

CLASSIFICATION:

**UNCLASSIFIED**

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: <b>June 2001</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY/BA-5</b>					R-1 ITEM NOMENCLATURE SSN-21 Development/0604561N					
COST (\$ in Millions)	FY 2000	FY 2001	FY 2002							
Total PE Cost	<b>30.505</b>	<b>6.557</b>	<b>5.770</b>							
SSN-21 Development/F1946	<b>30.505</b>	<b>6.557</b>	<b>5.770</b>							
Quantity of RDT&E Articles										

A. (U) Mission Description and Budget Item Justification: The SEAWOLF submarine is a multi-mission ship that will introduce 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.

(U) Program Accomplishments and Plans:

1. (U) FY 2000 Accomplishments :

- (U) (\$21.913) Commenced Operational Evaluation (OPEVAL)/Technical Evaluation (TECHEVAL).
- (U) (\$4.000) Funded Live Fire Test and Evaluation requirements without performing Full Ship Shock Test (FSST) and removed temporary instrumentation to restore the SSN21 to its baseline condition.
- (U) (\$4.592) Re-engineered and corrected deficiencies in Non-Propulsion Electronics (NPE) systems including Ship Control, Exterior Communications Systems (ECS), Total Ship Monitoring System, etc. Re-engineered and designed to correct acoustic deficiencies including propulsor, TT Muzzle Door Slide Mechanism, investigation of TT Shutter Windup, investigation of Motor Bearing Greasing, and Sail Instrumentation Data Analysis. Continued risk management efforts in all high risk areas.

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<p>2. (U) FY 2001 Plan:</p> <ul style="list-style-type: none"><li>- (U) (\$2.264) Complete Operational Evaluation (OPEVAL)/Technical Evaluation (TECHEVAL).</li><li>- (U) (\$1.219) Funds Component Shock Tests and Analysis (WAA/Aft, Ventilator Hanger, Periscope, and A/B-1/PMP) .</li><li>- (U) (\$2.985) Re-engineering and correction of deficiencies in NPE systems including Ship Control, Weapons Shipping and Handling Systems (WSHS), Exterior Communication System (ECS), etc. Re-engineering and design to correct acoustic deficiencies including Depth Control Pressure/Vent, Hydraulics, Auxiliary Systems, etc. Continue risk management efforts in all high risk areas.</li><li>- (U) (\$.089) Portion of extramural program reserved for Small Business Innovation Research assessment in accordance with 15 USC 638.</li></ul> <p>3. (U) FY 2002 Plan</p> <ul style="list-style-type: none"><li>- (U) (\$1.200) Complete analysis and reporting requirements from Operational Evaluation (OPEVAL)/Technical Evaluation (TECHEVAL).</li><li>- (U) (\$2.950) Funds Component Shock Test and Analysis (Periscope, Propulsor, and Spherical Air Flask).</li><li>- (U) (\$1.620) Re-engineering and correction of deficiencies in NPE systems including Ship Control, Weapons Shipping and Handling Systems (WSHS), Exterior Communication System (ECS), etc. Re-engineering and design to correct acoustic deficiencies including Main Feed Pump Vane, R-12, Auxiliary Systems, Ship Service Hydraulic Pumps, etc. Continue risk management efforts in all high risk areas.</li></ul>		

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**Exhibit R-2, RDT&E Budget Item Justification**

