February 2023. The program is on track to complete its test program in August 2023 to be followed by a Post Shakedown Availability (PSA) in September 2023. The program will reach IOC at the completion of PSA in January 2024.

Planned delivery and OWLD for T-AO 206-212:

T-AO 206: Delivery: May 2023; OWLD: July 2024

T-AO 207: Delivery: December 2023; OWLD: February 2025

T-AO 208: Delivery: March 2025; OWLD: May 2026

T-AO 209: Delivery: November 2025 OWLD: January 2027

T-AO 210: Delivery: June 2026; OWLD: August 2027

T-AO 211: Delivery: March 2027; OWLD: May 2028

T-AO 212: Delivery: October 2027; OWLD: December 2028

Deviation Explanation

1. Delivery: In November 2021, a Program Deviation Memorandum was submitted to document the Lead Hull schedule breach, thus impacting IOT&E and IOC. The delay is due to the following impacts: 1) the July 2018 Graving Dock incident required reschedule of yard-wide production efforts, 2) late delivery of subcontractor outfitting, main engines, and other components, 3) first of class complexity issues, and 4) COVID-19 pandemic related impacts to workforce availability and productivity as well as vendor delivery schedules.
2. IOT&E Completion: See deviation explanation No. 1.
3. IOC: See deviation explanation No. 1.

Performance

T-AO 205 Class

Performance Characteristics					
Milestone Baseline	Current Baseline Objective/Threshold		Demonstrated Performance	Current Estimate/Actual	Deviation
(KPP) - Energy					
	Unrefueled range of 6,000 Nautical Miles at 20 knots while consuming no more than 14,000 barrels of fuel	(T=O) Unrefueled range of 6,000 Nautical Miles at 20 knots while consuming no more than 14,000 barrels of fuel	Endurance and Fuel Consumption Calculations DI-095-05, 571-342-7143.01 Rev B22 July 2022	Unrefueled range of 6,000 Nautical Miles at 20 knots while consuming no more than 14,000 barrels of fuel	
(KPP) - Force Protection					
	Protect Personnel: Permanent crew-served weapon mounts and ready service lockers for use by on-watch EST Secure stowage for weapons and ammunitions when ship's force security teams and ESTs are not on watch PPE as routinely provided to MSC crews to include Force Protection and CBR PPE for a minimum of 125 personnel	(T=O) Protect Personnel: Permanent crew-served weapon mounts and ready service lockers for use by on-watch EST Secure stowage for weapons and ammunitions when ship's force security teams and ESTs are not on watch PPE as routinely provided to MSC crews to include Force Protection and CBR PPE for a minimum of 125 personnel	General Arrangement DI-089, 571-341-7008 Rev P22 July 2022	Protect Personnel: Permanent crew-served Weapon mounts and ready service lockers for use by on-watch EST Secure stowage for weapons and ammunitions when ship's force security teams and ESTs are not on watch PPE as routinely provided to MSC crews to include Force Protection and CBR PPE for a minimum of 125 personnel	
(KPP) - Fueling at Sea					
	Cargo Fuel Capacity: 156,000 barrels	(T=O) Cargo Fuel Capacity: 156,000 barrels	T&S Booklet DI-093.1, 571-341-7012 Rev E22 July 2022	Cargo Fuel Capacity: 162,164 barrels	
(KPP) - Net-Ready					

	<p>Perform Logistics and Combat Services: 0.999 Supply Operational Forces: 0.999 Synchronize Supply of Fuel in Joint Operations Area: 0.999 Transmit/Receive Bandwidth between ship and external network: Unclassified (NIPR), Classified (SIPR), and Coalition Network 3.36 Mbps Situational Information; Movement Procedures: Moderate (1-10 sec.) Distribution Data; Transport Data; Coordination Data; Delivery Information: Moderate (1-10 sec.)</p>	<p>Perform Logistics and Combat Services: 0.99 Supply Operational Forces: 0.99 Synchronize Supply of Fuel in Joint Operations Area: 0.99 Transmit/Receive Bandwidth between ship and external network: Unclassified (NIPR), Classified (SIPR), and Coalition Network 0.889 Mbps Situational Information; Movement Procedures: Slow (10 sec. to 10 min.) Distribution Data; Transport Data; Coordination Data; Delivery Information: Up to 60 min. (10 min. to 60 min.)</p>	<p>Report due July 2023</p>	<p>Perform Logistics and Combat Services: 0.999 Supply Operational Forces: 0.999 Synchronize Supply of Fuel in Joint Operations Area: 0.999 Transmit/Receive Bandwidth between ship and external network: Unclassified (NIPR), Classified (SIPR), and Coalition Network 3.36 Mbps Situational Information; Movement Procedures: Moderate (1-10 sec.) Distribution Data; Transport Data; Coordination Data; Delivery Information: Moderate (1-10 sec.)</p>	
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(KPP) - Space, Weight, Power, and Cooling (SWaP-C)

