CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification							DATE:				
-									Feb	ruary 2005	
APPROPRIATION/BUDGET ACTIVITY						R-1 ITEM NO	MENCLATURE				
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-4						0603502N/Su	rface and Shall	ow Water Mine	Countermeas	ure	
	Prior										Total
COST (\$ in Millions)	Years Cost	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to Complete	Program
Total PE Cost	765.887	126.231	108.016	122.122	140.480	161.880	245.151	233.104	240.239	Continuing	Continuing
Remote Minehunting System / 0260 / 2387	270.287	56.866	14.284	0.000	0.000	0.000	0.000	27.008	33.384	Continuing	Continuing
Mine Counter Measures Mid-Life Upgrades / 1233 / 2388	69.872	3.634	3.813	15.855	19.513	28.925	18.003	4.441	4.511	Continuing	Continuing
Unmanned Underwater Vehicle / 2094 / 2852	238.167	62.799	59.965	54.633	52.176	74.707	165.358	157.816	154.912	Continuing	Continuing
Assault Breaching System / 2131	187.561	2.932	26.808	29.215	37.530	36.551	35.897	31.246	30.446	Continuing	Continuing
Expendable Mine Neutralization System / 4025	0.000	0.000	2.155	11.506	14.030	0.000	0.000	0.000	0.000	0.000	27.691
BPUAV/9513	0.000	0.000	0.991	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.991
Low Frequency Broadband / 3102	0.000	0.000	0.000	9.850	15.470	18.132	23.895	10.552	14.902	Continuing	Continuing
SMCM UUV / 3123	0.000	0.000	0.000	1.063	1.761	3.565	1.998	2.041	2.084	Continuing	Continuing
Quantity of RDT&E Articles											0.000

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

The program provides for developments to combat the threat of known and projected foreign mines against U.S. Naval and merchant shipping in harbors, channels, choke points, sea lines of communications and amphibious and other fleet operating areas. It develops: (1) organic remote minehunting capability for surface platforms; (2) the integration and improvement of systems and support for systems which will detect, localize and classify moored, bottom, and close-tethered mines for use in Mine Countermeasure (MCM) MCM-1 Class, Mine Hunter Coastal (MHC) MHC-51 Class, and other surface ships; (3) systems for neutralizing mines and light obstacles from shallow water, very shallow water, surf zones, and beach landing craft zones in support of amphibious operations; (4) Unmanned Undersea Vehicle (UUV) systems for clandestine mine reconnaissance.

(U) B. JUSTIFICATION FOR BUDGET ACTIVITY:

This program is funded under DEMONSTRATION AND VALIDATION because it develops and integrates hardware for experimental testing related to specific ship or aircraft applications.

CLASSIFICATION:

HIBIT R-2, RDT&E Budget Item Justification					DATE:
					February 2005
ROPRIATION/BUDGET ACTIVITY			R-1 ITE	M NOMENCLATURE	
SEARCH DEVELOPMENT TEST & EVALUATION, NAVY /	BA-4	0603502	N/Surface and	Shallow Water Mine	Countermeasure
(U) B. PROGRAM CHANGE SUMMARY:					
(U) B. PROGRAM CHANGE SUMMARY:	FY 2004	FY 2005	FY 2006	FY 2007	
FY05 President's Budget	145.678	103.308	100.114	89.286	
FY06 President's Budget	126.231	108.016	122.122	140.480	
Total Adjustments	-19.447	4.708	22.008	51.194	
Summary of Adjustments					
FY04 Omnibus Reprogramming	-10.000	0.000	0.000	0.000	
FY04 SBIR	-3.243	0.000	0.000	0.000	
MISC Adjustments	-6.204	4.708	22.008	51.194	
	-19.447	4.708	22.008	51.194	
(U) Schedule:					
RMS Plan is to procure four Remote Mine Hunting Vehicles (RI	MVs) production	systems in FY0	05 and FY06 ar	d deliver in FY06 and	FY07. Also procure two additional RMVs in FY07.
(U) Technical:					
Not Applicable					

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification						DATE:					
									Febru	uary 2005	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM EI	EMENT NUM	BER AND NAM	IE	PROJECT NU	MBER AND N	AME			
RDT&E, N / BA-4	0603502N, Su	rface and Shal	low Water MCN	Л		0260/2387, Re	mote Minehun	ting Systems			
	Prior										Total
COST (\$ in Millions)	Years Cost	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 20010	FY 2011	Cost to Complete	Program
Project Cost	270.287	56.866	14.284	0.000	0.000	0.000	0.000	27.008	33.384	Continuing	Continuing
RDT&E Articles Qty	2	1	0	0							3

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

The Remote Minehunting System (RMS), AN/WLD-1(V)1, program develops a new remotely operated minehunting system for surface ships. This effort includes development and integration of a remote minehunting vehicle, minehunting sensors, mission command and control, and installation into the DDG-51 Class Flight IIA Baseline 7 and AN/SQQ-89(V)15 Undersea Warfare Combat System. Future funding addresses key areas such as minesweeping, mine neutralization, in-situ environmental characterization, sensor upgrades and subsystem upgrades to address emergent fleet requirements, enhanced mission capabilities and/or system deployment from new platforms. Future funding will be used to begin development of emerging technologies for incorporation into the AN/WLD-1(V) Remote Minehunting System and Littoral Combat Ship (LCS) Reconfigurable Mission Capabilities (Multi-Mission - MM).

