



Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-592



T-AKE LEWIS and CLARK Class Dry Cargo/Ammunition Ship (T-AKE)

As of FY 2011 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

Table of Contents

Common Acronyms and Abbreviations for MDAP Programs	3
Program Information	5
Responsible Office	5
References	5
Mission and Description	6
Executive Summary	7
Threshold Breaches	8
Schedule	9
Performance	11
Track to Budget	14
Cost and Funding	15
Low Rate Initial Production	22
Foreign Military Sales	23
Nuclear Costs	23
Unit Cost	24
Cost Variance	27
Contracts	30
Deliveries and Expenditures	31
Operating and Support Cost	32

Common Acronyms and Abbreviations for MDAP Programs

Acq O&M - Acquisition-Related Operations and Maintenance
ACAT - Acquisition Category
ADM - Acquisition Decision Memorandum
APB - Acquisition Program Baseline
APPN - Appropriation
APUC - Average Procurement Unit Cost
\$B - Billions of Dollars
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
FOC - Full Operational Capability
FMS - Foreign Military Sales
FRP - Full Rate Production
FY - Fiscal Year
FYDP - Future Years Defense Program
ICE - Independent Cost Estimate
IOC - Initial Operational Capability
Inc - Increment
JROC - Joint Requirements Oversight Council
\$K - Thousands of Dollars
KPP - Key Performance Parameter
LRIP - Low Rate Initial Production
\$M - Millions of Dollars
MDA - Milestone Decision Authority
MDAP - Major Defense Acquisition Program
MILCON - Military Construction
N/A - Not Applicable
O&M - Operations and Maintenance
ORD - Operational Requirements Document
OSD - Office of the Secretary of Defense
O&S - Operating and Support
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
UCR - Unit Cost Reporting
U.S. - United States
USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)

Program Information

Program Name

LEWIS and CLARK Class (T-AKE) Dry Cargo/Ammunition Ship (T-AKE)

DoD Component

Navy

Responsible Office

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References

SAR Baseline (Production Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated September 20, 2001

Approved APB

Navy Acquisition Executive (NAE) Approved Acquisition Program Baseline (APB) dated September 12, 2009

Mission and Description

The LEWIS and CLARK Class Dry Cargo/Ammunition Ship (T-AKE) acquisition program will provide a two product (ammunition and combat stores - including dry stores, frozen and chilled products, spare parts and consumables) replacement for the aging single product combat stores (T-AFS) and ammunition (T-AE) shuttle ships. Working in concert with an oiler (T-AO), the team can perform a "substitute" station ship mission that will allow the retirement of the three product fast combat support ships (AOE 1 Class). In its shuttle role, T-AKE will provide logistics lift to station ships and other ships operating with naval sources from supply sources, such as friendly ports, and at sea from Modular Cargo Delivery System (MCDS) equipped merchant vessels.

The T-AKE will have the capability to effectively and efficiently provide naval forces with ordnance, stores and spare parts through both connected replenishment (CONREP) and vertical replenishment (VERTREP). Organic helicopter operations to conduct VERTREP require T-AKE to support two military cargo logistics helicopters or two equivalent commercial variants and associated aviation personnel. Additionally, T-AKE will have the capability to transfer a limited quantity of fuel by means of CONREP or Astern Refueling.

The T-AKE end force structure will be such that it meets fleet peacetime requirements and satisfies the majority of wartime requirements. Wartime operations will require augmentation by additional shuttle ships (such as MCDS equipped ships currently in the Ready Reserve Force).

Executive Summary

The LEWIS and CLARK Class Dry Cargo/Ammunition Ship (T-AKE) program is under a Fixed-Price Incentive (FPI) contract for the Detail Design and Construction of a lead ship and options for thirteen follow ships with General Dynamics National Steel and Shipbuilding Company (NASSCO), San Diego, CA. There are currently twelve ships under contract, including Long Lead Time and Materials (LLTM) for T-AKE 13 and 14. The Program Office's maximum liability for each hull is the ceiling price. The program is fully funded to the ceiling price for the first nine ships and fully funded to target price for the tenth through fourteenth hulls.

NASSCO has made a fifty percent decrease in production labor hours from T-AKE 1 to T-AKE 9. The Navy and NASSCO have worked together to execute numerous cost reduction initiatives netting a projected savings of \$55.7M to the program as of December 2009. Additionally, NASSCO has invested significant capital in the yard, including on-ground outfitting and blast and paint facilities. As a result of all of these initiatives the PMEACs for T-AKE 10-12 are projected to come in under target cost offsetting the previous nine hulls loss.

