

EXHIBIT R-2, RDT&E Budget Item Justification					DATE:				
					FEBRUARY 2002				
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE							
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA-5		VIRGINIA Class Design Development/0604558N							
COST (\$ in Millions)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY2006	FY2007	Cost to Complete	Total Cost
Total PE Cost	207.395	204.667	238.253	194.578	188.805	183.705	182.626	79.335	3369.764
VIRGINIA Class HM&E Development/F1947	127.255	120.103	128.741	125.730	132.895	138.096	123.327	79.335	2229.509
VIRGINIA Class Combat Systems Dev/F1950	73.387	79.707	92.907	62.390	51.839	45.609	59.299	0.000	1065.996
Enhanced Sonar Dome Demo/Validation/F2429	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.548
Adv Sub Tactical Electronic Sys/Int. Mast/F2430	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.545
VIRGINIA Class Advance Tech Insertion/F2644	4.823	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.662
NON-Propulsion Electronics System/F2645	1.930	0.000	0.000	0.000	0.000	0.000	0.000	0.000	14.513
VIRGINIA Class SSN Combat Sys Tec Insert/Refresh/F2887	0.000	4.857	0.000	0.000	0.000	0.000	0.000	0.000	4.857
Submarine Multi Mission Team Trainer/F3062	0.000	0.000	16.605	6.458	4.071	0.000	0.000	0.000	27.134
Quantity of RDT&E Articles									
A. (U) Mission Description and Budget Item Justification: The U.S. Navy must maintain a submarine fleet that is of sufficient capability and numbers to defend American interests. The VIRGINIA Class Submarine formerly the New Attack Submarine (New SSN) is being designed to fulfill this need. It will counter the potential threats of the next century in a multi-mission capable submarine that has the ability to provide covert, sustained combat presence in denied waters. The primary goal of the program is to develop an affordable yet capable submarine by evaluating a broad range of system and technology alternatives, and pursuing cost reduction, producibility improvement, and technical risk management. This Program Element (PE) provides the technology, prototype components, and systems engineering needed to design and construct the VIRGINIA Class Submarine and build and its Command, Control, Communications, and Intelligence (C3I) System. This PE directly supports the following VIRGINIA Class Submarine missions: (1) covert strike warfare; (2) anti-submarine warfare; (3) covert intelligence collection/surveillance, indication and warning, and electronic warfare; (4) anti-surface ship warfare; (5) special warfare; (6) mine warfare; and (7) battle group support. (U) Project F2429: Plus up continued a FY97 special Congressional interest item that includes B.F. Goodrich, Electric Boat and Naval Surface Weapons Center as participants. The line funded investigation into new manufacturing processes for a submarine bow SONAR dome. (U) Project F2430: The Congressional plus-up for Advance Submarine Tactical Electronic Combat System (ASTECS) and Integrated Electronic Support (ES) Measures Mast (IEM) restored several highly desirable elements of the ASTECS/IEM programs to improve platform performance. These items were eliminated due to fiscal constraints. Improvements included enhancements to ship's radar intercept, emitter identification, and signal intercept capabilities.									

UNCLASSIFIED

R-1 SHOPPING LIST - Item No. 122

UNCLASSIFIED

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2, RDT&E Budget Item Justification		DATE: FEBRUARY 2002
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA-5	R-1 ITEM NOMENCLATURE VIRGINIA Class Design Development/0604558N	
(U) Change Summary Explanation: (U) F1947 Funding: FY2001 decrease of \$-6.602M is attributed to decreases of (\$-3.416M) for SBIR, (\$-0.024M) for Federal Technology & Insertion, (\$-0.335M) for Canceled Accounts, (\$-1.599M) for BTRS Adjustments, (\$-0.291M) for Government-Wide Rescission, (-\$0.937M) .07% Pro-Rata. FY2002 decrease of \$-1.075M is attributed to decreases of (\$-1.071M) for Section 8123: Management Reform Initiativesand (\$-0.004M) for PBD-630.The FY2003 increase of \$15.284M is attributed to increases of (\$20.500M) for PDM II, (\$0.220M) for NWCF Rate adjustments and (\$0.007M) for PBD-606, (\$0.189M) for BOS Incorporation of PBD's and decreases of (\$-0.345M) for BOS, realignment residual issue, (\$-0.002M) for reimbursable funding implication, (\$-1.520M) for SYSCOM contractor support, (\$-2.852M) for PBD-404, (\$-0.738M) for PBD-604, and (\$-0.175M) for PBD-P33. (U) F1950 Funding: FY2001 increase of \$0.153M is attributed to an increase of (\$2.523M) for BTR01-22 and decreases of (\$-1.515M) for SBIR and (\$-0.183M) for Canceled Accounts, (\$-0.159M) Government-Wide Rescission. FY2002 decrease of \$-711M is attributed to a decrease of (\$-0.711M) for Section 8123: Management Reform Ininiatives. FY2003 increase of \$29.228M is attributed to an increase of (\$10.500M) for Tactical Controls Rapid COTS insertion (TD-RCI), (\$20.500M) for PDM-II and (\$0.152M) for NWCF Rate adjustments and decreases of (\$-0.193M) for BSO relainment residual issue, (\$-0.002M) for reimbursable funding implication, (\$-0.930M) for SYSCOM Contractor Support, (\$-0.267M) for PDB-404 and (\$-0.532M) for PBD-604. (U) F2644 Funding: FY2001 decrease of \$-0.177M is attributed to an assessment for SBIR, (-\$0.131M) Government-Wide Rescission, (\$-0.011M), .07% Pro-Rata, (-\$0.035) . (U) F2645 Funding: FY2001 decrease of \$-0.070M is attributed to an assessment for SBIR, (-\$0.052M) Government-Wide Rescission, (\$-0.004M), .07% Pro-Rata (-\$0.014M) . (U) F2887 Funding: The FY2002 increase of \$4,857M is attributed to an increase of (\$4.900M) for VIRGINIA Class SSN Combat System Technology Insertion/Refresh and a decrease of (\$-0.043M) for Section 8123: Management Reform Initiatives.		

R-1 SHOPPING LIST - Item No. 122

Exhibit R-2, RDT&E Budget Item Justification

(Exhibit R-2, page 3 of 26)

UNCLASSIFIED

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2, RDT&E Budget Item Justification		DATE: FEBRUARY 2002
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA-5	R-1 ITEM NOMENCLATURE VIRGINIA Class Design Development/0604558N	
(U) F2887 Funding: The FY2002 increase of \$4,857M is attributed to an increase of (\$4.900M) for VIRGINIA Class SSN Combat System Technology Insertion/Refresh and a decrease of (\$-0.043M) for Section 8123: Management Reform Initiatives. (U) F3062 Funding: The FY2003 increase of \$16,605M is attributed to increases of (\$1.200M) for Submarine MMTT Program and (\$15.500M) for various resource sponser issues and a decrease of (\$-0.095M) for non-pay inflation. (U) Schedule: Not applicable. (U) Technical: Not applicable.		