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:	
			Februa	ary 2005
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	IAME	
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM	0260/2387, Remote Minehui	nting Systems	
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM	0260/2387, Remote Minehu	nting Systems	

(U) B. Accomplishments/Planned Program

Product Development	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	43.224	8.281	0.000	0.000
RDT&E Articles Quantity	1			

Continue engineering and fabrication of Engineering Development Models (EDMs) for the RMS. Conduct Functional/Physical Configuration Audit of Data Link Subsystem and Launch and Recovery Subsystem. Continue with the fabrication of Engineering Development Models (EDMs) for the RMS and begin Pilot Line Proofing of system hardware. Complete fabrication of Engineering Development Models (EDMs) for the RMS including Physical Configuration Audit (PCA) and continue Pilot Line Proofing of system hardware. Completion of the Engineering Manufacturing and Development Phase, of pilot line proofing, and Engineering Change Proposals (ECPs) resulting from OPEVAL.

Support	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	5.476	3.619	0.000	0.000
RDT&E Articles Quantity	1			

Continue software Design/Code/Test for the RMS. Continue Integrated Logistics Support (ILS) Planning and Integrated Electronic Technical Manual (IETM) Development for RMS. Continue Integration Support for the RMS.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2005
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	IAME
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM	0260/2387, Remote Minehu	nting Systems

(U) B. Accomplishments/Planned Program

T&E	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	6.933	1.229	0.000	0.000
RDT&E Articles Quantity	1			

Conducted DT Assist of the Datalink Subsystem for the RMS Shipboard Equipment. Begin test preparation for TECHEVAL Phase I on ship. Complete test preparation and conduct TECHEVAL Phase I and II for the RMS. Conduct and complete OPEVAL.

Management	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	1.233	1.155	0.000	0.000
RDT&E Articles Quantity	1			

Funds provided for COMOPTEVFOR and Program Management Support and Travel.

	TOTAL	56.866	14.284	0.000	0.000
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CLASSIFICATION:

EXHIBIT R-2a, RDT&	E Project Justification			DATE:
				February 2005
APPROPRIATION/BUDGE	ET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NA	AME
RDT&E, N /	BA-4	0603502N, Surface and Shallow Water MCM	0260/2387, Remote Minehun	ting Systems

(U) D. OTHER PROGRAM FUNDING SUMMARY:

<u>Line Item No. & Name</u> 2622 / OPN	<u>FY 2004</u>	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	<u>Complete</u>	Cost	
RMS	0.000	35.031	50.840	15.649	0.000	0.000	6.000	6.000	Continued	Continued	
Support	0.000	1.603	4.449	2.345	0.000	0.000	0.000	0.000	Continued	Continued	
Total	0.000	36.634	55.289	17.994	0.000	0.000	6.000	6.000	Continued	Continued	
(U) RDT&E, Line 0604373, 0529	18.075	4.750	3.421	4.797	3.419	0.808	9.830	20.781	Continued	Continued	

(U) E. ACQUISITION STRATEGY:

The government issued a series of contract modifications to Lockheed Martin to complete efforts through the System Design Review. Based upon the approved Milestone II decision the program office issued the contract modification to complete the Critical Design Review (CDR); upon completion of CDR a CPIF sole source contract was awarded to Lockheed Martin to complete the development, fabrication, and testing of the engineering development models, initial pilot line/tooling, and timed phased procurement of initial systems to meet ship delivery schedules. The government has worked with the contractor in an IPT environment to refine the specification and Statement of Work for the overall development effort. The IPT pricing process was used to generate the cost estimates against Navy requirements. The government will pursue commonality between the AN/AQS-20A airborne minehunting system and the AN/WLD-1(V)1. The AN/WLD-1(V)1 contract plan is for the development of EDMs, system interactive electronic technical manual (IETM), provisioning data, technical drawings and data, and engineering services. The 4 EDM remote minehunting vehicles are required to meet ship schedules for DDG ship deliveries prior to receiving follow-on production units and to support the stand-up of the maintenance and training facilities.

CLASSIFICATION:

								DATE:						
Exhibit R-3 Cost Analysis (page										F	ebruary	2005		
APPROPRIATION/BUDGET ACTIVIT	TY	PROGRAM	1 ELEMENT			PROJECT N	UMBER AN	D NAME						
RDT&E, N / BA-4		0603502N,	Surface and Sh	allow Water N	1CM	0260/2387, I		ehunting Syster	ms					
Cost Categories			Total		FY 04		FY 05		FY 06		FY 07			
	Method	Activity &	PY s	FY 04	Award	FY 05	Award	FY 06	Award	FY 07	Award	Cost to	Total	Target Value
	& Type	Location	Cost		Date	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
Hardware Development & Integration		Lockheed Martin	97.283										97.283	
Hardware Development & Integration	CPIF	Lockheed Martin	42.445	39.191	11/03	6.342	11/04						87.978	3
Hardware Development & Integration	WX	NSWC, Panama City, FL	4.375	1.796	10/03	0.969	10/04						7.140)
Systems Engineering	CPIF	Lockheed Martin	5.465										5.465	j
Systems Engineering	CPIF	Lockheed Martin	4.248	1.753	11/03	0.485	11/04						6.486	;
Systems Engineering	WX	NSWC, Panama City, FL	0.946	0.484	10/03	0.485	10/04						1.915	5
Award Fees			5.485										5.485	5
													0.000)
													0.000)
													0.000	
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													0.000)
													0.000)
													0.000)
													0.000)
													0.000	
Subtotal Product Development			160.247	43.224		8.281		0.000		0.000)	0.000	211.752	2