NASSCO submitted a Request for Equitable Adjustment (REA) concerning Occupational Safety and Health Administration (OSHA) driven changes in fire protection and control/management of stainless weld emissions (HEX chrome). On December 23, 2008, NASSCO submitted a REA concerning impacts to the T-AKE program related to USS George Washington (CVN-73) Repair. Naval Sea Systems Command (NAVSEA) contracts and NASSCO executed both settlement agreements on April 30, 2009.

T-AKE 1: Delivered June 20, 2006. Awarded the Department of Navy's 2008 Safety Excellence Award August 19, 2008. T-AKE 2: Delivered February 27, 2007. T-AKE 3: Delivered June 26, 2007. T-AKE 4: Delivered November 14, 2007. T-AKE 5: Delivered June 5, 2008. T-AKE 6: Delivered October 30, 2008. T-AKE 7: Delivered March 4, 2009. T-AKE 8: Delivered September 1, 2009. T-AKE 9: Launched on August 16, 2009. Expected delivery date February 24, 2010. T-AKE 10: Keel was laid on March 13, 2009. Ship is 84% complete. T-AKE 11: Contract Option exercised for Design and Construction on December 12, 2008. Start of Construction began March 18, 2009. Keel was laid on August 21, 2009. Ship is 40% complete. T-AKE 12: Exercised LLTM option on June 10, 2008. Contract Option exercised for Design and Construction on December 12, 2008. Start of Construction commenced September 22, 2009. Ship is 2% complete.

T-AKE 13/14: Exercised both LLTM options on December 12, 2008. The Department of Defense FY 2010 Appropriation Act includes funding for T-AKE 13 and 14. Contract options for Detailed Design and Construction to be awarded no later than March 2010.

The Joint Requirements Oversight Council (JROC) approved Maritime Prepositioning Force (Future) (MPF(F)) Increment 1 Capability Development Document (CDD) for the acquisition of 2 additional T-AKEs. On May 21, 2008, Assistant Secretary of the Navy (Research, Development & Acquisition) (ASN (RDA)) signed the revised T-AKE Acquisition Strategy for a total of 14-ships to support Combat Logistics Force (CLF) and MPF(F) requirements. Under Secretary of Defense for Acquisition, Technology, and Logistics (USD AT&L) MPF(F) Acquisition Decision Memorandum (ADM) of December 4, 2008 approved the T-AKE Acquisition Strategy Addendum for 11 CLF and 3 MPF(F) ships.

There are no software-related issues for this program at this time.

Threshold Breaches

APB Breaches

Schedule		<input type="checkbox"/>
Performance		<input type="checkbox"/>
Cost	RDT&E	<input type="checkbox"/>
	Procurement	<input type="checkbox"/>
	MILCON	<input type="checkbox"/>
	Acq O&M	<input type="checkbox"/>
O&S Cost		<input type="checkbox"/>
Unit Cost	PAUC	<input type="checkbox"/>
	APUC	<input type="checkbox"/>