	<p>Specific SWaP-C margins for future (non-contiguous) installations of self-defense systems to include: -CIWS or SeaRAM -ATTDS - ADC Weight: 68,000 lbs. Space: 500 sq. ft. - above deck space 500 sq. ft. - below deck space Power: 100kW Cooling: 40kW</p>	<p>(T=O) Specific SWaP-C margins for future (non-contiguous) installations of self-defense systems to include: -CIWS or SeaRAM - ATTDS -ADC Weight: 68,000 lbs. Space: 500 sq. ft. - above deck space 500 sq. ft. - below deck space Power: 100kW Cooling: 40kW</p>	<p>General Arrangement DI-089, 571-341-7008 Rev PQWR22 July 2022</p>	<p>Specific SWaP-C margins for future (non-contiguous) installations of self-defense systems to include: -CIWS or SeaRAM - ATTDS - ADC Weight: 68,000 lbs. Space: 500 sq. ft. - above deck space 500 sq. ft. - below deck space Power: 100kW Cooling: 40kW</p>	
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(KPP) - Survivability

	<p>Vulnerability: Built to commercial standards and meet OPNAVINST 9070.1. The ship will comply with ABS SVR Classification and USCG certification. Vessel will be double-hulled.</p>	<p>(T=O) Vulnerability: Built to commercial standards and meet OPNAVINST 9070.1. The ship will comply with ABS SVR Classification and USCG certification. Vessel will be double-hulled.</p>	<p>ABS and USCG issued Regulatory Body Certificates at delivery of the ship in July of 2022 including ABS Class and Certificate of Inspection General ArrangementDI-089, 571-341-7008 Rev P22 July 2022</p>	<p>Vulnerability: Built to commercial standards and meet OPNAVINST 9070.1. The ship will comply with ABS SVR Classification and USCG certification. Vessel will be double-hulled</p>	
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(KPP) - Sustainment

	<p>Materiel Availability: 0.74 (Note: Equivalent to 270 Days RFT per year) Operational Availability: 0.95 (Note: Operational AOCF resulting in C4 CASREPs</p>	<p>(T=O) Materiel Availability: 0.74 (Note: Equivalent to 270 Days RFT per year) Operational Availability: 0.95 (Note: Operational AOCF resulting in C4 CASREPs</p>	<p>Reliability, Availability, and Maintainability Assessment ReportDI -48-03, 571-631-8041 Rev H22 July 2022</p>	<p>Materiel Availability: 0.74 (Note: Equivalent to 270 Days RFT per year) Operational Availability: 0.95 (Note: Operational AOCF resulting in C4 CASREPS</p>	
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(KPP) - Training

	<p>Crew familiarization training on ship-specific systems and equipment to be provided by Contractor MSC will provide training based on CIVMAR) Competency Matrices. Training will occur at MSC-sponsored facilities and at other facilities to include Navy training sites, other Government agencies, maritime schools, and other commercial vendors.</p>	<p>(T=O) Crew familiarization training on ship-specific systems and equipment to be provided by Contractor MSC will provide training based on CIVMAR) Competency Matrices. Training will occur at MSC-sponsored facilities and at other facilities to include Navy training sites, other Government agencies, maritime schools, and other commercial vendors.</p>	<p>Crew familiarization of ship specific systems and equipment completed by NASSCO prior to delivery on 22 July 2022. MSC crew arrived at ship with all training requirements completed.</p>	<p>Crew familiarization training on ship-specific systems and equipment to be provided by Contractor MSC will provide training based on CIVMAR) Competency Matrices. Training will occur at MSC-sponsored facilities and at other facilities to include Navy training sites, other Government agencies, maritime schools, and other commercial vendors.</p>
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Requirement Reference

JROC reviewed and validated the CDD for the Fleet Replenishment Oiler on June 16, 2015. CNO approved updated CDD on February 14, 2017.

