

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011										
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE					PROJECT					
1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)		PE 0603561N: (U)ADVANCED SUBMARINE SYSTEM DEVELOPMENT					3220: SBSD Advanced Submarine System Development					
COST (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
3220: SBSD Advanced Submarine System Development		363.371	493.028	781.575	-	781.575	857.497	1,064.225	786.691	748.848	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification												
<p>The Sea Based Strategic Deterrent (SBSD) Advanced Submarine System Development program funding request supports the necessary design, systems engineering, prototyping, and vendor qualification activities needed to execute the schedule for Common Missile Compartment (CMC) design, whole ship design, and component technologies development for the next generation US ballistic missile submarine. This RDT&E program supports cooperation with the United Kingdom (UK) to maintain strategic deterrence, based on a single effort to develop a common missile compartment as agreed by the UK Secretary of State for Defense and the US Secretary of Defense in 2009.</p> <p>The OHIO Replacement program strategy is to maximize the re-use of existing OHIO systems and new designs from VIRGINIA Class (as applicable), focus on Life Cycle Total Ownership Cost (TOC) affordability and meet the higher standards required for this SSBN to achieve mission success in a challenging environment.</p> <p>The following key activities support a ship acquisition program to replace the OHIO Class SSBNs:</p> <ol style="list-style-type: none"> 1. Design and development of a missile compartment, launch system and strategic support systems to meet US strategic requirements while cooperating with the UK on modernizing its strategic deterrent in accordance with Presidential direction (December 2006). 2. Analysis of Alternatives (AOA) completed with final brief to the Office of the Secretary of Defense (OSD) on May 20, 2009. The final AOA Report was completed in September 2009. AOA Sufficiency Review Letter was signed by OSD Director, Cost Assessment & Program Evaluation on December 8, 2009. The program completed a Milestone A (MSA) Defense Acquisition Board (DAB) review on December 9, 2010. The Acquisition Decision Memorandum (ADM) is expected to be signed in February 2011, approving MSA, and authorizing the program to enter the Technology Development phase. 3. Concept and System Definition for remaining portions of the ship will maintain synchronization with the CMC design efforts. This effort will be accomplished by the design/ build/ sustain approach modeled after the VIRGINIA Class program. 4. Development of advanced submarine platform technologies to provide capabilities needed to enhance platform operational effectiveness and minimize life cycle cost. 												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)												
<i>Title:</i> SBSD Advanced Submarine System Development												
<i>Description:</i> SBSD Concept and System Definition Prototyping, and Technology Development Efforts.												
		FY 2010	FY 2011	FY 2012								
		363.371	493.028	781.575								
		0	0	0								
		<i>Articles:</i>										
		0	0	0								

UNCLASSIFIED

<p>Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy</p>		<p>DATE: February 2011</p>		
<p>APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)</p>		<p>PROJECT 3220: SBSD Advanced Submarine System Development</p>		
<p>R-1 ITEM NOMENCLATURE PE 0603561N: (U)ADVANCED SUBMARINE SYSTEM DEVELOPMENT</p>				
<p>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</p> <p>The SBSD program supports design, systems engineering, prototyping, and vendor qualification activities needed to develop CMC design, the OHIO Replacement whole ship design, and component development. OHIO Replacement design efforts support decisions on missile tube hull insert manufacturing in FY 2010 and missile compartment construction strategy down-select in FY 2011. The SBSD design timelines are based on the approach proven on VIRGINIA Class Program, adjusted for the additional complexity of a missile compartment and Strategic Weapons Systems (SWS). Planned technical studies and prototyping are necessary to reduce risks associated with updating SSBN system designs for current technical standards and demonstrating design feasibility of technical options to inform the establishment of detailed requirements.</p> <p>The Navy is investing \$150M (\$50M/year in FY 2012-2014) in Design for Affordability (DFA) initiatives similar to those employed successfully for VIRGINIA Class, but will be further tailored to the uniqueness of OHIO Replacement to drive down overall program costs. Efforts will focus on reducing ship construction costs through implementing more effective design features to produce a more affordable/produced class. As part of this effort, alternative contracting strategies will be examined.</p> <p>Activities planned for FY 2010, FY 2011 and FY 2012 include the design of a common missile compartment to satisfy the requirements of both the US and the UK, to mature required technologies, and to re-host the TRIDENT II D5 Strategic Weapon System (Launcher, Fire Control and Navigation) while ensuring no degradation to D5 security, safety, and performance. In addition, whole ship design efforts are focused on technologies requiring significant development times and those technologies with early design impacts. These include propulsor development, ship control (e.g., control surfaces), and ship signatures. These technologies are critical to understand stealth capabilities for a ship class that will be in service until the 2080s. Ship concept design efforts include important pre-construction activities such as trade studies of ship requirements, risk characterization of technology options, improvement and validation of performance prediction tools, and improvement of design tools. Technology development will address maturation of technologies that must be mature to support ship design and construction schedules such as the propulsor, maneuvering/ship control, and signatures.</p> <p>FY 2010 Accomplishments: Common Missile Compartment (CMC) Design and Prototyping (\$116.2M) - Initiated efforts for the design and development of the CMC to include: related sections of the ship specification, concept system design, prototype missile tube concept design and prototype missile tube/barrel quad pack design, and CMC system diagrams. Completed efforts related to full scale welding feasibility demonstration of four representative missile tube barrel quarter crown assemblies. Initiated casting vendor qualification and manufacturing fixture prototyping for validation of missile tube to missile tube quad production techniques. Fixture design and prototype efforts of the E Fixture (missile tube crown assembly; prototype), F Fixture (missile tube/hull cylinder integration; concept design), H Fixture (automated frame fabrication; concepts) and I Fixture (pressure hull shell fabrication; concepts). Initiated system engineering efforts to define the required CMC build strategy. Commence planning activities for CMC test facilities.</p>		<p>FY 2010</p>	<p>FY 2011</p>	<p>FY 2012</p>