Nunn-McCurdy Breaches

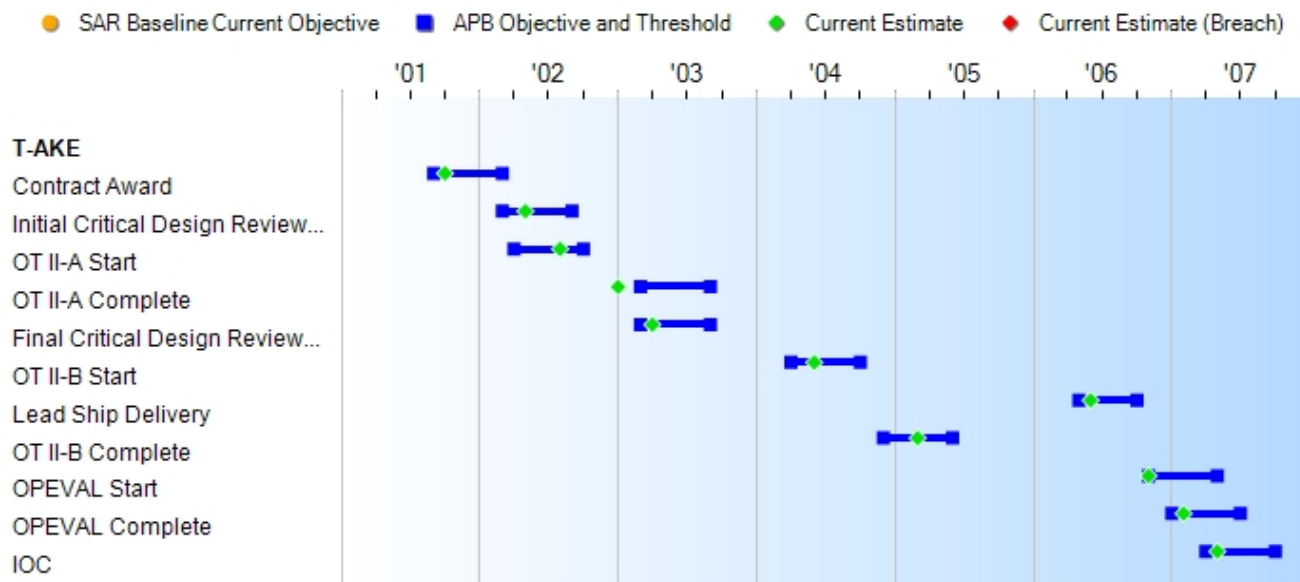
Current UCR Baseline

PAUC	None
APUC	None

Original UCR Baseline

PAUC	None
APUC	None

Schedule



Schedule Events				
Events	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate
Contract Award	Sep 2001	Sep 2001	Mar 2002	Oct 2001
Initial Critical Design Review & OIPT	Mar 2002	Mar 2002	Sep 2002	May 2002
OT II-A Start	Apr 2002	Apr 2002	Oct 2002	Aug 2002
OT II-A Complete	Mar 2003	Mar 2003	Sep 2003	Jan 2003
Final Critical Design Review & OIPT	Mar 2003	Mar 2003	Sep 2003	Apr 2003
OT II-B Start	Apr 2003	Apr 2004	Oct 2004	Jun 2004
Lead Ship Delivery	Jul 2005	May 2006	Oct 2006	Jun 2006
OT II-B Complete	Jul 2005	Dec 2004	Jun 2005	Mar 2005
OPEVAL Start	Apr 2006	Nov 2006	May 2007	Nov 2006
OPEVAL Complete	Jun 2006	Jan 2007	Jul 2007	Feb 2007
IOC	Oct 2006	Apr 2007	Oct 2007	May 2007

Change Explanations

None

Acronyms and Abbreviations

IOC - Initial Operational Capability
OIPT - Overarching Integrated Product Team
OPEVAL - Operational Evaluation
OT - Operational Test

Performance

Performance Characteristics				
SAR Baseline Production Estimate	Current APB Production Objective/Threshold	Demonstrated Performance	Current Estimate	
Intership Cargo Handling Interoperability				
Provide all REP sys and equip. req'd for seamless interface w/existing and planned US ships	Provide all REP sys and equip. req'd for seamless interface w/existing and planned US ships	Provide all REP sys and equip. req'd for seamless interface w/existing and planned US ships	Provides all REP systems and equipment required for seamless interface w/existing and planned US ships.	Provides all REP systems and equipment required for seamless interface w/existing and planned US ships
C4I Interoperability				
100% Top Level and Navy IERs	100% Top Level and Navy IERs	100% Top Level and Navy IERs designated as CRITICAL	100% Top Level and Navy IERs	100% Top Level and Navy IERs
Survivability				
The ship will survive flooding caused by damage to the shell at any location. The final damaged heel angle will not exceed 15 deg and the margin lines will not be submerged.	The ship will survive flooding caused by damage to the shell at any location. The final damaged heel angle will not exceed 15 deg and the margin lines will not be submerged.	The ship will survive flooding caused by damage to the shell at any location except the transverse bulkheads bounding an aft machinery space. The final damaged heel angle will not exceed 25 deg.	The ship will survive flooding caused by damage to the shell at any location. The final damaged heel angle will not exceed 15 degrees and the margin lines will not be submerged.	The ship will survive flooding caused by damage to the shell at any location. The final damaged heel angle will not exceed 15 degrees and the margin lines will not be submerged.
Endurance				
14000 NM (20 kts)	14000 NM (20 kts)	14000 NM (20 kts)	Exceeds 14,000 NM/(20 kts)	Exceeds 14,000 NM (20 kts)
Sustained Speed				
> 20 kts NTE 80% MCR	> 20 kts NTE 80% MCR	20 kts NTE 80% MCR	20 kts	20 kts
Cargo Transfer Rate (Sea State 2)				
> 274 MTPH palletized ordnance to CV (CONREP & VERTREP), > 220 MTPH palletized ordnance to CV & CG simultaneous-ly (CONREP)	> 274 MTPH palletized ordnance to CV (CONREP & VERTREP), > 220 MTPH palletized ordnance to CV & CG simultaneous-ly (CONREP)	=/> 149 MTPH palletized ordnance to CV (CONREP & VERTREP), =/> 138 MTPH palletized ordnance to CV & CG simultaneous-ly (CONREP)	216 MT/hr to CV using 2 CONREP & 2 VERTREP stations * 221 MT/hr to CV & CG simultaneously using 4 CONREP stations **	216 MT/hr to CV using 2 CONREP & 2 VERTREP stations * 221 MT/hr to CV and CG simultaneously using 4 CONREP stations **
Supportability				