Remarks

GFE - AN/AQS-20A systems provided to RMS program were developed under PE 0604373/0529. Production units will be procured under OPN 424800. Lockheed Martin, Syracuse, NY, contracts: (1) N00024-96-C-6322 was competitive CPAF/CPIF and (2) N00024-02-C-6309 was sole source CPIF.

CLASSIFICATION:

									DATE:						
Exhibit R-3 Cost Analysis	(page 1)											Febru	ary 2005		
APPROPRIATION/BUDGET A	ACTIVITY		PROGRAM E	LEMENT			PROJECT N	IUMBER ANI	NAME						
RDT&E, N / BA-			0603502N, S	urface and Sh	allow Water N	1CM	0260/2387, F		hunting Syste						
Cost Categories	Contract Method & Type	Performing Activity & Location	•	Total PY s Cost	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete		Target Value of Contract
Software Development	CPIF	Lockheed Marti	n	7.092										7.092	
Software Development	CPIF	Lockheed Marti	n	6.159	0.414	11/03	0.388	11/04						6.961	
Software Development	WR	NSWC, Panar	na City, FL	1.561	0.290	10/03	0.291	10/04						2.142	
ILS	CPIF	Lockheed Marti	n	5.682										5.682	
ILS	CPIF	Lockheed Marti	n	5.932	3.009	11/03	1.163	11/04						10.104	
ILS	WX	NSWC, Panar	na City, FL	1.493	0.290	10/03	0.291	10/04						2.074	
Ship Integration	CPIF	Lockheed Marti	n	1.258										1.258	
Ship Integration	CPIF	Lockheed Marti	n	1.813	0.677	11/03	0.388	11/04						2.878	
Ship Integration**	Various	Various		11.557	0.796	12/03	1.098	12/04						13.451	
														0.000	
														0.000	
														0.000	
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														0.000	
														0.000	
														0.000	
Subtotal Support				42.547	5.476		3.619		0.000	o	0.00	00	0.000	51.642	

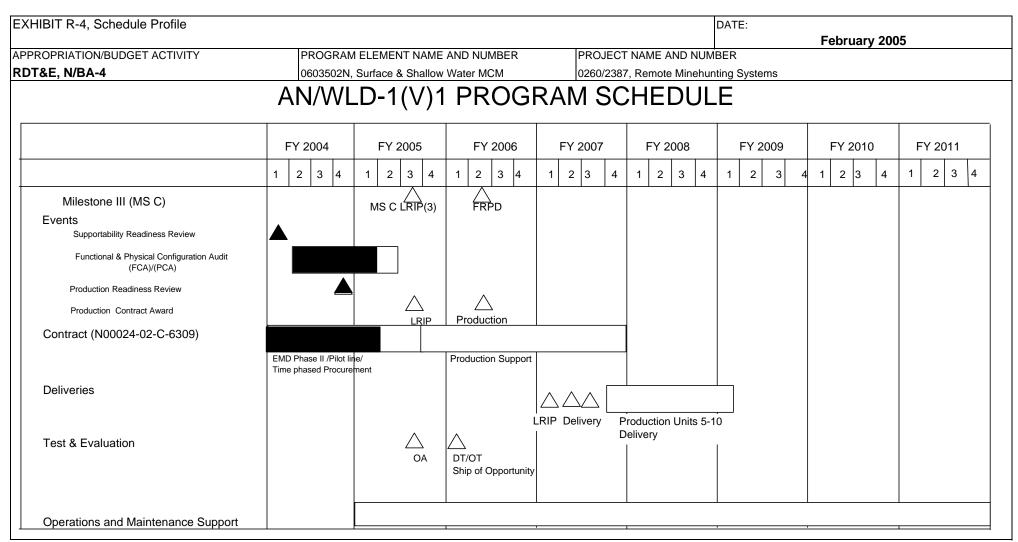
Remarks

Various in Ship Integration provides funding to support AN/SQQ-89(V)15 ECP effort for RMS and RMS DDG ship class integration efforts.

