Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Navy Date: March 2019

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

1319: Research, Development, Test & Evaluation, Navy I BA 7: Operational

PE 0204313N I SHIP-TOWED ARRAY SURVEILLANCE SYSTEMS

Systems Development

COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	15.454	14.449	-	14.449	10.748	6.079	0.000	0.000	0.000	46.730
3261: TAGOS Design & Total Ship Integration	0.000	0.000	15.454	14.449	-	14.449	10.748	6.079	0.000	0.000	0.000	46.730

A. Mission Description and Budget Item Justification

This program was previously funded in FY 2018 under Program Element 0603564N (Ship Preliminary Design and Feasibility Studies) Project 3261 (TAGOS Design and Total Ship Integration). This program element continues efforts started under the previous program element and is not a new start. FY20 funding will enable the program to complete Preliminary Design, start contract design and continue industry participation.

T-AGOS Design & Total Ship Integration - Ocean surveillance ships gather underwater acoustical data to support the mission of the Integrated Undersea Surveillance System by

providing a ship platform capable of theater anti-submarine acoustic passive and active surveillance. Auxiliary General Ocean Surveillance Ships (T-AGOS) are operated by Military

Sealift Command to support the anti-submarine warfare mission of the commanders of the Atlantic and Pacific Fleets. The two current classes of surveillance ships use surveillance

towed-array sensor system (SURTASS) equipment to gather undersea acoustic data. The ships also carry electronic equipment to process and transmit that data via satellite to shore

stations for evaluation. Funding will support recapitalization of the four SWATH (T-19 Class) and one SWATH (T-23 Class) Auxiliary General Ocean Surveillance ships (T-AGOS).

B. Program Change Summary (\$ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	0.000	15.454	14.449	-	14.449
Current President's Budget	0.000	15.454	14.449	-	14.449
Total Adjustments	0.000	0.000	0.000	0.000	0.000
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
 Reprogrammings 	-	-			
SBIR/STTR Transfer	-	-			

Exhibit R-2A, RDT&E Project Ju		Date: March 2019										
Appropriation/Budget Activity 1319 / 7						am Elemen 13N <i>I SHIP-</i> . <i>ANCE</i> SYS	TÒWED AF	umber/Name) GOS Design & Total Ship				
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
3261: TAGOS Design & Total Ship Integration	0.000	0.000	15.454	14.449	-	14.449	10.748	6.079	0.000	0.000	0.000	46.730
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

PE 0204313N: SHIP-TOWED ARRAY SURVEILLANCE SYSTEMS

T-AGOS Design & Total Ship Integration - Ocean surveillance ships gather underwater acoustical data to support the mission of the Integrated Undersea Surveillance System by

providing a ship platform capable of theater anti-submarine acoustic passive and active surveillance. Auxiliary General Ocean Surveillance Ships (T-AGOS) are operated by Military

Sealift Command to support the anti-submarine warfare mission of the commanders of the Atlantic and Pacific Fleets. The two current classes of surveillance ships use surveillance

towed-array sensor system (SURTASS) equipment to gather undersea acoustic data. The ships also carry electronic equipment to process and transmit that data via satellite to shore

stations for evaluation. Funding will support recapitalization of the four SWATH (T-19 Class) and one SWATH (T-23 Class) Auxiliary General Ocean Surveillance ships (T-AGOS).

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2020	FY 2020	FY 2020
	FY 2018	FY 2019	Base	oco	Total
Title: T-AGOS Design	0.000	15.454	14.449	0.000	14.449
Articles:	-	-	-	-	-
FY 2019 Plans:					
Begin the Navy led Preliminary Design efforts. Continue development of SURTASS interface documentation.					
Conduct Gate 3 to support submission of the CDD for joint staffing. Develop model to conduct seakeeping and					
loads tests. Coordinate acquisition efforts with NAVSEA, MSC, PEO SHIPS, CNO, ASN RD&A, OSD, and Fleet.					
FY 2020 Base Plans:					
Award multiple contracts for industry studies. Complete Preliminary Design, start contract design with industry					
participation. Start development of Request For Proposals (RFP) documentation for Detail Design and					
Construction (DD&C) Contract and conduct model testing. Continue to coordinate acquisition efforts with					
NAVSEA, MSC, PEO SHIPS, CNO, ASN RD&A, OSD, and Fleet.					
FY 2020 OCO Plans:					
		'		'	

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy			Date: March 2019
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0204313N / SHIP-TOWED ARRAY SURVEILLANCE SYSTEMS	• `	umber/Name) GOS Design & Total Ship

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
N/A					
FY 2019 to FY 2020 Increase/Decrease Statement:					
FY 2019 to FY 2020 decrease due to design efforts and model development for testing.					
Accomplishments/Planned Programs Subtotals	0.000	15.454	14.449	0.000	14.449

C. Other Program Funding Summary (\$ in Millions)

			FY 2020	FY 2020	FY 2020					Cost To	
Line Item	FY 2018	FY 2019	Base	OCO	<u>Total</u>	FY 2021	FY 2022	FY 2023	FY 2024	Complete	Total Cost
• SCN/5030: <i>TAGOS</i>	0.000	0.000	0.000	-	0.000	0.000	343.244	369.000	301.980	1,621.276	2,635.500
SURTAS SHIPS											