MSC Stds (CGCERT & ABS)	MSC Stds (CG CERT & ABS)	MSC Stds (CG CERT & ABS)	MSC stds (CG CERT & ABS)	MSC Stds (CG CERT & ABS)
Reliability (Ship Systems)				
Highest commercial stds, ABS Rules, R1 (redundancy) notation for propulsion, steering & aux sys. Redundancy in excess of commercial reqmts for mission critical systems	Highest commercial stds, ABS Rules, R1 (redundancy) notation for propulsion, steering & aux sys. Redundancy in excess of commercial reqmts for mission critical systems	Highest commercial stds, ABS Rules, R1 (redundancy) notation for propulsion, steering & aux sys. Redundancy in excess of commercial reqmts for mission critical systems	Highest commercial standards, ABS Rules, R1 (redundancy) notation for propulsion, steering and aux systems. Redundancy in excess of commercial requirements for mission critical systems.	Highest commercial stds, ABS Rules, R1 (redundancy) notation for propulsion, steering and aux systems. Redundancy in excess of commercial reqmts for mission critical systems.
Reliability (Cargo Transfer Systems)				
Ao=0.98	Ao=0.98	Ao=0.80	Ao=.98	Ao=.98

Requirements Reference

Thresholds and objectives are abbreviated directly from the Table of Key Performance Parameters (KPPs) in the T-AKE Operational Requirements Document (ORD) no. 541-4-99, dated July 3, 2001.

Change Explanations

None

Notes

NOTES: Threshold and objectives are abbreviated directly from the Table of Key Performance Parameters (KPP) in the T-AKE Operational Requirements Document (ORD), dated July 3, 2001. Refer to the T-AKE ORD for the expanded KPP objectives and threshold.

Mission critical systems include cargo refrigeration, cargo handling gear, auxiliary equipment for mobility, fire fighting and exterior communications.

Acronyms and Abbreviations

ABS - American Bureau of Shipping
Ao - Operational Availability
C4I - Command, Control, Communications, Computers and Intelligence
CERT - Certification
CONREP - Connected Replenishment
CV&CG - Aircraft Carrier & Cruiser
deg - Degree
IER - Information Exchange Requirements
kts - Knots
MCR - Maximum Continuous Rating
MSC - Military Sealift Command
MTPH - Metric Tons Per Hour
NM - Nautical mile
NTE - Not to exceed
R1 - ABS Redundancy notation "... indicating that a vessel is fitted with multiple machines but only one propeller and steering system..."
REP - Replenishment
Stds - Standards
US - United States
USCG - United States Coast Guard
VERTREP - Vertical Replenishment

Track to Budget

RDT&E

Appn	BA	PE
------	----	----

Navy 1319 04 0603564N

Project	Name
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0408 (Shared) (Sunk)

Navy 1319 05 0604567N

Project	Name
---------	------

1803 (Shared) (Sunk)

Procurement

Appn	BA	PE
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Navy 4557 01 0408042N

Line Item	Name
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0120 T-AKE

5000 NDSF Post Delivery and Outfitting

Cost and Funding

Cost Summary

Total Acquisition Cost							
Appropriation	BY 2000 \$M			BY 2000 \$M	TY \$M		
	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Production Estimate	Current APB Production Objective	Current Estimate
RDT&E	26.0	26.0	28.6	26.0	25.9	25.9	25.9
Procurement	4236.6	5394.0	5933.4	5366.9	4864.3	6868.0	6863.3
Flyaway	--	--	--	5366.9	--	--	6863.3
Recurring	--	--	--	5269.7	--	--	6759.7
Non Recurring	--	--	--	97.2	--	--	103.6
Support	--	--	--	0.0	--	--	0.0
Other Support	--	--	--	0.0	--	--	0.0
Initial Spares	--	--	--	0.0	--	--	0.0
MILCON	0.0	0.0	--	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	4262.6	5420.0	N/A	5392.9	4890.2	6893.9	6889.2

Cost Notes

A 90% confidence level is given to the December 2009 SAR for APB-based cost estimates. The rationale for selecting a 90% confidence level is based on actual cost returns on eight delivered ships.