CLASSIFICATION:

								DATE:	-	- 				
Exhibit R-3 Cost Analysis (pag											Febr	uary 2005		
APPROPRIATION/BUDGET ACTIV	ITY	PROGRAM E				PROJECT N	IUMBER ANI	D NAME						
RDT&E, N / BA-4		0603502N, S		allow Water N		0260/2387,		hunting Syster		•				•
Cost Categories	Contract	Performing	Total		FY 04		FY 05		FY 06		FY 07			
	Method & Type	Activity & Location	PY s Cost	FY 04 Cost	Award Date	FY 05 Cost	Award Date	FY 06 Cost	Award Date	FY 07 Cost	Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	CPIF	Lockheed Martin	18.470		Date	CUSI	Date	COSI	Date	Cost	Date	Complete	18.470	
Developmental Test & Evaluation	CPIF	Lockheed Martin	11.107		11/03	0.590	11/04	-					14.210	
Developmental Test & Evaluation	WX	NSWC, Panama City, FL	3.105	+	11/03	0.639							8.164	
Developmental Test & Evaluation	VVA	NOWO, Fallallia City, FL	3.100	4.420	11/03	0.038	10/04						0.000	
													0.000	
								-					0.000	
													0.000	
Subtotal T&E			32.682	6.933		1.229	1	0.000		0.000		0.000	40.844	+
Subtotal T&L		<u> </u>	32.002	0.933		1.223	'!	0.000	<u> </u>	0.000	']	0.000	40.044	4
	1	1	1	T	1				T				1	
Contractor Engineering Support	CPIF	Lockheed Martin	2.919)		0.780)						3.699	
Government Engineering Support	WX	NSWC, Panama City, FL	22.393	3									22.393	
Program Management Support	CPFF	CACI	2.874	1.146	11/03	0.288	11/04						4.308	
Travel	Various	NAVSEA	0.264	0.087	Various	0.087	Various						0.438	
SBIR Assessment	Various	Various	6.361										6.361	
													0.000	+
Subtotal Management			34.811	1.233		1.155	i i	0.000		0.000		0.000	37.199)
Remarks: Award dates for management are Total Cost Remarks:	various bed	cause multiple activities are re	eceiving tasks			e fiscal year.		0.000		0.000		0.000	341.437	,

CLASSIFICATION:



CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:		
						F	ebruary 200	05
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	EMENT			PROJECT NU			
RDT&BA-4	0603502N, Su	rface & Shallo	w Water MCM		0260/2387, Re	emote Minehunting Systems		
Schedule Profile: AN/WLD-1 (V)1	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 201
Milestone III (MS C)		3Q (LRIP)	2Q (FRPD)					
Supportability Readiness Review	1Q	`	,					
Functional & Physical Configuration Audit (FCA)/(PCA)	2Q-4Q	1Q-2Q						
Production Readiness Review (PRR)	4Q							
Production Contract Award		3Q (LRIP)	2Q (FRP)					
Engineering Manufacturing & Development(EMD)	1Q-4Q	1Q-3Q	, ,					
Production Start		3Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q		
LRIP 1-3 Delivery				1Q-3Q				
Production Unit 5-10 Delivery				4Q	1Q-4Q	1Q		
Operational Assessment		3Q						
DT/OT (Ship of Opportunity)			1Q					
Operations and Maintenance Support Start		1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
· · ·								

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE:			
									Febru	uary 2005	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM EL	EMENT NUME	BER AND NAME	E	PROJECT NUI	MBER AND NA	ME			
RDT&E, N / BA-4	0603502N, Su	rface and Shall	ow Water MCM	1		1233, Mine Co	unter Measure	s Mid-Life Upgr	rades		
	Prior										Total
COST (\$ in Millions)	Years Cost	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to Complete	Program
Project Cost	69.872	3.634	3.813	15.855	19.513	28.925	18.003	4.441	4.511	Continuing	Continuing
RDT&E Articles Qty											

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

(1) High-Frequency, Wide Band (HFWB) is a technology upgrade to the SQQ-32 Towed Body which will incorporate HFWB technology into the detection sonar to address performance deficiencies against new mine threats in the littorals. This upgrade will be installed on MCM-1 Class ships with the SQQ-32(V)3 and will develop new transducer modules, fiber optic cable and modify topside processing and display software. 2) Mine Warfare and Environmental Decision Aids Library (MEDAL) is a software segment on the Global Command and Control System – Maritime (GCCS-M). MEDAL provides mine and mine warfare planning and evaluation tools and databases to the MCM Commander. (3) MCM Command Control, Communication, Computers and Intelligence (C4I) meet FORCEnet implementation standards; develop and maintain Mine Warfare (MIW) C4I Surveillance and Reconnaissance (C4ISR) architecture; identify and validate C4ISR shortfalls. 4) Develop and implement Course of Action Planner (COAP). 5) Battle Space Profiler (BSP) is used to optimize sonar setup (towed body depth and D/E angles), support mission planning based on predicted sonar performance, and adapt mission planning to changes in the environment and threats. Improvement to the BSP system will allow the BSP to become an in situation real time environmental data collection system and will allow sharing pertinent data such as MEDAL contact and environmental databases, as well as all Navigation information. 6) Unmanned Submersible Vehicle (USV) Sweep System is a magnetic/acoustic sweep system developed to sweep acoustic/magnetic influence mines from a small unmanned surface platform deployed from the Littoral Combat Ship (LCS).