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603561N: <i>(U)ADVANCED SUBMARINE SYSTEM DEVELOPMENT</i>	PROJECT 3220: <i>SBSD Advanced Submarine System Development</i>
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		
<p>Performed facility concept studies and facility outfit planning work. Initial exploration of robotic welding capabilities and techniques to support missile tube to keel weld butt.</p> <p>Ship Studies and Design (\$48.0M) - Initiated efforts for Rest of Ship concept development, Systems Integration, component design, system definition documents, system diagrams, ship arrangements, construction drawings, and studies to support CMC interfaces with the shipbuilder.</p> <p>NAVSEA R&D and Prototyping (\$25.0M) - Initiated Technology Development efforts for corrosion control, undersea sensor suite, propulsor, shafting system, hydrodynamics, maneuvering, ship control, composites, component development, and ship signatures.</p> <p>Test and Evaluation (T&E) (\$1.2M) - Initiated efforts to identify T&E requirements for the program and interfaced with OSD oversight organizations for T&E.</p> <p>Strategic Weapons System (SWS) Integration (\$98.6M) - Initiated system engineering efforts for the development of SWS system diagrams as they interface with the CMC. Initiated concept and design work to develop a missile launch tube test facility, test stand and refurbishment of a test vehicle to support launch system prototype effort and qualification.</p> <p>Systems Engineering / Program Management (\$74.4M) - Provided technical oversight including Program Office management and technical support from government laboratories for review, analysis and modeling.</p> <p>FY 2011 Plans:</p> <p>CMC Design and Prototyping (\$209.4M) - Continue efforts for the design and development of the CMC to include; related sections of the ship specification, commence prototype missile tube detailed design and prototype missile quad pack design, and CMC system diagrams. On-site installation of the missile tube integration fixture and execution of the missile tube quarter crown and barrel prototype quad. Fixture design and prototype efforts. E Fixture (missile tube crown assembly), F Fixture (missile tube/hull cylinder integration; preliminary design), H Fixture (automated frame fabrication; concepts continued) and I Fixture (pressure hull shell fabrication; concepts continued). Continue casting vendor qualification and concept design of missile tube quad to hull manufacturing prototypes to validate planned missile compartment production techniques. Continue system engineering efforts to refine the required CMC build strategy. Conduct missile tube requirements review and commence missile tube detailed design. Continue planning activities for CMC test facilities. Perform facility development studies and facility outfit planning activities. Initial planning, development and testing of missile tube to keel robotic welding.</p>		
FY 2010	FY 2011	FY 2012