Total Quantity			
Quantity	SAR Baseline Production Estimate	Current APB Production	Current Estimate
RDT&E		0	0
Procurement		12	14
Total		12	14

Cost and Funding

Funding Summary

Appropriation Summary									
FY 2011 President's Budget / December 2009 SAR (TY\$ M)									
Appropriation	Prior	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total
RDT&E	25.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.9
Procurement	5637.5	1225.8	0.0	0.0	0.0	0.0	0.0	0.0	6863.3
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2011 Total	5663.4	1225.8	0.0	0.0	0.0	0.0	0.0	0.0	6889.2
PB 2009 Total	5637.4	31.0	17.7	18.1	4.0	7.0	0.0	0.0	5715.2
Delta	26.0	1194.8	-17.7	-18.1	-4.0	-7.0	0.0	0.0	1174.0

Quantity Summary										
FY 2011 President's Budget / December 2009 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total
Development	0	0	0	0	0	0	0	0	0	0
Production	0	12	2	0	0	0	0	0	0	14
PB 2011 Total	0	12	2	0	0	0	0	0	0	14
PB 2009 Total	0	12	0	0	0	0	0	0	0	12
Delta	0	0	2	0	0	0	0	0	0	2

Cost and Funding

Annual Funding By Appropriation

Annual Funding							
1319 RDT&E Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1996	--	--	--	--	--	--	1.1
1997	--	--	--	--	--	--	3.6
1998	--	--	--	--	--	--	3.8
1999	--	--	--	--	--	--	5.9
2000	--	--	--	--	--	--	11.5
Subtotal	--	--	--	--	--	--	25.9

Annual Funding 1319 RDT&E Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	BY 2000 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1996	--	--	--	--	--	--	1.1
1997	--	--	--	--	--	--	3.7
1998	--	--	--	--	--	--	3.9
1999	--	--	--	--	--	--	5.9
2000	--	--	--	--	--	--	11.4
Subtotal	--	--	--	--	--	--	26.0

Annual Funding 4557 Procurement National Defense Sealift Fund, Navy							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2000	1	385.3	--	103.6	488.9	--	488.9
2001	1	357.8	--	--	357.8	--	357.8
2002	1	357.7	--	--	357.7	--	357.7
2003	1	388.5	--	--	388.5	--	388.5
2004	2	768.0	--	--	768.0	--	768.0
2005	2	786.6	--	--	786.6	--	786.6
2006	1	400.0	--	--	400.0	--	400.0
2007	1	862.3	--	--	862.3	--	862.3
2008	--	--	--	--	--	--	--
2009	2	1227.7	--	--	1227.7	--	1227.7
2010	2	1225.8	--	--	1225.8	--	1225.8
Subtotal	14	6759.7	--	103.6	6863.3	--	6863.3

Annual Funding 4557 Procurement National Defense Sealift Fund, Navy							
Fiscal Year	Quantity	BY 2000 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2000	1	361.4	--	97.2	458.6	--	458.6
2001	1	324.5	--	--	324.5	--	324.5
2002	1	322.6	--	--	322.6	--	322.6
2003	1	331.2	--	--	331.2	--	331.2
2004	2	632.2	--	--	632.2	--	632.2
2005	2	621.6	--	--	621.6	--	621.6
2006	1	306.3	--	--	306.3	--	306.3
2007	1	637.3	--	--	637.3	--	637.3
2008	--	--	--	--	--	--	--
2009	2	873.0	--	--	873.0	--	873.0
2010	2	859.6	--	--	859.6	--	859.6
Subtotal	14	5269.7	--	97.2	5366.9	--	5366.9

FY 2008 (\$804.7M) was used to exercise a priced option to fully fund balance the T-AKE 10 (FY 2007) and exercise priced options Advanced Procurements for Long Lead Time and Materials (LLTM) for T-AKE 11-14.

Low Rate Initial Production

There is no approved Low Rate Initial Production (LRIP) for the Combat Logistics Force (CLF) T-AKE Program.