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justifica	ation			DATE:	200E
PROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUM	ARED AND NAME	PROJECT NUMBER AND N	Februar	y 2005
T&E, N / BA-4	0603502N, Surface and Sha	allow Water MCM	1233, Mine Counter Measur	es Mid-Life Upgrades	
B. Accomplishments/Planned Program					
BSP / Product Development	FY 04	FY 05	FY 06	FY 07	
Accomplishments/Effort/Subtotal Cost	0.000	0.000	1.155	0.370	
RDT&E Articles Quantity					
BSP / Support	FY 04	FY 05	FY 06	FY 07	
DOI / Support	1101				
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Develop logistics products, including training	0.000	0.000	0.110	0.050	
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity	0.000	0.000	0.110	0.050	
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Develop logistics products, including training	0.000	0.000 anual.			
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Develop logistics products, including training BSP / Management	materials and interactive technical ma	0.000 anual.	0.110 FY 06 0.320	0.050 FY 07 0.106	
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Develop logistics products, including training	0.000 materials and interactive technical ma	0.000 anual.	FY 06	FY 07	
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Develop logistics products, including training BSP / Management Accomplishments/Effort/Subtotal Cost	materials and interactive technical materials and interactive tech	0.000 anual.	FY 06	FY 07	
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Develop logistics products, including training BSP / Management Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Management:	materials and interactive technical materials and interactive tech	0.000 anual.	FY 06	FY 07	

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2005
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	IAME
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM	1233, Mine Counter Measur	es Mid-Life Upgrades

(U) B. Accomplishments/Planned Program

C4I / Product Development	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.348	0.600	0.720	0.767
RDT&E Articles Quantity				

Product Development:

Continue MIW information system engineering effort. This effort to include the ongoing development of the MIW C4ISR Architecture, which documents the Information Exchange Requirements of the MIW community and serves as Architecture for all MIW Programs of Record as required by DODI 5000.2. Rev 2 Architecture. Rev 3 Architecture. Rev 4 Architecture.

C4I / Support	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.302	0.350	0.300	0.400
RDT&E Articles Quantity				

Support:

Identification of C4ISR shortfalls within the MIW community and analysis of potential solutions are accomplished through membership on the FORCEnet Requirements and Architecture Working Groups. System Engineering Support is also provided to the SMCM Class identifying class issues and seeking engineering solutions. The MIW Architecture is utilized to conduct assessments in order to identify shortfalls and provide C4ISR solutions to the MIW community. Specific ongoing initiatives include the continued MIW C4ISR assessment, MCM/MHC LAN improvement program, continued MEDAL/TEDS integration, and the integration of MIW tactical databases into the Global Enterprise Systems.

C4I / Management	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.236	0.182	0.153	0.223
RDT&E Articles Quantity				

Management:

Provide program management support and travel for MIW C4I program.

C4I TOTAL	0.886	1.132	1.173	1.390

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2005
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	IAME
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM	1233, Mine Counter Measur	es Mid-Life Upgrades

(U) B. Accomplishments/Planned Program

COAP / Product Development	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.885	0.902
RDT&E Articles Quantity				

Product Development:

Begin the development and design of Build 0. Continue testing and delivery of Build 0. Begin development and design of Build 1. Continue the development and design of Build 1. Continue testing and delivery of Build 1. Begin development and design of Build 2.

COAP / Support	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.110	0.110
RDT&E Articles Quantity				

Support:

Oversee technical integration of developed algorithms and models that have demonstrated their effectiveness in reducing the complexity of the MCM planning problem into a manageable set of options depending on the operational objective. Support effort to include communication with acitivities such as ONR and NSWC-PC to coordinate the incorporation of validated algorithms and models into MEDAL with the Commander's Estimate of the Situation framework in order to effectively simplify the MCM planning problem for CSG and ESG staffs and therefore provide the speed, agility, adaptability, and flexibility required for modern MCM operations.

COAP / Management	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.094	0.080
RDT&E Articles Quantity				

Management:

Provide program management support and travel for Course Of Action Planner program. Program management shall include overall technical guidance and leadership for the program. Other ongoing PM support includes oversight of financial and logistics efforts and adequate coordination with MEDAL. Other PM tasking to include briefings, demonstrations, and project planning as required.

COAP TOTAL	0.000	0.000	1.089	1.092

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2005
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	IAME
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM	1233, Mine Counter Measure	es Mid-Life Upgrades
	·	_	·

(U) B. Accomplishments/Planned Program

GCCS-M4X / Product Development	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.475	0.000
RDT&E Articles Quantity				

Product Development:

Develop and integrate GCCS-M 4.x hardware for M-class ships and expeditionary units. This effort includes the identification, approval, design, planning, programming, budgeting and accomplishment of improvements that increase the ability of the MIW ships to perform assigned missions. This is the first step in a larger plan to upgrade the MCM and MHC Class ships to the full IT-21 suite by rapidly inserting the minimum components enabling the MCM fleet to maximize operational effectiveness and minimize associated risk for own force and supported joint forces.

GCCS TOTAL	0.000	0.000	0.475	0.000

CLASSIFICATION:

				DATE:
	IDDOOD AM EL EMENT NUM	ADED AND MAKE	DDO ISOT NI IMPED AND N	February 200
ROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUM		PROJECT NUMBER AND N	
Γ&E, N / BA-4	0603502N, Surface and Sha	allow Water MCM	1233, Mine Counter Measure	es Mid-Life Upgrades
3. Accomplishments/Planned Program				
HFWB / Product Development	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.000	0.000	5.335	5.725
RDT&E Articles Quantity				
Begin Design and fabrication of transducer and operator console components. Continue design				
HFWB / Support	FY 04	FY 05	FY 06	FY 07
HFWB / Support Accomplishments/Effort/Subtotal Cost	FY 04 0.000	FY 05 0.000	FY 06 2.600	FY 07 2.500
HFWB / Support Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Develop beamforming and display software; M packages, technical manual and training updat	0.000 odify existing software and integrat	0.000 ion of new software; Inte	2.600 grated Logistic Support (ILS): Dev	2.500 velop ICDs, installation
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Develop beamforming and display software; M packages, technical manual and training updat	0.000 odify existing software and integrat es. Continue software development	0.000 ion of new software; Intent and integration; Integr	grated Logistic Support (ILS): Devated Logistic Support (ILS): Conti	2.500 relop ICDs, installation nue ILS efforts.
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Develop beamforming and display software; M packages, technical manual and training updat HFWB / T&E	0.000 odify existing software and integrat es. Continue software development	0.000 ion of new software; Intent and integration; Integr	grated Logistic Support (ILS): Devated Logistic Support (ILS): Conti	2.500 velop ICDs, installation nue ILS efforts.
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Develop beamforming and display software; M packages, technical manual and training updat HFWB / T&E Accomplishments/Effort/Subtotal Cost	0.000 odify existing software and integrat es. Continue software development	0.000 ion of new software; Intent and integration; Integr	grated Logistic Support (ILS): Devated Logistic Support (ILS): Conti	2.500 relop ICDs, installation nue ILS efforts.
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Develop beamforming and display software; M packages, technical manual and training updat HFWB / T&E	0.000 odify existing software and integrat es. Continue software development FY 04 0.000	0.000 ion of new software; Intent and integration; Integration FY 05 0.000	grated Logistic Support (ILS): Devated Logistic Support (ILS): Conti	2.500 velop ICDs, installation nue ILS efforts.
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Develop beamforming and display software; M packages, technical manual and training updat HFWB / T&E Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Conduct component and development Environ	0.000 odify existing software and integrat es. Continue software developments FY 04 0.000 mental Qualification Testing (EQT)	0.000 ion of new software; Intent and integration; Integr	grated Logistic Support (ILS): Devated Logistic Support (ILS): Conti	2.500 velop ICDs, installation nue ILS efforts. FY 07 0.725
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Develop beamforming and display software; M packages, technical manual and training updat HFWB / T&E Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity	0.000 odify existing software and integrat es. Continue software development FY 04 0.000	0.000 ion of new software; Intent and integration; Integration FY 05 0.000	grated Logistic Support (ILS): Devated Logistic Support (ILS): Conti	2.500 velop ICDs, installation nue ILS efforts.

R-1 SHOPPING LIST - Item No.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification	n		DATE:
			February 2005
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	IAME
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM	1233, Mine Counter Measure	es Mid-Life Upgrades

(U) B. Accomplishments/Planned Program

MEDAL / Support	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	2.305	2.306	2.150	2.145
RDT&E Articles Quantity				

Support:

For all MEDAL software development, new functions shall be incorporated through the execution of an evolutionary development process. These functions shall be in accordance with the prioritized fleet requirements and the MEDAL Program Plan. Test of Build 9; complete IOC Build 9, complete development and test of Build 10, Initiate development of Build 11. Test of Build 10, complete IOC Build 10, complete IOC Build 11, Initiate development of Build 12. Test of Build 11, complete IOC Build 11, complete IOC Build 12, complete IOC Build 12, complete IOC Build 13, Initiate development of Build 14.

MEDAL / Management	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.443	0.375	0.461	0.467
RDT&E Articles Quantity				

Management:

Provide program management support and travel for MEDAL program. Program management shall include overall technical guidance and leadership for the program. Other ongoing PM support includes oversight of financial and logistics efforts and coordination with Navy and other DoD organizations and contractors as required to ensure successful execution of the program. As part of the systems engineering element of PM, communicate and coordinate with MIW C4ISR, ICWS, Organic MCM, Mainstreaming MIW, Expeditionary Warfare C4ISR, tactics development, long term planning, NSCT-1, and other programs as they relate to MEDAL and MIW Mission Planning, Evaluation, and C4ISR. Other PM tasking to include briefings, demonstrations, and project planning as required.

MEDAL TOTAL 2.748 2.681 2.611 2.612	-				
	MEDAL TOTAL	2.748	2.681	2.611	2.612

R-1 SHOPPING LIST - Item No.