Remarks

D. Acquisition Strategy

Develop CDD, conduct trade studies and Pre-Preliminary Design in FY18. Start Navy-led Preliminary Design in FY19. Issue RFP for Industry Studies for award of multiple contracts in FY20 to participate in Navy-led Contract Design efforts. Complete Navy-led PD/CD efforts in FY21in order to issue Detail Design and Construction (DD&C) RFP and award to a single shipbuilder in FY22 for DD&C of a Lead Ship with options for up to six Follow-On ships.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy

R-1 Program Element (Number/Name)

Project (Number/Name)

1319 *I* 7

PE 0204313N I SHIP-TOWED ARRAY SURVEILLANCE SYSTEMS

3261 / TAGOS Design & Total Ship

Date: March 2019

Integration

Product Development (\$ in Millions)			FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO						
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Integration/ Design	Various	Various : Various	0.000	0.000		6.155	Jan 2019	5.186	Jan 2020	-		5.186	6.608	17.949	-
Industry Studies (shipyards)	C/FFP	Various : Various	0.000	0.000		0.000		2.000	May 2020	-		2.000	2.000	4.000	-
Model Testing	Various	Various : Various	0.000	0.000		3.700	Jan 2019	2.300	Jan 2020	-		2.300	1.000	7.000	-
SURTASS Integration	Various	Various : Various	0.000	0.000		1.300	Jan 2019	1.000	Jan 2020	-		1.000	1.300	3.600	-
		Subtotal	0.000	0.000		11.155		10.486		-		10.486	10.908	32.549	N/A

Remarks

FY18 funding is in PE 0603564N P/U 3261.

Appropriation/Budget Activity

Support (\$ in Million	s)			FY 2	2018	FY 2	2019		2020 ise	FY 2		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Milestone Doc/RFP Development	Various	Various : Various	0.000	0.000		1.317	Jan 2019	1.174	Jan 2020	-		1.174	2.340	4.831	-
Specification & TDP Development	Various	Various : Various	0.000	0.000		2.052	Jan 2019	1.729	Jan 2020	-		1.729	1.046	4.827	-
Systems Integration (C4I/ Safety/Risk)	Various	Various : Various	0.000	0.000		0.620	Jan 2019	0.640	Jan 2020	-		0.640	1.227	2.487	-
Source Selection Support	Various	Various : Various	0.000	0.000		0.000	Feb 2019	0.100	Feb 2020	-		0.100	0.300	0.400	-
		Subtotal	0.000	0.000		3.989		3.643		-		3.643	4.913	12.545	N/A

Remarks

FY18 funding is in PE 0603564N P/U 3261.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy

R-1 Program Element (Number/Name)

Project (Number/Name)

Appropriation/Budget Activity 1319 / 7

PE 0204313N I SHIP-TOWED ARRAY SURVEILLANCE SYSTEMS

3261 I TAGOS Design & Total Ship

Date: March 2019

Integration

Test and Evaluation (\$ in Millions)			FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Test and Evaluation Planning	Various	Various : Various	0.000	0.000		0.310	Jan 2019	0.320	Jan 2020	-		0.320	1.007	1.637	-
		Subtotal	0.000	0.000		0.310		0.320		-		0.320	1.007	1.637	N/A

Remarks

FY18 funding is in PE 0603564N P/U 3261.

	Prior Years	FY 2018	FY 2	2019	FY 20 Bas	FY 2	 FY 2020 Total	Cost To	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000	15.454		14.449	-	14.449	16.828	46.731	N/A

<u>Remarks</u>

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Navy

Appropriation/Budget Activity
1319 / 7

R-1 Program Element (Number/Name)
PE 0204313N / SHIP-TOWED ARRAY
SURVEILLANCE SYSTEMS

Project (Number/Name)
3261 / TAGOS Design & Total Ship
Integration

T-AGOS Design & Total Ship Integration

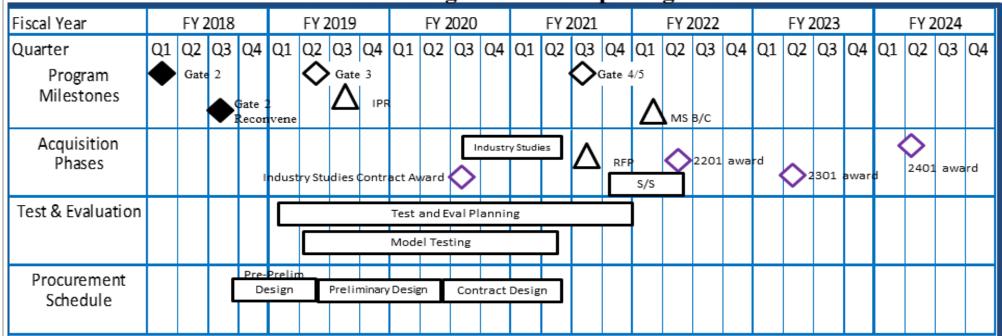


Exhibit R-4A, RDT&E Schedule Details: PB 2020 Navy			Date: March 2019
Appropriation/Budget Activity 1319 / 7	3	- , (umber/Name) GOS Design & Total Ship
	SURVEILLANCE SYSTEMS	Integration	,

Schedule Details

Events by Sub Project	S	Start		End	
	Quarter	Year	Quarter	Year	
Proj 3261					
Gate 3	2	2019	2	2019	
Milestone B/C	1	2022	1	2022	
DD&C Award	2	2022	2	2022	
Interim Program Review	3	2019	3	2019	
Gate 2 reconvene	3	2018	3	2018	
GATE 4/5	3	2021	3	2021	