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<p>B. (U) Program Change Summary:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;"></th> <th style="width: 15%; text-align: center;">FY 2000</th> <th style="width: 15%; text-align: center;">FY 2001</th> <th style="width: 15%; text-align: center;">FY 2002</th> </tr> </thead> <tbody> <tr> <td>(U) FY 2001 President's Budget:</td> <td style="text-align: right;">31.825</td> <td style="text-align: right;">6.617</td> <td style="text-align: right;">5.994</td> </tr> <tr> <td>(U) Appropriated Value:</td> <td style="text-align: right;">31.825</td> <td style="text-align: right;">6.617</td> <td style="text-align: right;">0.000</td> </tr> <tr> <td>(U) Adjustment to FY 2000/2001 Appropriated Value FY2001 President's Budget</td> <td style="text-align: right;">-1.320</td> <td style="text-align: right;">-0.060</td> <td style="text-align: right;">-0.224</td> </tr> <tr> <td>(U) FY 2002 PRES Budget Submit:</td> <td style="text-align: right;">30.505</td> <td style="text-align: right;">6.557</td> <td style="text-align: right;">5.770</td> </tr> </tbody> </table> <p>(U) <u>Change Summary Explanation</u></p> <p>(U) Funding: The FY00 net decrease is a result of the SBIR Assessment in accordance with 15 USC 638 (-\$.492), a Proportionate Reduction directed by Congressional Language in the FY-01 Appropriation Bill (-\$.125M), the FY2000 Mid Year Review Adjustment (-\$.623), and FY2000 Actuals (-\$.080). The FY01 decrease is a result of a .7% Pro-Rata Reduction (across the board) (-\$.046) and a Government-wide Rescission of .22% (-\$.014). The FY-02 decrease (-\$.224) is a result of various minor undistributed adjustments.</p> <p>(U) Schedule: No Schedule change.</p> <p>(U) Technical: No change.</p> <p>C. (U) Other Program Funding Summary:</p> <table style="width: 100%; border-collapse: collapse; margin-top: 20px;"> <thead> <tr> <th style="width: 45%;"></th> <th style="width: 15%; text-align: center;">FY 2000</th> <th style="width: 15%; text-align: center;">FY 2001</th> <th style="width: 15%; text-align: center;">FY 2002</th> </tr> </thead> <tbody> <tr> <td>(U) SCN #201200</td> <td style="text-align: right;">16.691</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">10.254</td> </tr> <tr> <td>(U) MILCON P-398</td> <td></td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.000</td> </tr> </tbody> </table>				FY 2000	FY 2001	FY 2002	(U) FY 2001 President's Budget:	31.825	6.617	5.994	(U) Appropriated Value:	31.825	6.617	0.000	(U) Adjustment to FY 2000/2001 Appropriated Value FY2001 President's Budget	-1.320	-0.060	-0.224	(U) FY 2002 PRES Budget Submit:	30.505	6.557	5.770		FY 2000	FY 2001	FY 2002	(U) SCN #201200	16.691	0.000	10.254	(U) MILCON P-398		0.000	0.000
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**Exhibit R-2, RDT&E Budget Item Justification**

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EXHIBIT R-2, RDT&E Budget Item Justification				DATE:
APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE	
<b>RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY/BA-5</b>			SSN-21 Development/0604561N	
	FY 2000	FY 2001	FY 2002	
(U) OPN #51000, #094100	48.403	11.991	8.050	
(U) Related RDT&E:				
(U) PE 0603570N (Advanced Nuclear Power Systems)				
(U) PE 0604524N (Submarine Combat Systems)				
(U) PE 0604567N (Ship Contract Design/Live Fire T&E)				
D. (U) Acquisition Strategy:				
(U) To deliver 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. (U) Schedule Profile:				
(U) See attached Planning Schedule Program				

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**Exhibit R-2, RDT&E Budget Item Justification**

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Exhibit R-3 Cost Analysis (page 1)								DATE: <b>June 2001</b>				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER						
<b>RDT&amp;E, N/BA-5</b>			<b>SSN-21 Development/0604561N</b>			<b>SSN-21 Development/F1946</b>						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date			
Primary Hardware Development												
Ancillary Hardware Development												
Systems Engineering	SS/CPFF	General Dynam Groton, CT	366.391	2.158	Various	0.125	Various	0.772				
Systems Engineering	SS/CPFF	NNS Newport News, VA	116.689	0.990	Various	0.125	Various	0.535				
Systems Engineering	WR/RC	NSWC Carderock, MD	314.029	1.259	Various	1.216	Various	1.250				
Systems Engineering	WR	NUWC Newport, RI	46.583	1.212	Various	0.843	Various	0.750				
Systems Engineering	Various	Various	466.845	0.114	Various	0.136	Various	0.232				
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development			1310.537	5.733		2.445		3.539				
Remarks:												
Development Support Equipment												
Software Development												
Training Development												
Integrated Logistics Support												
Configuration Management												
Technical Data												
GFE												
Subtotal Support			0.000	0.000		0.000		0.000				
Remarks:												

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Exhibit R-3 Cost Analysis (page 2)										DATE: <b>June 2001</b>		
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<b>RDT&amp;E, N/BA-5</b>			<b>SSN-21 Development/0604561N</b>			<b>SSN-21 Development/F1946</b>						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date			
Developmental Test & Evaluation	SS/CPFF	General Dynam Groton, CT	68.716	0.278		0.000		0.000				
Developmental Test & Evaluation	WR	NSWC Carderock, MD	84.804	10.546	Various	0.450	Various	0.250	Various			
Developmental Test & Evaluation	Various	Various	111.004	11.089	Various	1.814	Various	0.950	Various			
Operational Test & Evaluation												
Tooling												
GFE												
Subtotal T&E			264.524	21.913		2.264		1.200				
Remarks:												
Contractor Engineering Support												
Government Engineering Support												
Program Management Support & ETS	Various	Various	43.969	2.859	Various	1.848	Various	1.031				
Travel												
Labor (Research Personnel)												
Overhead												
Subtotal Management			43.969	2.859		1.848		1.031				
Remarks:												
Total Cost			1619.030	30.505		6.557		5.770				
Remarks:												

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