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EXHIBIT R-2a, RDT&E Project Justificat	tion			DATE:	
				February 2005	
PROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUM	IBER AND NAME	PROJECT NUMBER AND N		
T&E, N / BA-4	0603502N, Surface and Sha	allow Water MCM	1233, Mine Counter Measur	es Mid-Life Upgrades	
B. Accomplishments/Planned Program					
USV / Product Development	FY 04	FY 05	FY 06	FY 07	
Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.000	1.969	
RDT&E Articles Quantity					
Hardware and Software Develpopement of ma	5				
USV / Support	FY 04	FY 05	FY 06	FY 07	
Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.000	0.800	
RDT&E Articles Quantity					
Logistics and integration Support for Boat Plat	fform and Host Platform/LCS.				
Logistics and integration Support for Boat Plat		FY 05	EY 06	FY 07	
Logistics and integration Support for Boat Plat	FY 04	FY 05 0.000	FY 06 0.000	FY 07 0.600	
Logistics and integration Support for Boat Plat		FY 05 0.000	FY 06 0.000	FY 07 0.600	
Logistics and integration Support for Boat Plat USV / T&E Accomplishments/Effort/Subtotal Cost	FY 04				
Logistics and integration Support for Boat Plat USV / T&E Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Risk Reduction Testing/ CT/DT/OT Planning. USV / Management	FY 04				
Logistics and integration Support for Boat Plat USV / T&E Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Risk Reduction Testing/ CT/DT/OT Planning. USV / Management Accomplishments/Effort/Subtotal Cost	FY 04 0.000	0.000	0.000	0.600	
Logistics and integration Support for Boat Plat USV / T&E Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Risk Reduction Testing/ CT/DT/OT Planning. USV / Management	FY 04 0.000	0.000 FY 05	0.000 FY 06	0.600 FY 07	
Logistics and integration Support for Boat Plat USV / T&E Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Risk Reduction Testing/ CT/DT/OT Planning. USV / Management Accomplishments/Effort/Subtotal Cost	FY 04 0.000	0.000 FY 05	0.000 FY 06	0.600 FY 07	
Logistics and integration Support for Boat Plat USV / T&E Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Risk Reduction Testing/ CT/DT/OT Planning. USV / Management Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity	FY 04 0.000	0.000 FY 05	0.000 FY 06	0.600 FY 07	

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE:
		February 2005
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM	1233, Mine Counter Measures Mid-Life Upgrades
(U) D. OTHER PROGRAM FUNDING SUMMAR	Y:	

									10	ı otal
Line Item No. & Name	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Complete	Cost
2622 / OPN (LV075/LV076/LV080)	9.112	16.396	26.349	24.059	10.536	33.368	39.691	44.335	Continuing	Continuing

(U) E. ACQUISITION STRATEGY:

HFWB - NSWC, Panama City will team with a university laboratory to design and develop the HFWB upgrade to the AN/SQQ-32. Contract award for Integration Contractor.

BSP - The system is being developed by NAVO, NRL and Naval Surface Warfare Center Panama City. The improvements being incorporated into the BSP system are modifications to existing Naval Oceanographic Office and NRL products

Mine Warfare and Environmental Decision Aids Library (MEDAL) - requirements for MEDAL Builds are generated through a formal requirements process. Requirements conferences gather a list of candidate functions based on a logical sequence to fully implement the overall software architecture. The fleet is presented with a recommended list of candidate capabilities based on this program plan, doctrine, fleet comments, and technology. These capability items are then prioritized by the fleet representatives (coordinated by Commander Mine Warfare Command). The fleet inputs are then consolidated by COMINEWARCOM into an overall list which is then presented to Navy leadership for pricing and final selection. The selection is based on price, risk, available funding, and possibly by other program factors (e.g., ensure that MEDAL supports other program delivery schedules). Selection balances immediate needs, long term objectives, technical maturity and other programmatic factors. A verification and validation process is applied to any algorithms, tactics, or models to be incorporated in the software.

COAP Acquisition strategy for COAP is to deliver the software module within MEDAL builds.

USV- NSWC Panama City will be the technical design agent and will award a prime contract for SD&D development of the Unmanned Vehicle Sweep system designed to sweep mines in the Littoral Waters. The SD&D phase will be followed by Milestone C / LRIP Decision. Production Decision and Production follows LRIP.

CLASSIFICATION:

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Exhibit R-3 Cost Analysis (pag											February	/ 2005		
APPROPRIATION/BUDGET ACTIVI	TY	PROGRAM I				PROJECT NU								
RDT&E, N / BA-4			Surface and Shall	ow Water MC				ures Mid-Life Upg						
	Contract Method & Type	Performing Activity & Location		FY 04 Cost	FY 04 Award Date		FY 05 Award Date	FY 06 Cost	FY 06 Award Date		FY 07 Award Date		Total Cost	Target Value of Contract
(BSP) Develop Bottom Sediment Cla		NRL	0.000			0.000		0.406	10/05	0.024	10/06	Continuing	Continuing	
(BSP) Develop Current Profiler	CPIF	NAVO	0.000			0.000		0.217	10/05	0.120	10/06	Continuing	Continuing	N/
(BSP) Develop Hydro-Optics Packag	WX	NAVO	0.000			0.000		0.200	10/05			0.000	0.200	
Systems Engineering	Various	NSWC, PC/NAVAIR						0.100	11/05	0.066	11/06	Continuing	Continuing	
(BSP) System Integration	WX	NSWC, Panama City, FL	0.000			0.000		0.232		0.160		Continuing	Continuing	
Subtotal Product Development			0.000	0.00	0	0.000		1.155		0.370		0.000	1.525	
(BSP) Develop Logistics Products	wx	NSWC, Panama City, FL	0.000			0.000	ı	0.110	ı	0.050	I	Continuing	Continuing	IN/A
(BSP) Develop Logistics Products	WX	NSWC, Panama City, FL	0.000			0.000		0.110		0.050		Continuing	Continuing 0.000	
Subtotal Support			0.000	0.00	n	0.000		0.110		0.050		0.000	0.160	
													0.000	
													0.000	
Subtotal T&E			0.000	0.00	0	0.000		0.000		0.000		0.000	0.000	
Remarks:														
0 0 11	CPFF	CACI						0.050	10/05	0.030	10/06	Continuing	Continuing	N/
Travel		NAVSEA	0.000					0.080		0.020		Continuing	Continuing	
Government Engineering Support	WX	NSWC, Panama City, FL	1					0.190		0.056		Continuing	Continuing	N/
Subtotal Management			0.000	0.00	0	0.000		0.320		0.106		0.000	0.426	
Remarks:										-		•		
BSP TOTAL			0.000	0.00	0	0.000		1.585		0.526		0.000	2.111	
-			R-1 SHOP	DINC LIST	· Itom No	. 36		1.585						