Deviation Explanation

No deviations for this program/subprogram

Notes

Acronyms/Abbreviations

ABS SVR - American Bureau of Shipping Steel Vessel Rules

AOCF - Operational Availability based on Critical Failures

ATTDS-ADC - Anti-Torpedo Torpedo Defense System - Acoustic Device Countermeasures

C4 CASREPs - Category 4 Casualty Reports

See comment above at the Sustainment KPP

CBR - Chemical, Biological and Radiological

CIVMAR - Civil Service Mariner

CIWS - Close-in Weapon System

EST - Expeditionary Security Team

kW – kilowatt

lbs. – pounds

Mbps - Megabits per second

MSC - Military Sealift Command

NIPR - Non-Classified Internet Protocol Router

O –Objective

OPNAVINST - Office of the Chief of Naval Operations Instruction

PPE - Personal Protective Equipment

RFT - Ready for Tasking

sec. - second(s)

SIPR - Secret Internet Protocol Router

sq. ft. - square feet

SWaP-C - Space, Weight, Power and Cooling

T - Threshold

Acquisition Budget Estimate

T-AO 205 Class

Total Acquisition Cost

		Milestone APB	Current Baseline		Budget Estimate PB 2024		
Category	Base Year	Objective (BY\$M)	Objective (BY\$M)	Threshold (BY\$M)	BY\$M	TY\$M	Deviation
RDT&E	2016	67.6	67.6	74.4	65.3	65.6	
Procurement	2016	8,475.9	11,290.2	12,419.2	11,604.2	16,109.1	
MILCON	2016	0	0	0	0	0	
Acq. O&M	2016	0	0	0	0	0	
Total		8,543.5	11,357.8		11,669.5	16,174.7	
PAUC	2016	502.559	567.890	624.679	583.475	808.735	
APUC	2016	498.582	564.510	620.961	580.210	805.455	

Appropriation Category Deviation Explanations

PAUC Deviation Explanation

APUC Deviation Explanation

Budget Notes

Total End Item Quantity

Quantity Category	Current APB Quantity	Current Estimate Quantity
Development	0	
Procurement	20	20
O&M-Acquired		

Quantity Notes

Unit Cost**T-AO 205 Class****Current UCR Baseline and Current Estimate (Base-Year Dollars)**

Category (\$M) Base Year:2016	Current UCR Baseline	Current Estimate	% Change
Program Acquisition Unit Cost			
Cost	11,357.8	11,669.5	
Quantity	20	20	
Unit Cost	567.890	583.475	2.74%
Average Procurement Unit Cost			
Cost	11,290.2	11,604.2	
Quantity	20	20	
Unit Cost	564.510	580.210	2.78%

Original UCR Baseline and Current Estimate (Base-Year Dollars)

Category (\$M) Base Year:2016	Original UCR Baseline	Current Estimate	% Change
Program Acquisition Unit Cost			
Cost	8,543.5	11,669.5	
Quantity	17	20	
Unit Cost	502.559	583.475	16.10%
Average Procurement Unit Cost			
Cost	8,475.9	11,604.2	
Quantity	17	20	
Unit Cost	498.582	580.210	16.37%

Cost Growth Details**Current Baseline PAUC Breach Explanation****Current Baseline APUC Breach Explanation****Original Baseline PAUC Breach Explanation****Original Baseline APUC Breach Explanation****Impacts of Schedule Changes on Unit Cost**

Any change that extends or expands the schedule will incur additional overhead which will increase unit cost. Impacts of performance changes on unit cost: Performance changes are a tool for the Program Manager to use to control cost. However, any performance changes must be adjudicated by the resource sponsor.