R-1 SHOPPING LIST - Item No. 122

Exhibit R-2, RDT&E Budget Item Justification
(Exhibit R-2, page 4 of 26)

UNCLASSIFIED

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification					DATE:					
VIRGINIA Class Design Dev/0604558N					FEBRUARY 2002					
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NAME AND NUMBER		PROJECT NAME AND NUMBER							
RDT&E, N/BA-5	0604558N		VIRGINIA Class HM&E Development/F1947							
COST (\$ in Millions)		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY2006	FY2007	Cost to Complete	Total Cost
Project Cost		127.255	120.103	128.741	125.730	132.895	138.096	123.327	79.335	2229.509
RDT&E Articles Qty										

A (U) Mission Description and Budget Item Justification: (U) This Project encompasses all the ship system development efforts for the VIRGINIA Class Submarine and the Technology Insertion Program for reducing cost and upgrading performance of future hulls by virtue of improvements in ship and combat systems. Technology developments, training, and logistics for developmental items, and VIRGINIA Class test & evaluation are included. This project is essential to achieve balanced platform capability, affordability, and flexibility in a low rate production environment. The thrust of these efforts will be to develop and apply multiple advanced system technologies which are integrated into the design of the VIRGINIA Class Submarine. New technologies are being transitioned from industry and government research and development programs where doing so offers substantial performance improvement and/or affordability payoffs. Transition opportunities include those from the Defense Advanced Research Projects Agency (DARPA) Sensors & Payloads program.

R-1 SHOPPING LIST - 122

Exhibit R-2a, RDT&E Project Justification
(Exhibit R-2a, page 5 of 26)

UNCLASSIFIED

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification		DATE: FEBRUARY 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, N/BA-5	PROGRAM ELEMENT NAME AND NUMBER VIRGINIA Class Design Dev/0604558N	PROJECT NAME AND NUMBER VIRGINIA Class HM&E Development/F1947
(U) Program Accomplishment and Plans: FY 2001 Accomplishments: (U) (\$98.301M) Continued design, manufacturing, and qualification testing of prototype technologies and components such as: ship service turbine generator (SSTG), weapons stowage and handling systems; propulsor improvement, electromagnetic signature reduction; and ship control system. Continued shock qualification testing and analyses of various components. Continued system verification studies, tests, and analyses in support of ship design including signature, hydrodynamics, materials, and survivability analyses and tests. Provided Integrated Product and Process Development (IPPD) (Design/Build) team support at shipyards, Navy laboratories and in-house. Supported ship design and construction efforts with engineering evaluations and ship integration assessments for emergent ship design and systems development issues. Technology Insertions include: (1) continued development of Accelerated EM Silencing, Advanced Control System, CAVES Array technology, Advanced Sail; (2) initiated development of Advanced Processor Build Acoustics (APB (A)) 01, Advanced Processor Build Tactical (APB(T)) 01, Tactical Control Information Management (TCIM), and the Improved Pressure Exchanger; and (3) completed interim update to the Total Ship Monitoring System, APB (A) 00 update. (U) (\$14.091M) Continued analyses and evaluations relating to force effectiveness. Conducted analysis in support of force effectiveness assessment and component performance tradeoffs. Maintained cost based approach to VIRGINIA Class Submarine construction through use of IPPD's concurrent engineering philosophy. Continued coordination of VIRGINIA Class Submarine specification at the shipbuilder. Continued cost estimating and validation of cost reduction ideas for VIRGINIA Class Submarine overall design development. Continued environmental compliance and pollution prevention efforts. (U) (\$4.739M) Continued unique logistics and trainers/training development to support the VIRGINIA Class. Items under this line included the: VIRGINIA Ship Control Operator Trainer (VSCOT), On-board Team Trainer Master Controller (OBTT MC), Submarine Multi-Mission Team Trainer (SMMTT), Ship Control Maintenance Trainer (SCMT) and related items. (U) (\$10.124M) Continued the development of the Test and Evaluation Master Plan (TEMP), Vulnerability Analysis Report (VAR) and Total Ship Survivability Trial (TSST). Planned and coordinated second shipbuilder Test and Evaluation efforts. Provided IPPD support to Commander Operational Test and Evaluation Force (COTF) operational assessments. Prepared test plans, schedules and support associated with developmental testing, conduct Command and Control System Off-hull Test Series, Shock, Acoustic and Launchers Trials Testing, Weapons System Accuracy Trials and Technical Evaluation. Conducted engineering evaluation of test results. Live Fire Test & Evaluation(LFT&E) modeling and analysis. Continued development of the total ship test plan in support of Developmental Testing (DT) and Operational Testing (OT).		

R-1 SHOPPING LIST - Item No. 122

Exhibit R-2a, RDT&E Project Justification
(Exhibit R-2a, page 6 of 26)

UNCLASSIFIED

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification		DATE: FEBRUARY 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, N/BA-5	PROGRAM ELEMENT NAME AND NUMBER VIRGINIA Class Design Dev/0604558N	PROJECT NAME AND NUMBER VIRGINIA Class HM&E Development/F1947

2. (U) FY 2002 Plan:

(U) (\$90.625M) Continue design, manufacturing, and qualification testing of prototype technologies and components such as: ship service turbine generator (SSTG), weapons stowage and handling systems; propulsor improvements, electromagnetic signature reduction; and ship control system. Continue shock qualification testing and analyses of various components. Continue system verification studies, tests, and analyses in support of ship design including signature, hydrodynamics, materials, and survivability analyses and tests. Provide Integrated Product and Process Development (IPPD) (Design/Build) team support at shipyards, Navy laboratories and in-house. Support ship design and construction efforts with engineering evaluations and ship integration assessments for emergent ship design and systems development issues. Technology Insertions include: (1) continue development of Accelerated EM Silencing, CAVES Array technology, the Advanced Sail, APB (A) 01, APB(T) 01, the Improved Pressure Exchanger; (2) initiate development of APB (A) 99 update, APB(A) 02 update, APB(T) 02, Information Assurance; and (3) complete development of the Advanced Control System.

(U) (\$13.753M) Continue analyses and evaluations relating to force effectiveness assessment and component performance tradeoffs. Maintain cost based approach to VIRGINIA Class submarine construction through use of IPPD's concurrent engineering philosophy. Continue coordination of VIRGINIA Class submarine specification at the shipbuilder. Continue cost estimating and validation of cost reduction ideas for VIRGINIA Class submarine overall design development. Continue environmental compliance and pollution prevention efforts.

(U) (\$4.281M) Continue development of trainers/training to support the VIRGINIA Class. This line includes the: VIRGINIA Ship Control Operator Trainer (VSCOT), On-board Team Trainer Master Controller (OBTT MC), Submarine Multi-Mission Team Trainer (SMMTT), Ship Control Maintenance Trainer, and related efforts. "

(U) (\$11.444M) Continue the development of the Test and Evaluation Master Plan (TEMP), Vulnerability Analysis Report (VAR) and Total Ship Survivability Trial (TSST). Plan and coordinate second shipbuilder Test and Evaluation efforts. Provide IPPD support to Commander Operational Test and Evaluation Force (COTF) operational test OT-IIB at the COATS facility. Prepare test plans, schedules and support associated with developmental testing, conduct Command and Control System Off-hull Test Series, Shock, Acoustic and Launchers Trials Testing, Weapons System Accuracy Trials and Technical Evaluation. Conduct engineering evaluation of test results. LFT&E modeling and analysis. Continue development of the total ship test plan in support of DT and OT.