Foreign Military Sales

None

Nuclear Costs

None

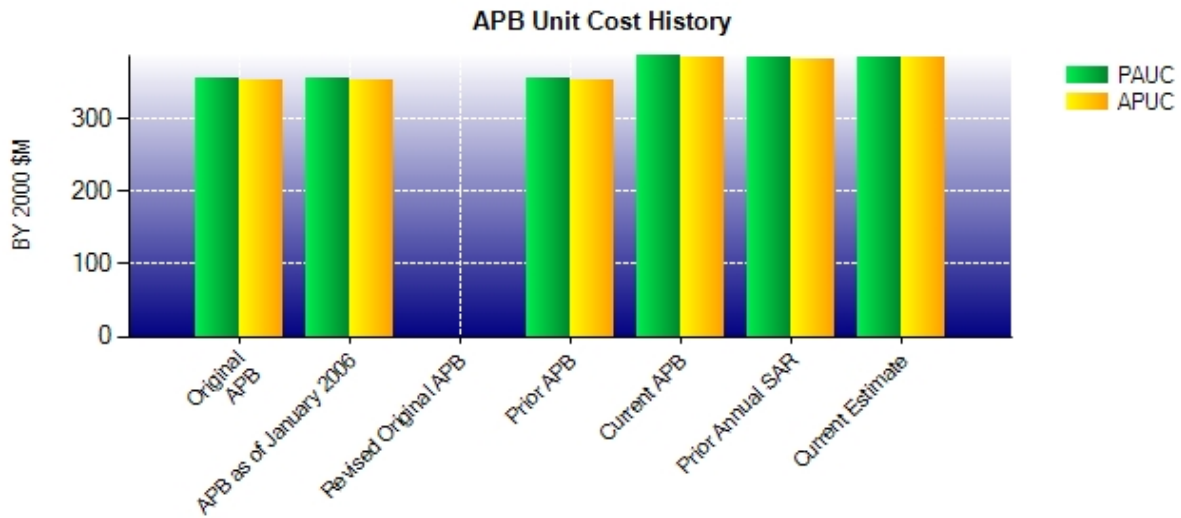
Unit Cost

Unit Cost Report

Item	BY 2000 \$M	BY 2000 \$M	% Change
	Current UCR Baseline (Sep 2009 APB)	Current Estimate (Dec 2009 SAR)	
Program Acquisition Unit Cost			
Cost	5420.0	5392.9	
Quantity	14	14	
Unit Cost	387.143	385.207	-0.50
Average Procurement Unit Cost			
Cost	5394.0	5366.9	
Quantity	14	14	
Unit Cost	385.286	383.350	-0.50

Item	BY 2000 \$M	BY 2000 \$M	% Change
	Original UCR Baseline (Sep 2001 APB)	Current Estimate (Dec 2009 SAR)	
Program Acquisition Unit Cost			
Cost	4262.6	5392.9	
Quantity	12	14	
Unit Cost	355.217	385.207	+8.44
Average Procurement Unit Cost			
Cost	4236.6	5366.9	
Quantity	12	14	
Unit Cost	353.050	383.350	+8.58

Unit Cost History



Item	Date	BY 2000 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	Sep 2001	355.217	353.050	407.517	405.358
APB as of January 2006	Apr 2003	355.217	353.050	407.517	405.358
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	Jan 2006	355.217	353.050	407.517	405.358
Current APB	Sep 2009	387.143	385.286	492.421	490.571
Prior Annual SAR	Dec 2007	384.850	382.683	476.267	474.108
Current Estimate	Dec 2009	385.207	383.350	492.086	490.236

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY \$M)									
Initial PAUC Production Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
407.517	24.700	13.398	3.750	0.000	42.721	0.000	0.000	84.569	492.086

Current SAR Baseline to Current Estimate (TY \$M)									
Initial APUC Production Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
405.358	24.700	13.706	3.750	0.000	42.721	0.000	0.000	84.877	490.236

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	N/A	N/A	N/A
Milestone C	N/A	N/A	N/A	N/A
IOC	N/A	N/A	Oct 2006	May 2007
Total Cost (TY \$M)	N/A	N/A	4890.2	6889.2
Total Quantity	N/A	N/A	12	14
PAUC	N/A	N/A	407.517	492.086

Cost Variance

Summary TY \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	25.9	4864.3	--	4890.2
Previous Changes				
Economic	--	+265.2	--	+265.2
Quantity	--	+72.2	--	+72.2
Schedule	--	+33.5	--	+33.5
Engineering	--	--	--	--
Estimating	--	+454.1	--	+454.1
Other	--	--	--	--
Support	--	--	--	--
Subtotal	--	+825.0	--	+825.0
Current Changes				
Economic	--	+80.6	--	+80.6
Quantity	--	+930.4	--	+930.4
Schedule	--	+19.0	--	+19.0
Engineering	--	--	--	--
Estimating	--	+144.0	--	+144.0
Other	--	--	--	--
Support	--	--	--	--
Subtotal	--	+1174.0	--	+1174.0
Total Changes	--	+1999.0	--	+1999.0
Current Estimate	25.9	6863.3	--	6889.2