Impacts of Performance Changes on Unit Cost**Actions Taken or Proposed to Control Future Cost Growth**

The FY 2021 Consolidated Appropriations Act and the FY 2022 Omnibus Appropriations Act included +\$20M (SCN) affordability initiatives. The Program Office established the joint Cost Reduction Working Group (CRWG) to identify non-spec cost avoidance up to \$20M per ship by T-AO 208 and follow. CRWG continues to identify new cost avoidance opportunities. The Navy requested a priced proposal from GD NASSCO to obtain savings associated with authorities in FY 2023 NDAA authorizing the Navy to enter into one or more contracts for the procurement of not more than eight John Lewis Class which will result in significant savings compared to the total anticipated costs of carrying out the program through annual contracts.

Risk and Sensitivity Analysis**T-AO 205 Class**

Risk and Sensitivity Analysis
Current Procurement Cost(December - 2022)
If commodity markets continue to be inflated, then additional Cost to Complete will be required as a result of the Economic Price Adjustment clause. Mitigation: Conduct quarterly reviews with NASSCO on timing of material buys
Original Baseline Estimate (September - 2017)
Target overhead cost assumed future commercial work, lack of future commercial work may result in an increase in cost..
Current Baseline Estimate (February - 2020)
Current baseline estimate reflects schedule delays, procurement profile changes, revised labor rates and overhead assumptions, material based on fact finding and actuals, and impact of the NASSCO Graving Dock failure on yard-wide production schedules.

Schedule Risk		
Current	2022-12-16	If NASSCO performance issues continue, then there will be yard wide risks to NASSCO's ability to meet schedule. Delays across the shipyard will have a cascading impact to T-AO schedules Driver: COVID-19 impact affecting U.S. job marketplace. Mitigation: Joint (NASSCO, T-AO/ESB) schedule working group to monitor yard wide schedule risks and evaluate if current plan is executable.
Technical Risks		
Current	2022-12-16	If the Degaussing system does not meet required capabilities, then additional design spiral and schedule/cost delays will be required to fix the system; Mitigation: Range testing planned for 3Q FY 2023 to confirm performance.

Low Rate Initial Production**T-AO 205 Class**

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	09/22/2017	06/21/2022
Approved Quantity	6	12
Reference	MS B/ADM	Assistant Secretary of the Navy (Research, Development, and Acquisition), ASN (RD&A) ADM
Start Year	2016	2016
End Year	2022	2023

Rationale if quantity exceeds 10% of the total number of articles to be procured:

The Current Total LRIP Quantity is more than 10% of the total production quantity due to the initial award of a block buy contract with National Steel and Shipbuilding Company (NASSCO) for six ships. In light of the addition of a second ship in FY 2022 and FY 2024, and the revised schedule for the lead ship's operational testing due to COVID, supplier and workforce impacts, the LRIP quantity was increased by the Milestone Decision Authority.

Notes

LRIP quantity increased per the Assistant Secretary of the Navy (Research, Development, and Acquisition) Acquisition Decision Memorandum dated June 21, 2022.

Contracts & Efforts

Contract Data	
Contract Number	N00024-16-C-2229/1
Effort Number	
Modification Number	
Award Date	06/30/2016
Definitization Date	06/30/2016
Order Number	
CAGE Code/CAGE Legal Name	/General Dynamics, National Steel and Shipbuilding Company (GD NASSCO)
Contract Title	Detail Design & Construction of T-AO 205
Contract Address	San Diego, CA
Contracting Office	
Supported Phase	Production
Contract Strategy	
Contract Type	Fixed-Price Incentive (Firm Target)
Modification Date	
Work Start Date	
Technical Data Rights	
Work Completed	

Contracts/Effort Price, Quantity, and Performance (TY\$M)		
Initial Target Price	Current Target Price	
\$640.2	\$642.8	
Initial Ceiling Price	Current Ceiling Price	
\$713.2	\$715.8	
Contractor EAC	PM EAC	
Initial Quantity	Current Quantity	Delivered Quantity
1	1	1
BAC	BCWP	ACWP

BCWS	Cost Variance	Schedule Variance

Contract Notes:

In accordance with Section 830(a)(2) of the FY 2020 National Defense Authorization Act (NDAA), which requires a SAR to be submitted in an unclassified form without any designation relating to dissemination control this SAR section has omitted information that is Controlled Unclassified Information (CUI).