R-1 SHOPPING LIST - Item No. 122

Exhibit R-2a, RDT&E Project Justification
(Exhibit R-2a, page 7 of 26)

UNCLASSIFIED

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification		DATE: FEBRUARY 2002
APPROPRIATION/BUDGET ACTIVITY RDTE&E, N/BA-5	PROGRAM ELEMENT NAME AND NUMBER VIRGINIA Class Design Dev/0604558N	PROJECT NAME AND NUMBER VIRGINIA Class HM&E Development/F1947
3. (U) FY 2003 Plan: (U) (\$81.192M) Continue design, manufacturing, and qualification testing of prototype technologies and components such as: ship service turbine generator (SSTG), main propulsion unit improvements, weapons stowage and handling systems; propulsor improvements, electromagnetic signature reduction; and ship control system. Continue shock qualification testing and analyses of various components. Continue system verification studies, tests, and analyses in support of ship design including signature, hydrodynamics, materials, and survivability analyses and tests. Provide Integrated Product and Process Development (IPPD) (Design/Build) team support at shipyards, Navy laboratories and in-house. Support ship design and construction efforts with engineering evaluations and ship integration assessments for emergent ship design and systems development issues. Technology Insertions include; (1) Continue development of Accelerated EM Silencing, CAVES Array technology, the Advanced Sail ,APB(T) 01, APB(T) 02; (2) initiate development of non-tactical data processing improvements, flexible payload launchers for the advanced sail; (3) complete development of Improved Pressure Exchanger, APB(A) 99, 01, and 02 updates (U) (\$13.552M) Continue analyses and evaluations relating to force effectiveness assessment and component performance tradeoffs. Maintain cost based approach to VIRGINIA Class submarine construction through use of IPPD's concurrent engineering philosophy. Continue coordination of VIRGINIA Class submarine specification at the shipbuilder. Continue cost estimating and validation of cost reduction ideas for VIRGINIA Class submarine overall design development. Continue environmental compliance and pollution prevention efforts. (U) (\$5.445M) Continue development of trainers/training to support the VIRGINIA Class. This includes the: VIRGINIA Ship Control Operator Trainer (VSCOT), On-board Team Trainer Master Controller (OBTT MC), Submarine Multi-Mission Team Trainer (SMMTT), Ship Control Maintenance Trainer, Weapons Control Launch Console (WCLC), Emergency Diesel Generator, and related efforts. (U) (\$28.552M) Continue the development of the Test and Evaluation Master Plan (TEMP), Vulnerability Analysis Report (VAR) and Total Ship Survivability Trial (TSST). Plan and coordinate second shipbuilder Test and Evaluation efforts. Conduct shipbuilder trials, and dockside testing. Prepare test plans, schedules and support associated with developmental testing, conduct Operational Testing - Phase IIB, Shock, Acoustic and Launchers Trials Testing, Weapons System Accuracy Trials and Technical Evaluation. Conduct engineering evaluation of test results. LFT&E modeling and analysis. Continue development of the total ship test plan in support of DT/OT-IIA-IIIF.		

R-1 SHOPPING LIST - Item No.

122

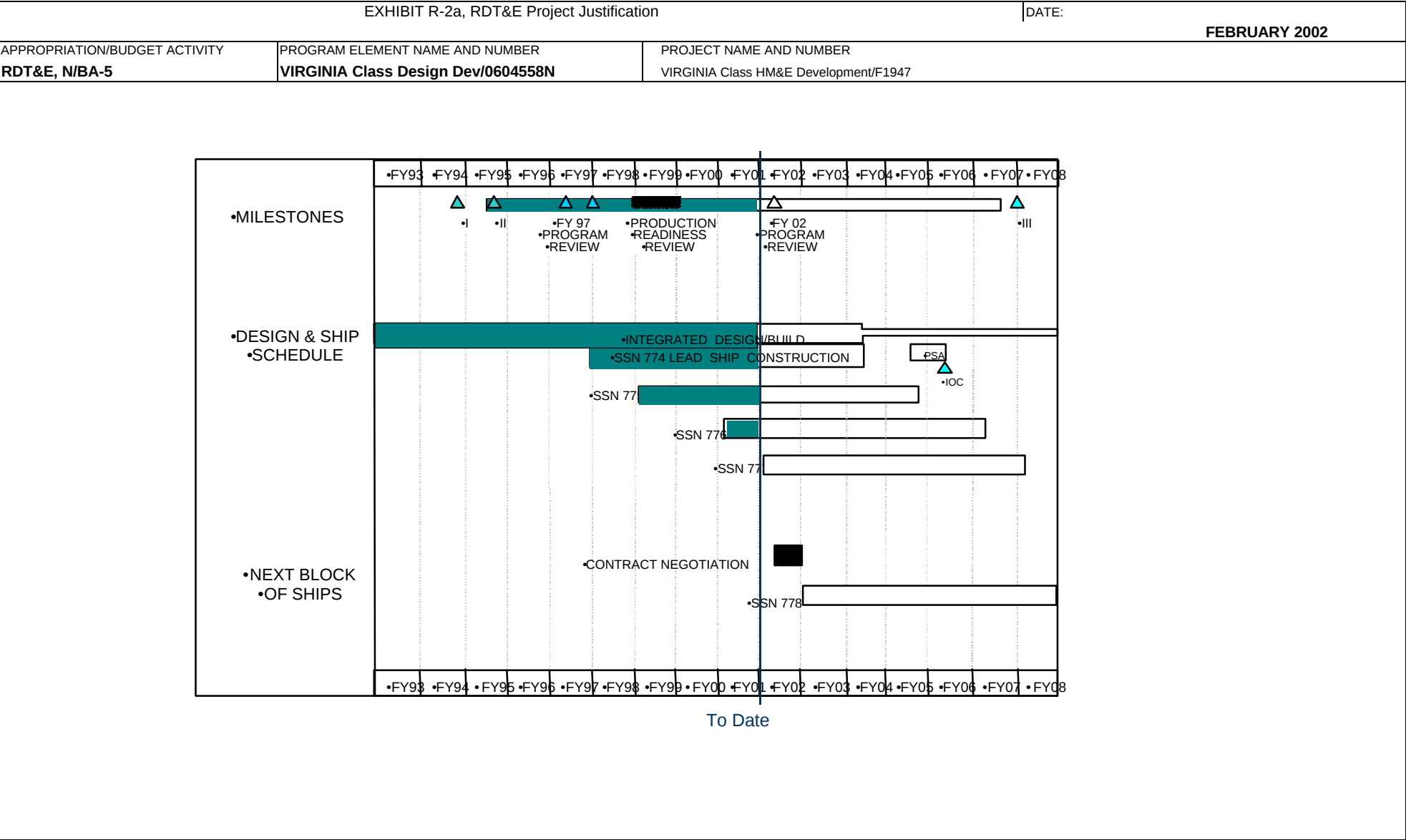
Exhibit R-2a, RDT&E Project Justification
(Exhibit R-2a, page 8 of 26)