Summary BY 2000 \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	26.0	4236.6	--	4262.6
Previous Changes				
Economic	--	--	--	--
Quantity	--	+16.8	--	+16.8
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	--	+338.8	--	+338.8
Other	--	--	--	--
Support	--	--	--	--
Subtotal	--	+355.6	--	+355.6
Current Changes				
Economic	--	--	--	--
Quantity	--	+652.4	--	+652.4
Schedule	--	+13.3	--	+13.3
Engineering	--	--	--	--
Estimating	--	+109.0	--	+109.0
Other	--	--	--	--
Support	--	--	--	--
Subtotal	--	+774.7	--	+774.7
Total Changes	--	+1130.3	--	+1130.3
Current Estimate	26.0	5366.9	--	5392.9

Previous Estimate: December 2007

Procurement	\$M	
	Base Year	Then Year
Current Change Explanations		
Revised escalation indices. (Economic)	N/A	+80.6
Total Quantity variance resulting from an increase of 2 ships from 12 to 14. (Subtotal)	+845.4	+1205.6
Quantity variance resulting from an increase of 2 ships from 12 to 14. (Quantity)	(+652.4)	(+930.4)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(+179.7)	(+256.2)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(+13.3)	(+19.0)
Adjustment for current and prior escalation. (Estimating)	-59.2	-80.0
There is no ship quantity in FY 2008, therefore Outfitting and Post Delivery funding is included with associated ship(s). (Estimating)	+2.9	+0.7
There is no ship quantity in FY 2008, therefore Delivery Incentive funding is included with T-AKE 5 and 6. (Estimating)	+2.4	0.0
There is no ship quantity in FY 2008, therefore funding is reflected with supported ship transfers for Calendar Year 2007 Economic Price Adjustment. (Estimating)	+1.3	0.0
There is no ship quantity in FY 2008, therefore funding is reflected with supported ship transfers for Calendar Year 2008 Economic Price Adjustment. (Estimating)	+0.5	0.0
FY 2008 funding was used to exercise a priced option to fully fund balance of the T-AKE 10 (FY 2007). (Estimating)	+5.5	0.0
FY 2008 funding was used to exercise a priced options for T-AKE 11 & 12 (FY 2009) Advanced Procurements for Long Lead Time and Materials (LLTM). (Estimating)	-2.3	0.0
Outyear Outfitting and Post Delivery funding realigned ship support due to no ship quantities in FY 2011-2014. (Estimating)	-21.8	-32.9
Procurement Subtotal	+774.7	+1174.0

(QR) Quantity Related

Contracts

Contract Identification

Appropriation: Procurement
Contract Name: T-AKE Construction
Contractor: National Steel & Shipbuilding Company (NASSCO)
Contractor Location: San Diego, CA 92186
Contract Number: N00024-02-C-2300
Contract Type: Fixed Price Incentive(Firm Target) (FPIF)
Award Date: October 18, 2001
Definitization Date: October 18, 2001

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
689.5	788.1	2	3819.0	4227.0	12	4798.6	4797.5

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (12/31/2009)	-399.7	-12.0
Previous Cumulative Variances	-324.5	+77.5
Net Change	-75.2	-89.5

Cost and Schedule Variance Explanations

General Contract Variance Explanation

NASSCO's cost performance report (CPR) data shows an unfavorable Net Change Cost Variance (CV) of \$75.2M when compared to the December 2007 SAR. The variance is attributed to the addition of T-AKE 13 and 14.

NASSCO's CPR data shows an unfavorable Net Change Schedule Variance (SV) of \$89.5M which is due to when NASSCO reports CPR data for ordering Long Lead Time and Materials (LLTM). Unlike the first nine ships on contract, T-AKE 10-14 have separate LLTM and construction options. LLTM option exercise occurs a minimum of 1 year before the construction option. NASSCO only begins to report LLTM CPR data sixty days after the detailed design and construction option is exercised.

Notes

The difference between the initial and current contract price is T-AKE 3 through T-AKE 12 priced options for Detailed Design and Construction have been exercised.

Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	0	0	0	--
Production	8	8	14	57.14%
Total Program Quantity Delivered	8	8	14	57.14%

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	6889.2	Years Appropriated	15
Expended to Date	4731.1	Percent Years Appropriated	100.00%
Percent Expended	68.67%	Appropriated to Date	6889.2
Total Funding Years	15	Percent Appropriated	100.00%

Operating and Support Cost

Assumptions and Ground Rules

In the LEWIS and CLARK Class Dry Cargo/Ammunition (T-AKE) Program Life Cycle Cost Estimate, Revision D, dated November 19, 2002, the assumptions for the Cost Element categories are as follows:

MISSION PAY ALLOWANCES. The Program Office developed a spreadsheet based on "The Center for Naval Analysis (CNA) CRM 97-28.10/November 1999 Combat Logistics Force (CLF) Analysis of Alternatives: Cost Estimating Methodology (CNA CRM 97-28.10)" to calculate a composite of United States Navy (USN) and Military Sealift Command (MSC) monthly salary cost for officer and enlisted personnel. The costs generated accurately reflect the specific complement for T-AKE. These values were then input into a Navy Center for Cost Analysis (NCCA) Operating and Support Cost Analysis Model (OSCAM) and used to generate this cost.