Factors Contributing to Cost Variance and Projected Effects on Program Costs

Factors Contributing to Schedule Variance and Projected Effects on Program Schedule

Contract Data	
Contract Number	N00024-16-C-2229/2
Effort Number	
Modification Number	
Award Date	06/05/2017
Definitization Date	06/05/2017
Order Number	
CAGE Code/CAGE Legal Name	/General Dynamics, National Steel and Shipbuilding Company (GD NASSCO)
Contract Title	Detail Design & Construction of T-AO 206
Contract Address	San Diego, CA
Contracting Office	
Supported Phase	Production
Contract Strategy	
Contract Type	Fixed-Price Incentive (Firm Target)
Modification Date	
Work Start Date	
Technical Data Rights	
Work Completed	

Contracts/Effort Price, Quantity, and Performance (TY\$M)		
Initial Target Price	Current Target Price	
\$480.4	\$480.5	
Initial Ceiling Price	Current Ceiling Price	
\$535.1	\$535.2	
Contractor EAC	PM EAC	
Initial Quantity	Current Quantity	Delivered Quantity
1	1	0
BAC	BCWP	ACWP
BCWS	Cost Variance	Schedule Variance

Contract Notes:

Award of advanced procurement is listed. Full funding was awarded March 28, 2018. In accordance with Section 830(a)(2) of the FY 2020 NDAA, which requires a SAR to be submitted in unclassified form without any designation relating to dissemination control this SAR section has omitted information that is CUI.

Factors Contributing to Cost Variance and Projected Effects on Program Costs**Factors Contributing to Schedule Variance and Projected Effects on Program Schedule**

Contract Data	
Contract Number	N00024-16-C-2229/3
Effort Number	
Modification Number	
Award Date	12/05/2017
Definitization Date	12/05/2017
Order Number	
CAGE Code/CAGE Legal Name	/General Dynamics, National Steel and Shipbuilding Company (GD NASSCO)
Contract Title	Detail Design & Construction of T-AO 207
Contract Address	San Diego, CA
Contracting Office	
Supported Phase	Production
Contract Strategy	
Contract Type	Fixed-Price Incentive (Firm Target)
Modification Date	
Work Start Date	
Technical Data Rights	
Work Completed	

Contracts/Effort Price, Quantity, and Performance (TY\$M)		
Initial Target Price	Current Target Price	
\$465.6	\$465.9	
Initial Ceiling Price	Current Ceiling Price	
\$518.6	\$518.8	
Contractor EAC	PM EAC	
Initial Quantity	Current Quantity	Delivered Quantity
1	1	0
BAC	BCWP	ACWP
BCWS	Cost Variance	Schedule Variance

Contract Notes:

Award of advanced procurement is listed. Full funding was awarded December 27, 2018. In accordance with Section 830(a)(2) of the FY 2020 NDAA, which requires a SAR to be submitted in unclassified form without any designation relating to dissemination control this SAR section has omitted information that is CUI.

Factors Contributing to Cost Variance and Projected Effects on Program Costs**Factors Contributing to Schedule Variance and Projected Effects on Program Schedule**

Contract Data	
Contract Number	N00024-16-C-2229/4
Effort Number	
Modification Number	
Award Date	12/27/2018
Definitization Date	12/27/2018
Order Number	
CAGE Code/CAGE Legal Name	/General Dynamics, National Steel and Shipbuilding Company (GD NASSCO)
Contract Title	Detail Design & Construction of T-AO 208
Contract Address	San Diego, CA
Contracting Office	
Supported Phase	Production
Contract Strategy	
Contract Type	Fixed-Price Incentive (Firm Target)
Modification Date	
Work Start Date	
Technical Data Rights	
Work Completed	

Contracts/Effort Price, Quantity, and Performance (TY\$M)		
Initial Target Price	Current Target Price	
\$463.1	\$463.1	
Initial Ceiling Price	Current Ceiling Price	
\$515.9	\$515.7	
Contractor EAC	PM EAC	
Initial Quantity	Current Quantity	Delivered Quantity
1	1	0
BAC	BCWP	ACWP
BCWS	Cost Variance	Schedule Variance

Contract Notes:

Full funding was awarded December 27, 2018. In accordance with Section 830(a)(2) of the FY 2020 NDAA, which requires a SAR to be submitted in unclassified form without any designation relating to dissemination control this SAR section has omitted information that is CUI.