UNCLASSIFIED

CLASSIFICATION: UNCLASSIFIED																																																																	
EXHIBIT R-2a, RDT&E Project Justification									DATE: FEBRUARY 2002																																																								
APPROPRIATION/BUDGET ACTIVITY RDT&E, N/BA-5	PROGRAM ELEMENT NAME AND NUMBER VIRGINIA Class Design Dev/0604558N				PROJECT NAME AND NUMBER VIRGINIA Class HM&E Development/F1947																																																												
B. (U) Other Program Funding Summary: (Dollars in Millions) <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>FY 2000</th> <th>FY 2001</th> <th>FY 2002</th> <th>FY 2003</th> <th>FY 2004</th> <th>FY 2005</th> <th>FY2006</th> <th>FY2007</th> <th>To Complete</th> <th>TOTAL Program</th> </tr> </thead> <tbody> <tr> <td>SCN Line 201300 PE: 0204281N</td> <td>744.475</td> <td>1766.917</td> <td>2505.050</td> <td>2495.643</td> <td>2441.453</td> <td>2914.326</td> <td>2929.180</td> <td>3692.433</td> <td>41292.163</td> <td>66859.120</td> </tr> <tr> <td>SCN Line 201310 PE: 0204281N</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>589.200</td> </tr> <tr> <td>O&M,N BA-2 1B2B PE: 0204283N</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>20.500</td> <td>20.500</td> <td>20.000</td> <td>20.000</td> <td>cont.</td> <td>cont.</td> </tr> <tr> <td>OPN BA-8 Line Item 094200</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>0.000</td> <td>21.548</td> <td>243.621</td> <td>293.958</td> <td>cont.</td> <td>cont.</td> </tr> </tbody> </table> (U) Related RDT&E: (U) PE 0603561N (Advanced Submarine System Development) (U) PE 0603570N (Advanced Nuclear Power Systems) (U) PE 0602121N (Surface Ship Technology) C. (U) Acquisition Strategy: The VIRGINIA Class Submarine Program has implemented Integrated Product and Process Development (IPPD). The traditional distinct phasing of the design process has been replaced with the continuous concurrent engineering IPPD process. The IPPD approach has facilitated a smoother transition from design to manufacturing, with Design expected to complete this year, and has reduced the number of changes typically encountered during construction of the Lead and early follow ships. In September 1997, Congress passed a law allowing the two companies to team for production of the first four VIRGINIA Class Submarines. Under the teaming agreement, Electric Boat remained the design yard for the VIRGINIA Class Submarine and Newport News Shipyard became a part of the IPPD process. The Program Office is expected to continue the EB/NNS teaming arrangement and is considering a block buy or multi-year procurement acquisition strategy for future ships starting in FY03. Future focus will be to complete ship design, continuance of Logistics products, Technology Insertion and testing for the Virginia Class. D. (U) Schedule Profile: See attached.												FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY2006	FY2007	To Complete	TOTAL Program	SCN Line 201300 PE: 0204281N	744.475	1766.917	2505.050	2495.643	2441.453	2914.326	2929.180	3692.433	41292.163	66859.120	SCN Line 201310 PE: 0204281N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	589.200	O&M,N BA-2 1B2B PE: 0204283N	0.000	0.000	0.000	0.000	20.500	20.500	20.000	20.000	cont.	cont.	OPN BA-8 Line Item 094200	0.000	0.000	0.000	0.000	0.000	21.548	243.621	293.958	cont.	cont.
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY2006	FY2007	To Complete	TOTAL Program																																																							
SCN Line 201300 PE: 0204281N	744.475	1766.917	2505.050	2495.643	2441.453	2914.326	2929.180	3692.433	41292.163	66859.120																																																							
SCN Line 201310 PE: 0204281N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	589.200																																																							
O&M,N BA-2 1B2B PE: 0204283N	0.000	0.000	0.000	0.000	20.500	20.500	20.000	20.000	cont.	cont.																																																							
OPN BA-8 Line Item 094200	0.000	0.000	0.000	0.000	0.000	21.548	243.621	293.958	cont.	cont.																																																							

CLASSIFICATION:

UNCLASSIFIED



UNCLASSIFIED

CLASSIFICATION:

UNCLASSIFIED

Exhibit R-3 Cost Analysis (page 1)								DATE: FEBRUARY 2002				
APPROPRIATION/BUDGET ACTIVITY RDT&E, N/BA-5			PROGRAM ELEMENT VIRGINIA Class Design Dev/0604558N			PROJECT NAME AND NUMBER VIRGINIA Class HM&E Development/F1947						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Component Development	SS/CPFF	EB-2112 Groton, CT	377.436	44.757	Various	36.913	Various	22.981	Various	51.067	533.154	533.154
Main Propulsion Complex Dev	SS/CPFF	EB-4030 Groton, CT	212.356	15.700	Various	21.000	Various	9.700	Various	12.900	271.656	271.656
Component Development	WR	NSWC Carderock, MD	316.250	37.555	11/00	34.727	11/01	31.337	11/01	90.990	510.859	N/A
Component Development	WR	NAWC Orlando, FL	16.406	2.471	11/00	3.217	11/01	2.591	11/01	15.052	39.737	N/A
Component Development	WR	NUWC Newport, RI	65.606	4.808	11/00	3.497	11/01	1.576	11/01	1.958	77.445	N/A
Technology Insertion	Various	Miscellaneous	14.951	3.091	Various	1.714	Various	17.552	Various	2.905	40.213	N/A
Component Development	Various	Miscellaneous	194.629	2.523	Various	2.330	Various	9.901	Various	12.042	221.425	N/A
Subtotal Product Development			1197.634	110.905		103.398		95.638		186.914	1694.489	N/A
Remarks:												
Development Support Equipment											0.000	
Software Development											0.000	
Training Development											0.000	
Integrated Logistics Support											0.000	
Configuration Management											0.000	
Technical Data											0.000	
GFE											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks: Not Applicable.												

R-1 SHOPPING LIST - Item No.