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603561N: <i>(U)ADVANCED SUBMARINE SYSTEM DEVELOPMENT</i>	PROJECT 3220: <i>SBSD Advanced Submarine System Development</i>
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		
<p>Ship Studies and Design (\$47.6M) - Continue Rest of Ship concept development, system integration, component design, system definition documents, system diagrams, ship arrangements, construction drawings, and studies to support CMC interfaces with the shipbuilder.</p> <p>NAVSEA R&D and Prototyping (\$35.1M) - Continue Technology Development efforts for corrosion control, undersea sensor suite, propulsor, shafting system, hydrodynamics, maneuvering, ship control, composites, component development, and ship signatures.</p> <p>T&E (\$2.9M) - Continue efforts to identify T&E requirements for the program and interface with OSD oversight organizations for T&E.</p> <p>SWS Integration (\$102.6M) - Continue system engineering efforts for the development of SWS system diagrams as they interface with the CMC. Continue concept and design work to develop a missile launch tube test facility and test stand including refurbishment of a test vehicle to support launch system prototype effort and qualification. Conduct evaluation of Missile gas temperature test data acquired during Demonstration and Shakedown Operations (DASO) to verify missile performance in re-hosted environment. Continue system engineering design efforts associated with the physical arrangement drawings of missile tubes and SWS hardware within the CMC and Missile Control Center (MCC).</p> <p>Systems Engineering / Program Management (\$95.4M) - Continue to provided technical oversight including Program Office management and technical support from government laboratories for review, analysis and modeling. Commence Design for Affordability (DFA) planning activities.</p> <p>FY 2012 Plans: CMC Design and Prototyping (\$297.1M) - Continue efforts for the design and development of the CMC to include; completion of sections of the CMC ship specification, drawings of the first article missile tube quad pack, and CMC system diagrams. Approve missile tube drawings and finalize CMC arrangements. Continue validation of missile tube to missile tube quad pack production techniques. Continue validation and verification of the casting design and preliminary design of the missile tube quad to hull manufacturing fixture prototypes to validate planned missile compartment production techniques. E Fixture (missile tube crown refit for 87 inch tube). F Fixture (missile tube/hull cylinder integration; detailed design), H Fixture (automated frame fabrication; preliminary design) and I Fixture (pressure hull shell fabrication; preliminary design). Continue system engineering efforts to define the required CMC testing during the build cycle. Commence detailed planning activities for CMC test facilities. Perform facility arrangements, test items and facility outfit detailed planning activities. Issue facility design award. Continue development and testing of missile tube to keel robotic welding techniques to support process certification.</p>		
FY 2010	FY 2011	FY 2012

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603561N: <i>(U)ADVANCED SUBMARINE SYSTEM DEVELOPMENT</i>	PROJECT 3220: <i>SBSD Advanced Submarine System Development</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
<p>Ship Studies and Design (\$41.3M) - Continue Rest of Ship concept development, system integration, component design, system definition documents, system diagrams, ship arrangements, construction drawings, and studies to support CMC interfaces with the shipbuilder.</p> <p>NAVSEA R&D and Prototyping (\$128.5M) - Continue Technology Development efforts for corrosion control, undersea sensor suite, propulsor, shafting system, hydrodynamics, maneuvering, ship control, composites, component development, and ship signatures.</p> <p>T&E (\$3.6M) - Continue efforts to identify T&E requirements for the program and interface with OSD oversight organizations for T&E.</p> <p>SWS Integration (\$151.7M) - Continue system engineering efforts required for the technical repackaging of the TRIDENT D5 SWS on the OHIO Replacement submarine; including review and modification of system interface drawings. Continue concept and design work to develop a missile launch tube test facility and test stand including refurbishment of a test vehicle to support launch system prototype effort and qualification. Initiation of system engineering efforts related to development of flight Test Instrumentation hardware, Special Test Vehicles, shore based and shipset mechanical and electrical support equipment, and flight test hardware. Complete system engineering design efforts associated with the physical arrangement drawings for SWS equipment within the CMC and MCC.</p> <p>Systems Engineering / Program Management (\$159.4M) - Continue to provide technical oversight including Program Office management and technical support from government laboratories for review, analysis and modeling. Commence execution of DFA program and design initiatives.</p>			
Accomplishments/Planned Programs Subtotals	363.371	493.028	781.575

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

D. Acquisition Strategy
The missile compartment will be designed and developed to support the US and UK in development of the OHIO Replacement and Successor SSBN programs. It also enables the potential for a common US-UK CMC production, which would maximize the benefit of the ongoing US-UK partnership in strategic deterrence. Whole ship concepts and System Definition efforts will be performed primarily by the US submarine shipyards. R&D efforts will be performed by Navy laboratories, shipyards, private industry, and University Affiliated Research Centers.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

