CLASSIFICATION:	UNCLASSIFIED						
EXHIBIT R-2, RDT&E BUDGET ITEM JUSTIFICATION					DATE May 2009		
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	R-1 ITEM NOMENCLATURE **0604561N/SSN-21 DEVELOPMENTS**						
COST (In Millions)	FY 2008	FY 2009	FY 2010				
Total PE Cost	1.946	0.000	0.000				
1946 / SSN-21 DEVELOPMENT	1.946	0.000	0.000				

A. MISSION DESCRIPTION:

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

1946 SSN-21 Developments: The SEAWOLF Submarine is a multi-mission ship that provides unprecedented performance capabilities. It is the quietest, most heavily-armed attack submarine the Navy has ever built. The design of the SEAWOLF is based on an extensive research and development program and incorporates technological advancements to provide: order of magnitude improvement in ship quieting; improved acoustic sensors; more capable combat systems; greater weapon capacity and capability; quieter launch; weapon launch at high ship speed; advanced reactor; improved performance machinery program; an advanced propulsor; increased operating depth; improved ship control; and enhanced survivability. SEAFAC Range Upgrade funding is included in 1946 in FY08 - $1.946M.

SEAFAC Range Upgrade: The SEAWOLF Class submarine is a multi-mission ship that provides numerous unprecedented submarine performance capabilities such as more capable combat systems, greater weapons capacity and capability, advanced reactor, improved acoustic sensors, increased operating depth, improved ship control, and enhanced survivability. Among these capabilities is an unprecedented acoustic stealth performance as a result of an order of magnitude improvement in ship quieting. Maintaining the acoustic stealth advantage and upholding the effectiveness and survivability of the SEAWOLF and future class submarines require that radiated acoustic signatures are periodically measured and understood. To this end, Southeast Alaska Acoustic Measurement Facility (SEAFAC) range will be upgraded with new underwater acoustic measurement systems capable of measuring new generation quiet-class submarines stationed in the Pacific fleet. The SEAFAC Range Upgrade Program comprises of a multi-year effort to design, develop, procure, install and test High Gain Measurement Systems (HGMS) in the Static and Underway Sites at SEAFAC. Efforts to upgrade the Static Site began in FY03 and efforts to upgrade the Underway Site began in FY04. (Note: Please refer to RDT&E,N PE0604561N/1946 R2 and OPN BLI 094200/H1RC08 budget exhibits for associated SEAFAC Upgrade Program funding.)

CLASSIFICATION:	UNCLASSIFIED	
EXHIBIT R-2, RDT&E BUDGET ITEM JUSTIFICATION (CONTINUATION)		DATE May 2009
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	R-1 ITEM NOMENCLATURE **0604561N/SSN-21 DEVELOPMENTS**	

B. PROGRAM CHANGE SUMMARY:

Funding:	FY 2008	FY 2009	FY 2010
FY09 President's Budget	2.403	0.000	0.000
FY10 President's Budget	1.946	0.000	0.000
Total Adjustments	-0.457	0.000	0.000
(U) Summary of Adjustments			
Congressional Rescissions	0.000	0.000	0.000
Congressional Adjustments	0.000	0.000	0.000
SBIR/STTR/FTT Assessment	0.000	0.000	0.000
Program Adjustments	-0.457	0.000	0.000
Rate/Misc Adjustments	0.000	0.000	0.000
Total	-0.457	0.000	0.000

C. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name

(U) Related RDT&E:

(U) P.E. 0603570N (Advanced Nuclear Power Systems)

(U) P.E. 0604524N (Submarine Combat Systems)

(U) P.E. 0604567N (Ship Contract Design/Live Fire T&E)

D. ACQUISITION STRATEGY:

(U) Delivered three SEAWOLF submarines under cost cap.

(U) To continue to correct SEAWOLF Acoustics deficiencies.

(U) To increase commonality with Virginia Class Submarines.

(U) Continue to review all areas for possible cost reductions.

E. MAJOR PERFORMERS:

Naval Surface Warfare Center (NSWC) Carderock, MD FY08 - $1.946M (Acoustics and Tech Insertion).

CLASSIFICATION:	UNCLASSIFIED						
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION					DATE May 2009		
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604561N/SSN-21 DEVELOPMENTS**				PROJECT NUMBER AND NAME **1946/SSN-21 DEVELOPMENT**		
COST (In Millions)	FY 2008	FY 2009	FY 2010				
Project Cost	1.946	0.000	0.000				
RDT&E Articles Qty	0	0	0	0	0	0	0

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

1946 SSN-21 Developments: The SEAWOLF Submarine is a multi-mission ship that provides unprecedented performance capabilities. It is the quietest, most heavily-armed attack submarine the Navy has ever built. The design of the SEAWOLF is based on an extensive research and development program and incorporates technological advancements to provide: order of magnitude improvement in ship quieting; improved acoustic sensors; more capable combat systems; greater weapon capacity and capability; quieter launch; weapon launch at high ship speed; advanced reactor; improved performance machinery program; an advanced propulsor; increased operating depth; improved ship control; and enhanced survivability. SEAFAC Range Upgrade funding is included in 1946 in FY08 - $1.946M.

SEAFAC Range Upgrade: The SEAWOLF Class submarine is a multi-mission ship that provides numerous unprecedented submarine performance capabilities such as more capable combat systems, greater weapons capacity and capability, advanced reactor, improved acoustic sensors, increased operating depth, improved ship control, and enhanced survivability. Among these capabilities is an unprecedented acoustic stealth performance as a result of an order of magnitude improvement in ship quieting. Maintaining the acoustic stealth advantage and upholding the effectiveness and survivability of the SEAWOLF and future class submarines require that radiated acoustic signatures are periodically measured and understood. To this end, Southeast Alaska Acoustic Measurement Facility (SEAFAC) range will be upgraded with new underwater acoustic measurement systems capable of measuring new generation quiet-class submarines stationed in the Pacific fleet. The SEAFAC Range Upgrade Program comprises of a multi-year effort to design, develop, procure, install and test High Gain Measurement Systems (HGMS) in the Static and Underway Sites at SEAFAC. Efforts to upgrade the Static Site began in FY03 and efforts to upgrade the Underway Site began in FY04. (Note: Please refer to RDT&E,N PE0604561N/1946 R2 and OPN BLI 094200/H1RC08 budget exhibits for associated SEAFAC Upgrade Program funding.)

CLASSIFICATION:	UNCLASSIFIED		
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION			DATE May 2009
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604561N/SSN-21 DEVELOPMENTS**	PROJECT NUMBER AND NAME **1946/SSN-21 DEVELOPMENT**	

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 2008	FY 2009	FY 2010
Accomplishments/Effort/Subtotal Cost	0.671	0.000	0.000
RDT&E Articles Quantity	0	0	0

Re-engineering and correction of Ship Control System (SCS) and acoustic sail deficiencies.

	FY 2008	FY 2009	FY 2010
Accomplishments/Effort/Subtotal Cost	1.275	0.000	0.000
RDT&E Articles Quantity	0	0	0

Technology Insertion for the SSN23.