122

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 11 of 26)

UNCLASSIFIED

CLASSIFICATION:

UNCLASSIFIED

Exhibit R-3 Cost Analysis (page 2)								DATE: FEBRUARY 2002				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER						
RDT&E, N/BA-5			VIRGINIA Class Design Dev/0604558N			VIRGINIA Class HM&E Development/F1947						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Test & Evaluation	WR	NSWC Carderock, MD	3.493	5.914	11/00	4.526	11/01	13.952	11/01	135.762	163.647	N/A
Test & Evaluation	WR	NUWC, Newport, RI	6.791	2.186	11/00	2.665	11/01	8.856	11/01	83.682	104.180	N/A
Test & Evaluation	C/CPAF	EG&G-C6411 Rockville, MD	3.414	1.370	Various	0.000	Various	0.000	Various	0.000	4.784	27.588
Test & Evaluation	Various	Miscellaneous	6.750	1.024	Various	4.253	Various	5.744	Various	149.574	167.345	N/A
Subtotal T&E			20.448	10.494		11.444		28.552		369.018	439.956	N/A
Remarks:												
Contractor Support Services	C/CPAF	EG&G-C6411 Rockville, MD	15.681	5.856	Various	0.000	Various	0.000	Various	0.000	21.537	21.537
Contractor Spt Services/Award Fees	C/CPAF	EG&G-C6411 Rockville, MD	1.032	0.000	Various	0.000	Various	0.000	Various	0.000	1.032	1.032
Contractor Support Services	Various	Miscellaneous	19.232	0.000	Various	5.261	Various	4.551	Various	43.451	72.495	72.495
Subtotal Management			35.945	5.856		5.261		4.551		43.451	95.064	
Remarks:												
Total Cost			1254.027	127.255		120.103		128.741		599.383	2229.509	N/A
Remarks:												

R-1 SHOPPING LIST - Item No. 122

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 12 of 26)

UNCLASSIFIED

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification					DATE: FEBRUARY 2002					
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT NAME AND NUMBER		PROJECT NAME AND NUMBER						
RDT&E, N/BA-5		VIRGINIA Class Design Dev/0604558N		VIRGINIA Class Combat System Development/F1950						
COST (\$ in Millions)		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Project Cost		73.387	79.707	92.907	62.390	51.839	45.609	59.299	0.000	1065.996
RDT&E Articles Qty										
A. (U) Mission Description and Budget Item Justification: (U) This project encompasses the top level systems development, test and integration into the ship of the VIRGINIA Class Submarine C3I System (formerly referred to as Combat Systems), which includes multiple subsystems. The scope of the system is expanded from Sonar and Combat Control subsystems to include AN/BLQ-10 Electronic Support (ES) Measures, Exterior Communications, Submarine Regional Warfare System, Navigation, Total Ship Monitoring, Imaging, Tactical Acoustic Communications, Radar, Interior Communications, Tactical Support Devices, Fiber Optic Cable Subsystem, and Special Purpose Subsystems, such as Battle Force Team Trainer and others. VIRGINIA Class Submarine specific development efforts including requirements definition, software, hardware development, software/hardw test, prototype production, and electronic integration as well as physical integration into the platform. (U) VIRGINIA Class Submarine implementation approach is based on Open System, Commercial-off-the-Shelf (COTS) Non-Developmental Items or subsystems. The program leverages on-going subsystems developments or developing new subsystems where needed to satisfy VIRGINIA Class requirements. The recurring cost of VIRGINIA Class Submarine C3I Systems is being reduced to meet the program's affordability goals. Modifications to many subsystems must be developed to: (1) reduce the shipbuilding and construction recurring costs through the use of COTS components; (2) use proven computer technologies to evolve to an Open System design; (3) enhance capabilities to support expanded operational requirements, reduced manning, and reduced shipboard component footprint. (U) To meet the collective future threat, the submarine force must operate as effectively in littoral regions as it traditionally has in open ocean. Close coordination with surface battle groups and airborne units is essential to mission accomplishment. To meet the VIRGINIA Class Submarine mission, the following capabilities are provided by the VIRGINIA Class Submarine C3I System: (1) Passive and Active detection of multiple contacts, including early warning threat determination through processing and analysis of sensor data; (2) classification of sensor data for the purpose of identifying contacts; (3) localization (tracking) of contacts through target motion analysis; (4) preset, launch, and control of weapons and countermeasures; (5) improved communication and connectivity with other battle group elements, airborne units, and special operations forces; (6) incorporation of vertical launch system to enhance strike warfare; and (7) more effective covert surveillance through video imaging with onboard digital enhancement capabilities, and improved electronic warfare analysis capabilities.										

R-1 SHOPPING LIST - I122

Exhibit R-2a, RDT&E Project Justification
 (Exhibit R-2a, page 13 of 26)

UNCLASSIFIED

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification		DATE: FEBRUARY 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, N/BA-5	PROGRAM ELEMENT NAME AND NUMBER VIRGINIA Class Design Dev/0604558N	PROJECT NAME AND NUMBER VIRGINIA Class Combat System Development/F1950
(U) Accomplishments and Plans: 1. (U) FY 2001 ACCOMPLISHMENTS: • (U) (\$24.186M) System level development activities continued in the following areas: development and validation of C3I System test and evaluation procedures to support integration testing and installation/test into the platform; conducted system engineering functions such as requirements management, interface control, test and evaluation planning to support formal DT/OT; and began C3I System Integration and Interface Operability Testing. Began development of system changes identified by integration efforts. Continued development of technology refreshment changes to C3I System/subsystems. • (U) (\$49.201M) Continued detailed S/CC/A engineering support to shipyard intra- and inter-subsystem integration. Conducted operability and integration testing. Continued development of technology refreshment changes to S/CC/A subsystems. Began integration of Tactical Tomahawk capability into S/CC/A. 2. (U) FY 2002 PLAN: • (U) (\$44.365M) Complete initial system level development activities continue in the following areas: development and validation of C3I System test and evaluation procedures to support integration testing and installation/test into the platform; conduct system engineering functions such as requirements management, interface control, test and evaluation planning to support formal DT/OT; and complete C3I System Integration and Interface Operability Testing. Continue development of system changes identified during integration efforts. Continue development of technology refreshment changes to C3I System/subsystems. • (U) (\$35.342M) Complete detailed S/CC/A engineering support to shipyard intra- and inter-subsystem integration. Continue development of S/CC/A subsystem changes identified during integration efforts. Continue development of deliveries for technology refreshment changes to S/CC/A subsystems. Continue integration of Tactical Tomahawk capability into S/CC/A.		

R-1 SHOPPING LIST - Item No.

122

Exhibit R-2a, RDT&E Project Justification
(Exhibit R-2a, page 14 of 26)

UNCLASSIFIED

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification		DATE: FEBRUARY 2002
APPROPRIATION/BUDGET ACTIVITY RDTE, N/BA-5	PROGRAM ELEMENT NAME AND NUMBER VIRGINIA Class Design Dev/0604558N	PROJECT NAME AND NUMBER VIRGINIA Class Combat System Development/F1950
3. (U) FY 2003 PLAN: • (U) (\$57.511M) Continue development of system changes identified during integration efforts. Continue development of technology refreshment changes to C3I System/subsystems. • (U) (\$35.396M) Continue development of S/CC/A subsystem changes identified during integration efforts. Continue development of technology refreshment changes to S/CC/A subsystems. Continue integration of Tactical Tomahawk capability into S/CC/A.		

R-1 SHOPPING LIST - Item No.