1319: *Research, Development, Test & Evaluation, Navy*

BA 4: *Advanced Component Development & Prototypes (ACD&P)*

R-1 ITEM NOMENCLATURE

PE 0603561N: *(U)ADVANCED SUBMARINE SYSTEM DEVELOPMENT*

PROJECT

3220: *SBSD Advanced Submarine System Development*

E. Performance Metrics

Updated Integrated Master Schedule, and CMC build strategy down-select. Development of Signature Management efforts to address knowledge gap, Concepts for Propulsor and Shafting, and Design Guidance and Interface Control Requirements.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY		PROJECT	
1319: Research, Development, Test & Evaluation, Navy		3220: SBSD Advanced Submarine System	
BA 4: Advanced Component Development & Prototypes (ACD&P)		Development	
R-1 ITEM NOMENCLATURE		PROJECT	
PE 0603561N: (U)ADVANCED SUBMARINE		3220: SBSD Advanced Submarine System	
SYSTEM DEVELOPMENT		Development	

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date				
Product Development	SS/CPFF	Ship Design Contractor:EB	97.452	47.600	Mar 2011	43.617	Oct 2011	-	-	43.617	Continuing	Continuing	Continuing
Product Development	SS/CPFF	Ship Design Contractor DFA Support:TBD	-	-		37.500	Jan 2012	-	-	37.500	Continuing	Continuing	Continuing
Product Development	WR	NSWC:Carderock, MD	28.791	76.940	Mar 2011	152.157	Oct 2011	-	-	152.157	Continuing	Continuing	Continuing
Product Development	WR	NSWC DFA Support:Carderock, MD	-	-		2.500	Jan 2012	-	-	2.500	Continuing	Continuing	Continuing
Product Development	SS/CPFF	ARL Penn State University:State College, PA	0.738	1.921	Mar 2011	0.356	Jan 2012	-	-	0.356	0.000	3.015	2.310
Product Development	SS/CPFF	EB:Groton, CT	4.887	7.439	Mar 2011	36.703	Oct 2011	-	-	36.703	Continuing	Continuing	Continuing
Product Development	SS/CPFF	NGMS:Sunnyvale, CA	30.935	15.742	Mar 2011	33.430	Oct 2011	-	-	33.430	Continuing	Continuing	Continuing
Product Development	WR	NUWC:Newport, RI	6.174	18.275	Mar 2011	18.711	Oct 2011	-	-	18.711	Continuing	Continuing	Continuing
Product Development	WR	NUWC DFA Support:Newport, RI	-	-		10.000	Jan 2012	-	-	10.000	Continuing	Continuing	Continuing
Product Development	SS/CPFF	Missile Comp Design Contractor-EB:Groton, CT	116.159	209.359	Mar 2011	297.113	Oct 2011	-	-	297.113	Continuing	Continuing	Continuing
Product Development	SS/CPFF	JHU/APL:Laurel, MD	5.865	4.200	Mar 2011	6.097	Oct 2011	-	-	6.097	Continuing	Continuing	Continuing
Product Development	SS/CPFF	Draper Labs:Cambridge, MA	-	2.760	Mar 2011	3.500	Oct 2011	-	-	3.500	Continuing	Continuing	Continuing
Product Development	SS/CPFF	LMFS:NY	3.550	5.022	Mar 2011	5.254	Oct 2011	-	-	5.254	Continuing	Continuing	Continuing
Product Development	Various	NAVSEA:Various	1.216	0.654	Mar 2011	4.328	Oct 2011	-	-	4.328	Continuing	Continuing	Continuing
Product Development	WR	NOTU:FL	-	4.400	Mar 2011	5.000	Oct 2011	-	-	5.000	Continuing	Continuing	Continuing
Product Development	SS/CPFF	LMMSC:CA	21.749	14.132	Mar 2011	29.500	Oct 2011	-	-	29.500	Continuing	Continuing	Continuing
Product Development	C/CPFF	GDAIS:MA	11.318	23.475	Mar 2011	26.050	Jan 2012	-	-	26.050	Continuing	Continuing	Continuing
Product Development	SS/CPFF	IEC:VA	3.522	1.200	Mar 2011	1.700	Oct 2011	-	-	1.700	Continuing	Continuing	Continuing
Product Development	WR	NSWC:VA	0.910	2.100	Mar 2011	4.720	Oct 2011	-	-	4.720	Continuing	Continuing	Continuing
Product Development	SS/CPFF	BAE:MD	2.098	6.826	Mar 2011	6.577	Oct 2011	-	-	6.577	Continuing	Continuing	Continuing
Product Development	SS/CPFF	BNA:CA	1.248	2.239	Mar 2011	3.140	Oct 2011	-	-	3.140	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY		PROJECT	
1319: Research, Development, Test & Evaluation, Navy		3220: SBSD Advanced Submarine System Development	
BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603561N: (U)ADVANCED SUBMARINE SYSTEM DEVELOPMENT	

