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Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Navy **Date:** February 2020

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 0204313N / <i>Ship-Towed Array Surveillance Systems</i>							
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	0.000	15.250	14.449	10.873	-	10.873	8.070	0.967	0.955	4.946	Continuing	Continuing
3261: <i>TAGOS Design & Total Ship Integration</i>	0.000	15.250	14.449	10.873	-	10.873	8.070	0.967	0.955	4.946	Continuing	Continuing

A. Mission Description and Budget Item Justification

The FY 2021 funding request was reduced by \$2.000 million to account for the availability of prior year execution balances.

T-AGOS are Ocean surveillance ships that gather underwater acoustical data to support the Integrated Undersea Surveillance System (IUSS) mission by providing a ship platform capable of theater anti-submarine passive and active acoustic surveillance. T-AGOS ships are operated by Military Sealift Command (MSC) to support the anti-submarine warfare (ASW) mission of Atlantic and Pacific Fleet Commanders. Both classes of T-AGOS ships use the Surveillance Towed-Array Sensor System (SURTASS) to gather undersea acoustic data. They also carry electronic equipment to process and transmit that data via satellite to shore stations for evaluation. Funding in this budget will recapitalize Navy's Auxiliary General Ocean Surveillance (T-AGOS) ships (four T-AGOS 19 Class vessels & one T-AGOS 23 Class vessel) with a total of seven (7) T-AGOS(X) ships based on the 2016 N81 Force Structure Assessment (FSA).

B. Program Change Summary (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	15.454	14.449	10.748	-	10.748
Current President's Budget	15.250	14.449	10.873	-	10.873
Total Adjustments	-0.204	0.000	0.125	-	0.125
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.401	0.000			
• SBIR/STTR Transfer	-0.605	0.000			
• Program Adjustments	0.000	0.000	0.000	-	0.000
• Rate/Misc Adjustments	0.000	0.000	0.125	-	0.125

Change Summary Explanation

The FY 2019 decrease of \$.204 million reflects a combination of -.605 million for Small Business Innovative Research (SBIR) transfer and a reprogramming increase of \$0.401 million to support the T-AGOS(X) development schedule.

The FY 2021 increase of \$.125 million is due to NWCF adjustments.

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy										Date: February 2020		
Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0204313N / <i>Ship-Towed Array Surveillance Systems</i>				Project (Number/Name) 3261 / <i>TAGOS Design & Total Ship Integration</i>			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
3261: <i>TAGOS Design & Total Ship Integration</i>	0.000	15.250	14.449	10.873	-	10.873	8.070	0.967	0.955	4.946	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

T-AGOS are ocean surveillance ships that gather underwater acoustical data to support the mission of the Integrated Undersea Surveillance System (IUSS) 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 Small Waterplane Area Twin Hull (SWATH) T-19 Class and one SWATH T-23 Class.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: T-AGOS (X) Design & Total Ship Integration	15.250	14.449	10.873	0.000	10.873
Articles:	-	-	-	-	-
FY 2020 Plans:					
- Award industry studies and continue preliminary/contract design with industry participation.					
- Begin development of Milestone B/C documentation and Request For Proposals (RFP) documentation for Detail Design and Construction (DD&C) contract.					
- Continue model testing. Coordinate acquisition efforts with NAVSEA, MSC, PEO SHIPS, CNO, ASN RD&A, OSD, and Fleet.					
FY 2021 Base Plans:					
- Complete industry studies, model testing, preliminary/contract design, and development of specification and Technical Data Package (TDP) for inclusion in the DD&C RFP.					
- Issue DD&C RFP and complete acquisition documentation to support Gate 4/5.					
- Continue development of Milestone B/C documentation.					
- Continue to coordinate acquisition efforts with NAVSEA, MSC, PEO SHIPS, CNO, ASN RD&A, OSD, and Fleet.					
FY 2021 OCO Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy	Date: February 2020
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Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0204313N / <i>Ship-Towed Array Surveillance Systems</i>	Project (Number/Name) 3261 / <i>TAGOS Design & Total Ship Integration</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
N/A					
<i>FY 2020 to FY 2021 Increase/Decrease Statement:</i> FY21 decreases by \$3.576 million due to completion of the majority of design efforts and model testing in FY20 and to account for the availability of prior year execution balances.					
Accomplishments/Planned Programs Subtotals	15.250	14.449	10.873	0.000	10.873