122

Exhibit R-2a, RDT&E Project Justification
(Exhibit R-2a, page 15 of 26)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification						DATE: FEBRUARY 2002				
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT NAME & NUMBER			PROJECT NAME AND NUMBER					
RDT&E, N/BA-5		VIRGINIA CLASS DESIGN DEV/0604558N			VIRGINIA Class Combat System Development/F1950					
B. (U) Other Program Funding Summary: (Dollars in Millions)										
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Complete	TOTAL Program
SCN Line 201300 PE: 0204281N	744.475	1766.917	2505.050	2495.643	2441.453	2914.326	2929.180	3692.433	41292.163	66859.120
SCN Line 201310 PE: 0204281N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	589.200
O&M,N BA-2 1B2B PE: 0204283N	0.000	0.000	0.000	0.000	20.500	20.500	20.000	20.000	cont.	cont.
OPN BA-8Line Item 094200	0.000	0.000	0.000	0.000	0.000	21.548	243.621	293.958	cont.	cont.
(U) Related RDT&E:										
(U) PE 0603504N (Advanced Submarine Combat Systems Development)										
(U) PE 0603561N (Advanced Submarine System Development)										
(U) PE 0603562N (Submarine Tactical Warfare Systems)										
(U) PE 0603570N (Advanced Nuclear Power Systems)										
(U) PE 0604503N (Submarine System Equipment Development)										
(U) PE 0604574N (Navy Tactical Computer Resources)										
(U) PE 0604777N (Navigation/ID Systems)										
(U) PE 0101226N (Submarine Acoustic Warfare Development)										
(U) PE 0604562N (Submarine Tactical Warfare System)										
(U) PE 0604524N (Submarine Combat System)										

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification		DATE: FEBRUARY 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, N/BA-5	PROGRAM ELEMENT NAME AND NUMBER VIRGINIA Class Design Dev/0604558N	PROJECT NAME AND NUMBER VIRGINIA Class Combat System Development/F1950
C. (U) Acquisition Strategy: The VIRGINIA Class Submarine Program has implemented Integrated Product and Process Development (IPPD). The traditional distinct phasing of the design process has been replaced with the continuous concurrent engineering IPPD process. The IPPD approach has facilitated a smoother transition from design to manufacturing, with Design expected to complete this year, and has reduced the number of changes typically encountered during construction of the Lead and early follow ships. In September 1997, Congress passed a law allowing the two companies to team for production of the first four VIRGINIA Class Submarines. Under the teaming agreement, Electric Boat remained the design yard for the VIRGINIA Class Submarine and Newport News Shipyard became a part of the IPPD process. The Program Office is expected to continue the EB/NNS teaming arrangement and is considering a block buy or multi-year procurement acquisition strategy for future ships starting in FY03. Future focus will be to complete ship design, continuance of Logistics products, Technology Insertion and testing for the Virginia Class. D. (U) Schedule Profile: See attached.		

R-1 SHOPPING LIST - Item No.

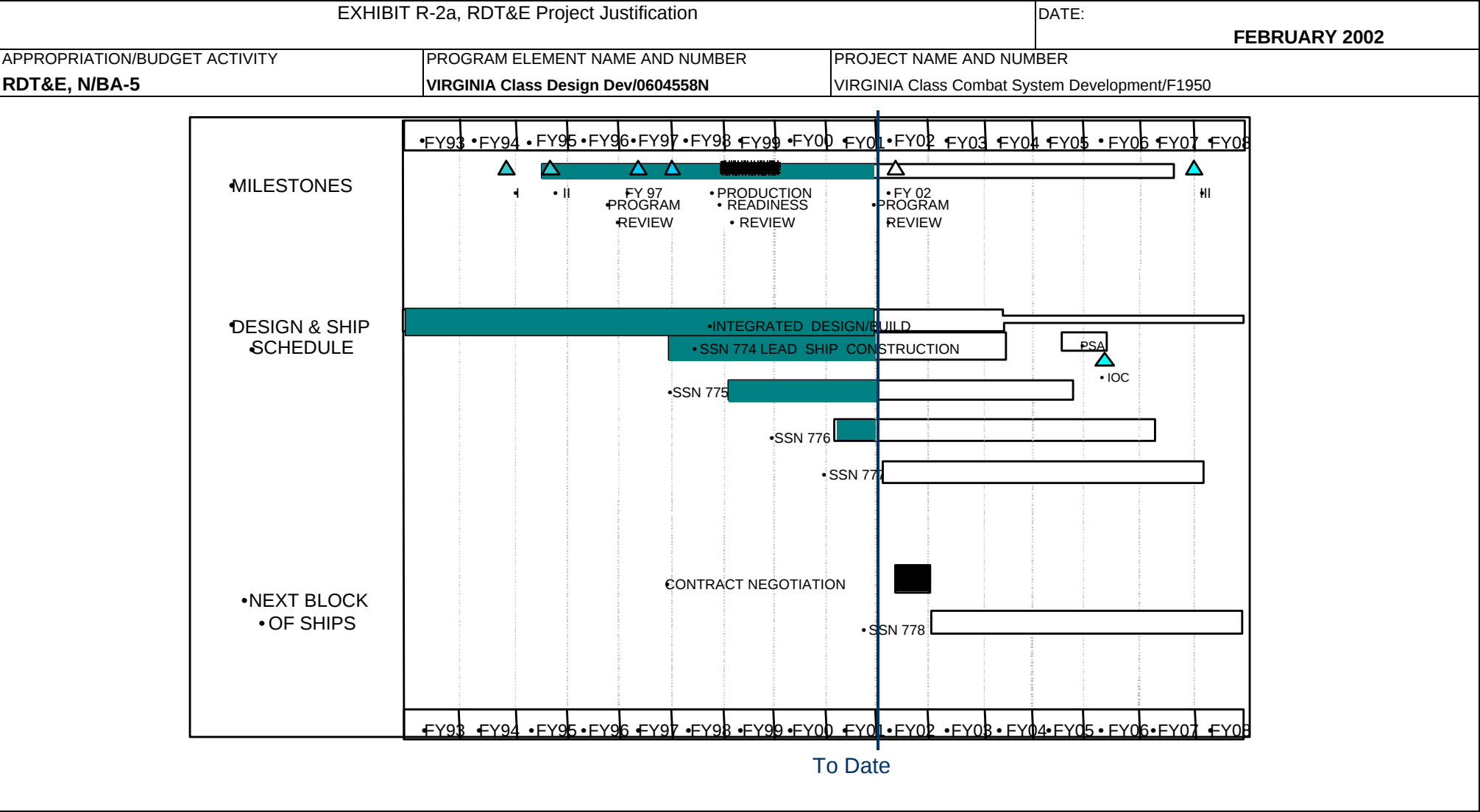
122

Exhibit R-2a, RDT&E Project Justification
(Exhibit R-2a, page 17 of 26)

UNCLASSIFIED

CLASSIFICATION:

UNCLASSIFIED



R-1 SHOPPING LIST - Item No. 122

Exhibit R-2a, RDT&E Project Justification
(Exhibit R-2a, page 18 of 26)

UNCLASSIFIED

CLASSIFICATION:

UNCLASSIFIED

Exhibit R-3 Cost Analysis (page 1)					DATE: FEBRUARY 2002							
VIRGINIA Class Design Dev/0604558N												
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT		PROJECT NAME AND NUMBER							
RDT&E, N/BA-5			0604558N		VIRGINIA Class Combat System Development/F1950							
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
C3I Prime Contract E&MD Total	C/CPAF	Lockheed Manassas, VA	194.543	23.139	Various	6.799	Various	12.878	Various	6.169	243.528	243.528
C3I Prime Contract E&MD Award Fee	C/CPAF	Lockheed Manassas, VA	4.608	1.400	Various	1.400	Various	0.300	Various	0.408	8.116	8.116
C3I Prime Contract Post Delivery	C/FFP	Lockheed Manassas, VA	1.000	8.100	Various	8.619	Various	3.135	Various	10.411	31.265	31.265
Advanced Display Sys (AN/UYQ-70)	SS/CPFF										0.000	
	CPIF	Lockheed St. Paul, MN	20.494	1.490	11/00	2.000	11/01	1.900	11/02	5.400	31.284	31.284
Multi-Purpose Processor	SS/CPIF	Digital Sys Fairfax, VA	41.449								41.449	41.449
Multi-Purpose Processor	SS/CPIF	Lockheed Manassas, VA	1.755								1.755	1.755
Photonics	C/CPIF	Kollmorgen Northhampton, MA	23.174	0.090	11/00	0.194	11/01	0.204	11/02	1.060	24.722	24.722
Non-Penetrating Periscope	C/CPIF	Kollmorgen Northhampton, MA	4.060								4.060	4.060
Electronic Support Measures	C/FFP	Lockheed Syracuse, NY	37.475	0.195	11/00	0.203	11/01	0.209	11/02	0.876	38.958	38.958
Platform Integration	SS/CPFF	EB Corp Groton, CT	20.095	1.979	11/00	5.820	11/01	2.700	11/02	11.150	41.744	41.744
Platform Integration	SS/CPFF	NNews Shipbuilding NNews, VA	2.725	0.340							3.065	3.065
Integrated Electronic Mast	SS/CPIF	Goleta Portsmouth, RI	8.897								8.897	8.897
Tactical Simulator	SS/CPFF	Goleta Portsmouth, RI	2.750								2.750	2.750
High Frequency Sail Array	SS/CPFF	Applied Research Austin, TX	3.273								3.273	3.273
Navigation/Radar	SS/CPFF	Sperry Corp Charlottesville, VA	6.153								6.153	6.153
Technology Refreshment	Various	Various/TBD		3.196	Various	6.036	Various	10.384	Various	44.899	64.515	N/A
Open System Module	SS/CPFF	UNISYS Corp St. Paul, MN	2.500								2.500	2.500
Technical Direction Agent	N/A	NUWC Newport, RI	155.388	16.181	Various	12.280	Various	9.660	Various	38.718	232.227	N/A

R-1 SHOPPING LIST - Item No. 122

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 19 of 26)

UNCLASSIFIED

CLASSIFICATION:

UNCLASSIFIED

Exhibit R-3 Cost Analysis (page 2)							DATE: FEBRUARY 2002						
VIRGINIA Class Design Dev/0604558N													
APPROPRIATION/BUDGET ACTIVITY				PROGRAM ELEMENT		PROJECT NAME AND NUMBER							
RDT&E, N/BA-5				0604558N		VIRGINIA Class Combat System Development/F1950							
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract	
Technology Refreshmnet	C/CPFF	Progeny Systems,Manassas,VA		6.811	11/00	2.000	11/01	1.000	11/01		9.811	9.811	
Systems Engineering	N/A	NSWC Cardock, MD	3.355	0.315	11/00	0.345	11/01	0.350	11/02	1.000	5.365	N/A	
Systems Engineering	N/A	NSWC Crane, IN	2.845	0.205	11/00	0.205	11/01	0.210	11/02	0.600	4.065	N/A	
Systems Engineering	N/A	SSC Charleston, SC	2.333								2.333	N/A	
Systems Engineering	N/A	SSC San Diego, CA	1.535								1.535	N/A	
Systems Engineering	N/A	NUWC Keyport, WA	2.474	1.098	11/00	1.085	01/01	1.085	11/02	2.500	8.242	N/A	
Miscellaneous	Various	Various	25.367	5.440	Various	28.271	Various	45.798	Various	58.673	163.549	N/A	
Subtotal Product Development			568.248	69.979		75.257		89.813		181.864	985.161	N/A	
Remarks:													
Development Support Equipment											0.000		
Software Development											0.000		
Training Development											0.000		
Integrated Logistics Support											0.000		
Configuration Management											0.000		
Technical Data											0.000		
GFE											0.000		
Subtotal Support			0.000	0.000		0.000				0.000	0.000		
Remarks: Not Applicable.													

UNCLASSIFIED

CLASSIFICATION:

UNCLASSIFIED

Exhibit R-3 Cost Analysis (page 3)							DATE: FEBRUARY 2002					
VIRGINIA Class Design Dev/0604558N												
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT		PROJECT NAME AND NUMBER							
RDT&E, N/BA-5			0604558N		VIRGINIA Class Combat System Development/F1950							
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation											0.000	
Operational Test & Evaluation											0.000	
Test & Evaluation	Various	Various	0.000			0.490	Various	0.300	Various	21.986	22.776	N/A
Tooling											0.000	
GFE											0.000	
Subtotal T&E			0.000	0.000		0.490		0.300		21.986	22.776	
Remarks:												
Contractor Engineering Support												
Contractor Support Services/ETS	C/CPAF	EG&G Rockville, MD				3.960	Various	2.794	Various	15.287	22.041	22.041
Contractor Support Services/ETS	C/CPAF	EG&G Rockville, MD	11.082	3.135	Various						14.217	14.217
CSS/ETS Award Fee	C/CPFF	EG&G Rockville, MD	0.906	0.273	Various						1.179	1.179
Contractor Support Services/ETS	C/CPFF	EG&G Rockville, MD	8.857								8.857	8.857
Contractor Support Services/ETS	C/CPFF	SWL Inc. Vienna, VA	5.705								5.705	5.705
Contractor Support Services/ETS	C/CPFF	American Sys Chantilly, VA	2.099								2.099	2.099
Miscellaneous	Various	Various	3.961								3.961	3.961
Program Management Support											0.000	
Travel											0.000	
Subtotal Management			32.610	3.408		3.960		2.794		15.287	58.059	
Remarks:												
Total Cost			600.858	73.387		79.707		92.907		219.137	1065.996	N/A
Remarks:												

R-1 SHOPPING LIST - Item No. 122

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 21 of 26)

UNCLASSIFIED

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification					DATE: FEBRUARY 2002					
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NAME AND NUMBER		PROJECT NAME AND NUMBER							
RDT&E, N/BA-5	VIRGINIA Class Design Dev/0604558N		SUBMARINE TRAINING DEVICE MODS/ F3062							
COST (\$ in Millions)		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY2006	FY2007	Cost to Complete	Total Cost
Project Cost		N/A	N/A	16.605	6.458	4.071	0.000	0.000	0.000	27.134
RDT&E Articles Qty										

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: To achieve desired submarine force readiness levels, it is necessary to construct highly sophisticated shorebased training facilities capable of training submarine combat system team personnel in all aspects of submarine approach, attack and surveillance operations in a controlled, simulated environment.