Factors Contributing to Cost Variance and Projected Effects on Program Costs

Factors Contributing to Schedule Variance and Projected Effects on Program Schedule

Contract Data	
Contract Number	N00024-16-C-2229/5
Effort Number	
Modification Number	
Award Date	12/27/2018
Definitization Date	12/27/2018
Order Number	
CAGE Code/CAGE Legal Name	/General Dynamics, National Steel and Shipbuilding Company (GD NASSCO)
Contract Title	Detail Design & Construction of T-AO 209
Contract Address	San Diego, CA
Contracting Office	
Supported Phase	Production
Contract Strategy	
Contract Type	Fixed-Price Incentive (Firm Target)
Modification Date	
Work Start Date	
Technical Data Rights	
Work Completed	

Contracts/Effort Price, Quantity, and Performance (TY\$M)		
Initial Target Price	Current Target Price	
\$472.5	\$472.1	
Initial Ceiling Price	Current Ceiling Price	
\$526.3	\$525.8	
Contractor EAC	PM EAC	
Initial Quantity	Current Quantity	Delivered Quantity
1	1	0
BAC	BCWP	ACWP
BCWS	Cost Variance	Schedule Variance

Contract Notes:

Award of advanced procurement is December 27, 2018. Full funding was awarded March 12, 2020. In accordance with Section 830(a)(2) of the FY 2020 NDAA, which requires a SAR to be submitted in unclassified form without any designation relating to dissemination control this SAR section has omitted information that is CUI.

Factors Contributing to Cost Variance and Projected Effects on Program Costs**Factors Contributing to Schedule Variance and Projected Effects on Program Schedule**

Contract Data	
Contract Number	N00024-16-C-2229/6
Effort Number	
Modification Number	
Award Date	03/12/2020
Definitization Date	03/12/2020
Order Number	
CAGE Code/CAGE Legal Name	/General Dynamics, National Steel and Shipbuilding Company (GD NASSCO)
Contract Title	Detail Design & Construction of T-AO 210
Contract Address	
Contracting Office	
Supported Phase	Production
Contract Strategy	
Contract Type	Fixed-Price Incentive (Firm Target)
Modification Date	
Work Start Date	
Technical Data Rights	
Work Completed	

Contracts/Effort Price, Quantity, and Performance (TY\$M)		
Initial Target Price	Current Target Price	
\$479.4	\$485	
Initial Ceiling Price	Current Ceiling Price	
\$534.1	\$540.1	
Contractor EAC	PM EAC	
Initial Quantity	Current Quantity	Delivered Quantity
1	1	0
BAC	BCWP	ACWP
BCWS	Cost Variance	Schedule Variance

Contract Notes:

Full funding was awarded March 12, 2020. In accordance with Section 830(a)(2) of the FY 2020 NDAA, which requires a SAR to be submitted in unclassified form without any designation relating to dissemination control this SAR section has omitted information that is CUI.

Factors Contributing to Cost Variance and Projected Effects on Program Costs**Factors Contributing to Schedule Variance and Projected Effects on Program Schedule**

Contract Data	
Contract Number	N00024-16-C-2229
Effort Number	7
Modification Number	0
Award Date	06/28/2022
Definitization Date	06/28/2022
Order Number	
CAGE Code/CAGE Legal Name	81220/General Dynamics, National Steel and Shipbuilding Company (GD NASSCO)
Contract Title	Detail Design & Construction of T-AO 211
Contract Address	San Diego, CA
Contracting Office	
Supported Phase	Production
Contract Strategy	FAR 15 (Negotiated)
Contract Type	Fixed-Price Incentive (Firm Target)
Modification Date	
Work Start Date	
Technical Data Rights	None
Work Completed	

Contracts/Effort Price, Quantity, and Performance (TY\$M)		
Initial Target Price	Current Target Price	
\$680	\$680	
Initial Ceiling Price	Current Ceiling Price	
\$728.8	\$728.8	
Contractor EAC	PM EAC	
Initial Quantity	Current Quantity	Delivered Quantity
1	1	0
BAC	BCWP	ACWP
BCWS	Cost Variance	Schedule Variance

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Contract Notes:

Contract Notes:Funding for LLTM was awarded June 28, 2022 and full funding was awarded August 4, 2022.In accordance with Section 830(a)(2) of the FY 2020 NDAA, which requires a SAR to be submitted "in unclassified form without any designation relating to dissemination control" this SAR section has omitted information that is CUI.