UNIT LEVEL CONSUMPTION. Unit Level Consumption consists of Ship Petroleum Oil Lubricants (POL), Repair Parts/Supplies, Depot Level Repairables, and Purchased Equipment/Services that were calculated as follows:

Ship POL - The Program Office developed spreadsheets to calculate fuel consumption based on the actual propulsion plant characteristics and the ship's operating/speed profile. These values were then input into OSCAM.

Repair Parts/Supplies - The Program Office developed a spreadsheet which used Center for Naval Analysis CNA 97-28.10 Cost Estimating Relationships (CERs) for Supplies (USN) and Consumables (MSC) to calculate the composite USN and MSC value. This value was then input into OSCAM.

Depot Level Repairables - The Program Office used the average cost of material consumed for repair for the CLF ships being replaced. This value was then input into OSCAM.

Purchased Equipment/Services - The Program Office used the NCCA CER for Variable Alongside Support Services to represent this cost. This value was then input into OSCAM.

INTERMEDIATE MAINTENANCE. MSC conducts Voyage Repairs (VR) in lieu of Intermediate Level Maintenance. The OSCAM Intermediate Maintenance Ashore function was used in conjunction with the ship's notional operating schedule (one VR per ship per operating quarter between Depot Level Maintenance periods) to generate the cost of VRs.

DEPOT MAINTENANCE. The Depot Level Maintenance profile used in OSCAM was developed based on MSC's notional Depot Maintenance schedule. The Program Office used average costs for the CLF ships being replaced and NCCA CERs to estimate the associated costs.

CONTRACTOR SUPPORT. This cost element was not used because the T-AKE ship is built to commercial standards and is supported via commercial sources rather than the USN Supply System.

SUSTAINING SUPPORT. This element is comprised of the following cost items:

Centrally Provided Material (CPM) - The Program Office used a spreadsheet to calculate CPM. The value generated was based on a weighted average of the CLF ships being replaced. This value was then input into OSCAM.

Engineering Technical Services - The NCCA CER for Engineering Technical Services that encompasses services provided to a ship by Mobile Technical Units, In-Service Engineering Agents and Navy Sea Center (Atlantic and Pacific) was used. This value was input into OSCAM.

Receipt, Segregation, Storage, Issue - The Program Office used a spreadsheet using CNA 97-28.10 Cost Estimating Methodology to calculate publication costs, which were used to represent this cost category. This value was input into

OSCAM.

INDIRECT COSTS. The Program Office developed a spreadsheet using CNA 97-28.10 Cost Estimating Methodology to calculate a composite USN and MSC monthly salary cost for officer and enlisted personnel. The resulting composite values included only indirect costs associated with USN officer and enlisted monthly pay. These values were then input into OSCAM.

There is no antecedent system for this program.

The assumed service life for the T-AKE is 40 years; quantity is 14 ships.

Cost Estimate Reference:

None

Sustainment Strategy:

None

Antecedent Information:

None

Unitized O&S Costs BY2000 \$M			
Cost Element	T-AKE		Antecedent System (Antecedent)
	Avg Annual Cost Per T-AKE Ship		
Mission Pay & Allowance	13.580		--
Unit Level Consumption	8.510		--
Intermediate Maintenance	0.640		--
Depot Maintenance	4.030		--
Contractor Support	0.000		--
Sustaining Support	0.740		--
Indirect	0.200		--
Other	0.000		--
Total	27.700		--

Unitized Cost Comments:

None

Item	Total O&S Cost \$M			
	T-AKE			Antecedent System (Antecedent)
	Current Production APB Objective/Threshold	Current Estimate		
Base Year	17080.0	18788.0	15512.0	N/A
Then Year	0.0	N/A	N/A	N/A

Total O&S Cost Comment

Operating and Support (O&S) Costs have been updated to reflect the increase in quantity and actual data provided by the Military Sealift Command. The O&S Cost Estimate dated November 19, 2002 has no Then-Year dollar component.

Disposal Estimate Details

Date of Estimate:

Source of Estimate:

Disposal/Demilitarization Total Cost (BY 2000 \$M):