The Combat Control System (CCS) MK 1 and CCS MK 2 are installed on SSN and SSBN (TRIDENT) Class submarines, and there are currently plans to further upgrade these systems with the next H/W and S/W revisions which provide enhanced warfighter capabilities. The Tactical Acoustic Rapid COTS (commercial-off-the-shelf) Insertion (ARCI) Phased upgrades are also being installed with the next revision which provides enhanced warfighter capabilities. These CCS and ARCI upgrades directly impact shore based Team Trainers. In addition, the Advanced Processing Builds (APB), which feed technology insertion into the CCS/Acoustic development, also impact the trainers.

The SMMTT supports operator, employment, strike, and Battle Group training for enlisted and officer pipelines. The SMMTT provides individual operators and combat teams the opportunity to train ashore, prior to, and between deployments. The shore based training provides a means of maintaining team proficiency in stand alone or in combined team mode prior to ship deployment.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 2001 PLANS:

(U) n/a

UNCLASSIFIED

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification						DATE: FEBRUARY 2002																										
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT NAME AND NUMBER			PROJECT NAME AND NUMBER																											
RDT&E, N/BA-5		VIRGINIA Class Design Dev/0604558N			SUBMARINE TRAINING DEVICE MODS/ F3062																											
2. (U) FY 2002 Plan: (U) n/a 3. (U) FY 2003 Plan: (U) (\$16.605M) Develop / integrate new software capabilities and system interfaces. Initiate development of display software. B. (U) Other Program Funding Summary: (Dollars in Millions) <table><thead><tr><th></th><th>FY 2000</th><th>FY 2001</th><th>FY 2002</th><th>FY 2003</th><th>FY 2004</th><th>FY 2005</th><th>FY2006</th><th>FY2007</th><th>Complete</th><th>Program</th></tr></thead><tbody><tr><td>OPN Line 566100 PE: 0804731N</td><td>23.184</td><td>30.084</td><td>17.233</td><td>12.702</td><td>7.166</td><td>27.384</td><td>25.893</td><td>13.841</td><td>cont.</td><td>cont.</td></tr></tbody></table> (U) Related RDT&E: n/a C. (U) ACQUISITION STRATEGY: The SMMTT program phase 3 software development is accounted for in this RDT&E line. All production kits and software procured in OPN BLI 566100 PE 0804731N. D. (U) SCHEDULE PROFILE: See attached.												FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY2006	FY2007	Complete	Program	OPN Line 566100 PE: 0804731N	23.184	30.084	17.233	12.702	7.166	27.384	25.893	13.841	cont.	cont.
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY2006	FY2007	Complete	Program																						
OPN Line 566100 PE: 0804731N	23.184	30.084	17.233	12.702	7.166	27.384	25.893	13.841	cont.	cont.																						

UNCLASSIFIED

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification

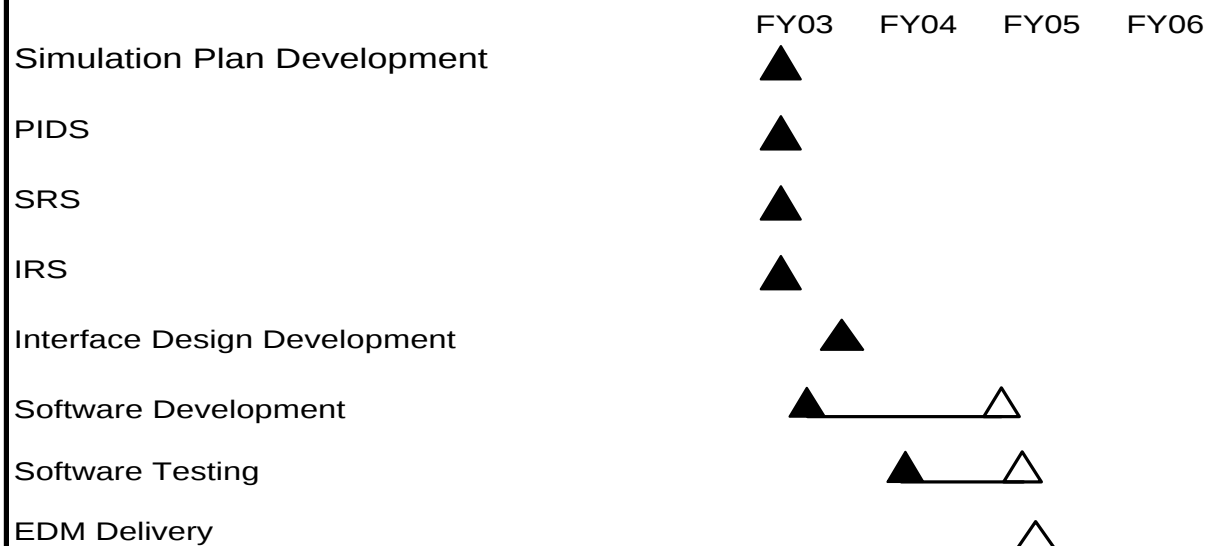
DATE:

FEBRUARY 2002

APPROPRIATION/BUDGET ACTIVITY

PROGRAM ELEMENT NAME AND NUMBER

PROJECT NAME AND NUMBER

RDT&E, N/BA-5**VIRGINIA Class Design Dev/0604558N****SUBMARINE TRAINING DEVICE MODS/ F3062****SMMTT Phase 3 Schedule**

R-1 SHOPPING LIST - Item No. 122

Exhibit R-2a, RDT&E Project Justification
 (Exhibit R-2a, page 24 of 26)

UNCLASSIFIED

CLASSIFICATION:

UNCLASSIFIED

Exhibit R-3 Cost Analysis (page 1)								DATE: FEBRUARY 2002				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER						
RDT&E, N/BA-5			VIRGINIA Class Design Dev/0604558N			SUBMARINE TRAINING DEVICE MODS/ F3062						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Component Development	WR/RC	NSWCCD Bethesda, MD						16.605	various	10.529	27.134	N/A
Subtotal Product Development			0.000	0.000		0.000		16.605		10.529	27.134	
Remarks:												
Development Support Equipment											0.000	
Software Development											0.000	
Training Development											0.000	
Integrated Logistics Support											0.000	
Configuration Management											0.000	
Technical Data											0.000	
GFE											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												

R-1 SHOPPING LIST - Item No. 122

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 25 of 26)

UNCLASSIFIED

CLASSIFICATION:

UNCLASSIFIED

Exhibit R-3 Cost Analysis (page 3)								DATE: FEBRUARY 2002				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER						
RDT&E, N/BA-5			VIRGINIA Class Design Dev/0604558N			SUBMARINE TRAINING DEVICE MODS/ F3062						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation											0.000	N/A
Operational Test & Evaluation											0.000	
Tooling											0.000	
GFE											0.000	
Subtotal T&E			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
Contractor Engineering Support											0.000	
Government Engineering Support											0.000	N/A
Program Management Support											0.000	
Travel											0.000	
Labor (Research Personnel)											0.000	
Overhead											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
Total Cost			0.000	0.000		0.000		16.605		10.529	27.134	N/A
Remarks:												

R-1 SHOPPING LIST - Item No. 122

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 26 of 26)

UNCLASSIFIED