Factors Contributing to Cost Variance and Projected Effects on Program Costs

Factors Contributing to Schedule Variance and Projected Effects on Program Schedule

Contract Data	
Contract Number	N00024-16-C-2229
Effort Number	8
Modification Number	
Award Date	06/28/2022
Definitization Date	06/28/2022
Order Number	
CAGE Code/CAGE Legal Name	/General Dynamics, National Steel and Shipbuilding Company (GD NASSCO)
Contract Title	Detail Design & Construction of T-AO 212
Contract Address	San Diego, CA
Contracting Office	
Supported Phase	Production
Contract Strategy	FAR 15 (Negotiated)
Contract Type	Fixed-Price Incentive (Firm Target)
Modification Date	
Work Start Date	
Technical Data Rights	
Work Completed	

Contracts/Effort Price, Quantity, and Performance (TY\$M)		
Initial Target Price	Current Target Price	
\$690	\$690	
Initial Ceiling Price	Current Ceiling Price	
\$739.5	\$739.5	
Contractor EAC	PM EAC	
Initial Quantity	Current Quantity	Delivered Quantity
1	1	0
BAC	BCWP	ACWP
BCWS	Cost Variance	Schedule Variance

Contract Notes:

Funding for LLTM was awarded June 28, 2022 and full funding was awarded August 4, 2022. In accordance with Section 830(a)(2) of the FY 2020 NDAA, which requires a SAR to be submitted "in unclassified form without any designation relating to dissemination control" this SAR section has omitted information that is CUI.

Factors Contributing to Cost Variance and Projected Effects on Program Costs

Factors Contributing to Schedule Variance and Projected Effects on Program Schedule

External Government Activities

Activity Title		Government Entity	Supported Phase
CAGE		Work Start Date	
City		State/Province:	
Notes			

Deliveries and Expenditures

T-AO 205 Class

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development				
Production	8	1	20	5.00%
Total Program Quantity Delivered	8	1	20	5.00%

Expended and Appropriated (TY \$M)				
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Years Appropriated to date: 13

Total Years Appropriated Funding (Current Baseline): 27

Percent Years Appropriated: 48.15%

Then-Year Funding Appropriated as Percentage of Total Acquisition Estimate: 34.00%

Then-Year Funding Expended as Percentage of Total Acquisition Estimate: 18.62%

Total Acquisition Cost: 16,174.7

Deliveries & Expenditures Notes:

The above data is current as of March 13, 2023. Lead ship, T-AO 205, delivered July 26, 2022.

Operating and Support Costs

T-AO 205 Class

O&S Cost Breakdown:

Category (BY\$ Million)	T-AO 205 Class
Unit-Level Manpower	8.6
Unit Operations	9.9
Maintenance	9.4
Sustaining Support	0.3
Continued System Improvements	0.4
Other	12.3
Total	40.9

Cost Estimate Source: POE dated January 16, 2020

O&S Cost Notes:

Disposal/Demilitarization Cost Estimate and Source of Estimate: POE signed January 16, 2020

Disposal/Demilitarization Total Cost (BY 2016 \$M): 74.4 Disposal costs account for the inactivation cost and the net disposal (scrap) cost. The T-AO 205 is not currently being considered as a remobilization asset; therefore no costs are set aside for that effort once the ship is decommissioned and taken out of service.

Sustainment Strategy: The Military Sealift Command (MSC) maintains the T-AO Fleet Replenishment Oilers utilizing established sustainment practices and maintenance philosophy which reflect the ship's commercial design and construction, utilization of commercial equipment and MSC's two-level maintenance philosophy consisting of shipboard and depot level maintenance. Sustainment efforts follow commercial merchant service practices that emphasize maximizing cost effectiveness and ship availability.