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total		Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Complete	
Product Development	WR	NSWC Crane:IN	6.853	4.269	Mar 2011	6.100	Oct 2011	-	-	6.100	Continuing	Continuing
Product Development	WR	NWC CL:CA	2.500	-		-		-	-	-	0.000	2.500
Product Development	SS/CPFF	SPA:VA	1.200	-		-		-	-	-	0.000	1.200
Product Development	Various	SSP:Various	6.569	16.212	Mar 2011	20.540	Oct 2011	-	-	20.540	Continuing	Continuing
Subtotal			353.734	464.765		754.593		-	-	754.593		

Remarks
Note: Various is used for multiple activities with different award dates

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total		Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Complete	
Contractor Test and Evaluation Support	C/CPFF	T&E Support:Various	0.454	1.100	Mar 2011	1.442	Oct 2011	-	-	1.442	Continuing	Continuing
Government Test and Evaluation Support	WR	T&E Support:Various	0.771	1.810	Mar 2011	2.153	Oct 2011	-	-	2.153	Continuing	Continuing
Travel	WR	NAVSEA HQ:Washington, D.C.	0.100	0.150	Mar 2011	0.083	Oct 2011	-	-	0.083	Continuing	Continuing
Subtotal			1.325	3.060		3.678		-	-	3.678		

Remarks
Note: Various is used for multiple activities with different award dates. Contractor Test & Evaluation Support cost category item funds will be sent to Shipbuilder and Support Contractors to be determined. Government Test and Evaluation Support cost category item funds will be sent to several Navy activities to be determined.

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total		Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Complete	
Contractor Management Support	C/CPFF	Various:Multiple Awards	5.727	14.115	Mar 2011	11.917	Oct 2011	-	-	11.917	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy
 BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 ITEM NOMENCLATURE

PE 0603561N: (U)ADVANCED SUBMARINE SYSTEM DEVELOPMENT

PROJECT

3220: SBSD Advanced Submarine System Development

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total Cost	Cost To Complete	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date			
Government Management Support	WR	Various: NSWC Carderock, MD	2.285	10.838	Mar 2011	11.052	Oct 2011	-	-	11.052	Continuing	Continuing
Travel	WR	NAVSEA HQ: Washington, D.C.	0.300	0.250	Mar 2011	0.335	Oct 2011	-	-	0.335	Continuing	Continuing
Subtotal			8.312	25.203		23.304		-	-	23.304		

Remarks

Note: Various is used for multiple activities with different award dates

Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Target Value of Contract
	Cost	493.028	781.575	-	-	781.575			
Project Cost Totals	363.371	493.028	781.575	-	-	781.575			

Remarks

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy
APPROPRIATION/BUDGET ACTIVITY
 1319: Research, Development, Test & Evaluation, Navy
 BA 4: Advanced Component Development & Prototypes (ACD&P)

DATE: February 2011

PROJECT
 3220: SBSD Advanced Submarine System Development

R-1 ITEM NOMENCLATURE
 PE 0603561N: (U)ADVANCED SUBMARINE SYSTEM DEVELOPMENT

ISCAL YEARE	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
SBSD PROJECT						
Concept Studies						
Platform Technology Demonstrations						
Strategic Systems Technology Demonstration						
Missile Compartment Design						
Whole Boat Concept and System Definition						
Prototyping Effort						
Design for Affordability						

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
1319: Research, Development, Test & Evaluation, Navy	PE 0603561N: (U)ADVANCED SUBMARINE	3220: SBSD Advanced Submarine System
BA 4: Advanced Component Development & Prototypes (ACD&P)	SYSTEM DEVELOPMENT	Development

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 3220				
Concept Studies				
Platform Technology Demonstrations	1	2010	4	2012
Strategic Systems Technology Demonstrations	1	2010	4	2016
Missile Compartment Design	1	2010	4	2016
Whole Boat Concept and System Definition	1	2010	4	2016
Prototyping Effort	1	2010	4	2016
Design for Affordability	2	2010	4	2016
	2	2012	4	2014