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021 Base</u>	<u>FY 2021 OCO</u>	<u>FY 2021 Total</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• SCN/5030: TAGOS SURTASS Ships	0.000	0.000	0.000	-	0.000	437.100	427.900	418.700	399.400	1,245.100	2,928.200

Remarks

D. Acquisition Strategy
Issue Request For Proposal (RFP) for industry studies in FY20. Issue RFP for Detail Design and Construction (DD&C) in FY21. Award DD&C in FY22 for lead ship with options.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Navy												Date: February 2020			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
1319 / 7				PE 0204313N / Ship-Towed Array Surveillance Systems				3261 / TAGOS Design & Total Ship Integration							
Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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
Engineering Integration/ Design	Various	Various : Various	0.000	6.194	Nov 2019	4.937	Feb 2020	3.700	Jan 2021	-		3.700	4.130	18.961	-
Industry Studies	C/FFP	Various : Various	0.000	0.000		2.500	Feb 2020	1.500	Oct 2020	-		1.500	Continuing	Continuing	Continuing
Model Testing	Various	Various : Various	0.000	3.700	Nov 2019	2.300	Feb 2020	1.000	Jan 2021	-		1.000	0.000	7.000	-
SURTASS Integration	Various	Various : Various	0.000	1.300	Nov 2019	0.500	Feb 2020	0.800	Jan 2021	-		0.800	0.800	3.400	-
Subtotal			0.000	11.194		10.237		7.000		-		7.000	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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 Documentation/ RFP Development	Various	Various : Various	0.000	1.224	Nov 2019	1.173	Feb 2020	1.323	Jan 2021	-		1.323	1.139	4.859	-
Specification & Technical Data Package Development	Various	Various : Various	0.000	2.132	Nov 2019	1.979	Feb 2020	1.233	Jan 2021	-		1.233	0.000	5.344	-
Systems Integration (C4I/ Safety/Risk)	Various	Various : Various	0.000	0.500	Jan 2020	0.640	Feb 2020	0.661	Jan 2021	-		0.661	0.955	2.756	-
Source Selection Support	Various	Various : Various	0.000	0.000		0.100	Feb 2020	0.200	Jun 2021	-		0.200	0.100	0.400	-
Subtotal			0.000	3.856		3.892		3.417		-		3.417	2.194	13.359	N/A
Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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
Test and Evaluation	Various	Various : Various	0.000	0.200	May 2019	0.320	Feb 2020	0.456	Jan 2021	-		0.456	9.955	10.931	-
Subtotal			0.000	0.200		0.320		0.456		-		0.456	9.955	10.931	N/A

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Navy		Date: February 2020
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0204313N / <i>Ship-Towed Array Surveillance Systems</i>	Project (Number/Name) 3261 / <i>TAGOS Design & Total Ship Integration</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 3261				
Gate 3	3	2019	3	2019
Test and Evaluation Planning	1	2019	4	2021
Model Testing	2	2019	1	2021
Preliminary/Contract Design with Industry Participation	2	2019	2	2021
Interim Program Review (IPR)	4	2019	4	2019
Industry Studies	2	2020	2	2021
GATE 4/5	3	2021	3	2021
Milestone B/C	1	2022	1	2022
Lead Hull DD&C Award	2	2022	2	2022
Developmental Testing (DT)	2	2022	4	2025
FY23 DD&C Award	2	2023	2	2023
FY24 DD&C Award	2	2024	2	2024
FY25 DD&C Award	2	2025	2	2025
Lead Hull Delivery	3	2025	3	2025
Operational Testing (OT)	3	2025	4	2025