Operating Tempo was assumed 55% of In Fleet Time (IFT) steaming underway and 45% of IFT steaming not underway, the average of the Dry Cargo/Ammunition Ship (T-AKE) Visibility and Management of Operating and Support Costs (VAMOSOC) data and the T-AO 201-204 data.

Antecedent System(s) O&S Costs: The Antecedent Systems are the T-AO 187 Class (specifically hulls T-AO 201-204) and T-AKE 1 Class as these are the most recent double-hulled auxiliary ships. The T-AO 201-204 and T-AKE 1-14 estimates were derived using the VAMOSOC database and the MSC Indirect values. The years of data used for T-AO 201-204 was FY 1993 through FY 2015. The years of data used for T-AKE 1-14 was FY 2006 through FY 2015.

Total Program O&S Cost Compared with Baseline

	Current Baseline		Current Estimate (BY\$M)	Current Estimate (TY\$M)	Deviation
	Objective (BY\$M)	Threshold (BY\$M)			
Total O&S	32,671	35,938.1	0.0	72,352.0	

Note:

Please see unitized costs section for additional data relative to this SAR section.

O&S Cost Deviation Explanation

Operating and Support Costs - Disposal and Unitized Costs**T-AO 205 Class****Annual Unitized O&S Cost Definition and Calculation Relative to Total O&S Cost:**

Base Year Total O&S Cost \$32,671.2M = 20 ships x \$40.839M Average Annual Cost per ship x 40 year service life. Then Year Total O&S Cost \$72,352.0M = 20 ships x \$90.440M Average Annual Cost per ship x 40 year service life.

Sustainment Factors	System Name: T-AO 205	Antecedent System Name: T-AO 187
Quantity to Sustain	20	
Unit of Measure	Ship	
Unit Expected Service Life	40	

Base Year:

Annual Unitized O&S Cost by Category Base Year \$ Unit:(\$M)	System Name: T-AO 205	Antecedent System Name: T-AO 187
Unit-Level Manpower	8.8	9.0
Unit Operations	9.6	11.0
Maintenance	9.4	6.0
Sustaining Support	0.3	1.0
Continued System Improvements	0.5	1.0
Other		
Total O&S	28.6	28.0

Disposal/Demilitarization Cost Estimate

(Base Year \$Millions)	System Name: T-AO 205	Antecedent System Name: T-AO 187
Total Disposal	74.4	

Cost Estimate Source - Disposal	
Type:	Program Office Estimate
Approval Authority and Date:	Cost Engineering & Industrial Analysis, NAVSEA 05C 01/16/2020
Note:	
Disposal Cost Notes:	
Disposal costs account for the inactivation cost and the net disposal (scrap) cost. The T-AO 205 is not currently being considered as a remobilization asset; therefore no costs are set aside for that effort once the ship is decommissioned and taken out of service.	
Additional O&S Estimate Assumptions:	

Sustainment Strategy:
<p>The Military Sealift Command (MSC) maintains the T-AO Fleet Replenishment Oilers utilizing established sustainment practices and maintenance philosophy which reflect the ship's commercial design and construction, utilization of commercial equipment and MSC's two-level maintenance philosophy consisting of shipboard and depot level maintenance. Sustainment efforts follow commercial merchant service practices that emphasize maximizing cost effectiveness and ship availability. Operating Tempo was assumed 55% of In Fleet Time (IFT) steaming underway and 45% of IFT steaming not underway, the average of the Dry Cargo/Ammunition Ship (T-AKE) Visibility and Management of Operating and Support Costs (VAMOSOC) data and the T-AO 201- 204 data.</p>
Antecedent Estimate Assumptions:
<p>The Antecedent Systems are the T-AO 187 Class (specifically hulls T-AO 201-204) and T-AKE 1 Class as these are the most recent double-hulled auxiliary ships. The T-AO 201-204 and T-AKE 1-14 estimates were derived using the VAMOSOC database and the MSC Indirect values. The years of data used for T-AO 201-204 was FY 1993 through FY 2015. The years of data used for T-AKE 1-14 was FY 2006 through FY 2015.</p>