R-1 SHOPPING LIST - Item No. 36

CLASSIFICATION:

								DATE:						
Exhibit R-3 Cost Analysis (pa	age 1)										Februar	y 2005		
APPROPRIATION/BUDGET ACTI	VITY	PROGRAM	ELEMENT			PROJECT NU	JMBER AND I	NAME						
RDT&E, N / BA-4		0603502N,	Surface and Shal	low Water MC	M	1233, Mine Co	ounter Measur	res Mid-Life Upg	rades					
Cost Categories	Contract	Performing	Total		FY 04		FY 05		FY 06		FY 07			
•	Method	Activity &	PY s	FY 04	Award	FY 05	Award	FY 06	Award	FY 07	Award	Cost to	Total	Target Value
	& Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
Systems Engineering	Various	NSWC, PC/NAVAIR		0.348	11/03	0.600	11/04	0.720	11/05	0.767	11/06	Continuing	Continuing	1
													0.000) N
													0.000)
													0.000)
Subtotal Product Development			0.000	0.348	3	0.600		0.720		0.767		0.000	2.435	5
Remarks:														
Software Development	WX	NSWC, Panama City, FL		0.302	11/03								0.302	
Software Development	SS/FFP	SAIC				0.350		0.300		0.400	11/06	Continuing	Continuing	
Subtotal Support			0.000	0.302	!	0.350		0.300		0.400		0.000	1.352	2
Remarks:														
													0.000	
													0.000	
													0.000	
Subtotal T&E			0.000	0.000)	0.000		0.000		0.000		0.000	0.000)
Remarks:														
Program Management Support	CPFF	CACI		0.110	11/03	0.058	11/04	0.050	10/05	0.045	10/06	Continuing	Continuing) N
Travel				0.039		0.035						Continuing	Continuing	9
Government Engineering Support	WX	NSWC, Panama City, FL						0.103		0.178			0.281	
Program Management Support	Various	NAVSEA		0.068	11/03	0.089	11/04					Continuing	Continuing	
SBIR Assessment				0.019								0.000		
Subtotal Management			0.000	0.236	5	0.182		0.153		0.223		0.000	0.794	1
Remarks:														

CLASSIFICATION:

Remarks:														
Subtotal Management			0.000	0.000		0.000		0.094		0.080		0.000	0.174	
Government Engineering Support	WX	NSWC, Panama City	, FL					0.044		0.025		Continuing	Continuing	
Program Management Support Travel	CPFF	CACI		1			 	0.045	10/05	0.050	10/06	Continuing	Continuing	
Remarks:	CPFF	CACI			1		T	0.045	10/05	0.050	10/06	Continuina	Continuina	ı
Subtotal T&E			0.000	0.000	1	0.000		0.000		0.000		0.000	0.000	<u> </u>
0.11705													0.000	
													0.000	
													0.000	
Remarks:														
Subtotal Support			0.000	0.000)[0.000	1	0.110		0.110		0.000	0.220	Ь
													0.000	
Software Development	SS/FFP	SAIC			1	<u> </u>	Ī	0.110	11/05	0.110	11/06	Continuing	Continuing	IN/A
Remarks:	•													
Subtotal Product Development			0.000	0.000)	0.000		0.885		0.902		0.000		
													0.000	
										+			0.000	1
Systems Engineering	vanous	NSWC, PC/NAVAIR	0.000	0.000	1	0.000		0.000	11/05	0.902	11/06	Continuing	0.000	
Systems Engineering	& Type Various	Location NSWC, PC/NAVAIR	Cost 0.000	Cost 0.000	Date	Cost 0.000	Date	Cost 0.885	Date 11/05	Cost 0.902	Date 11/06	Complete Continuing	Cost Continuing	of Contrac
		Activity &	PY s	FY 04	Award		Award		Award		Award	Cost to	Total	Target Valu
Cost Categories		Performing	Total		FY 04		FY 05		FY 06		FY 07			
RDT&E, N / BA-4			02N, Surface and Sha	llow Water MC	М			ures Mid-Life Upg	rades					
APPROPRIATION/BUDGET ACTI	VITY	PROG	RAM ELEMENT			PROJECT NU	JMBER AND	NAME			i ebiuai	y 2003		
Exhibit R-3 Cost Analysis (pa	ago 1)							DATE.			Februar	2005		
								DATE:						

CLASSIFICATION:

Subtotal Management 0.000 0.000 0.000 0.000 Remarks: .	0.000	0.00		
	0.000	0.00	•	
Subtotal Management 0.000 0.000 0.000	0.000			
	+	0.00		
	+		0.000	
	+		0.000	
			0.000	
TOTALING.				
Remarks:				·
Subtotal T&E 0.000 0.000 0.000 0.000	0.000	0.00		
			0.000	
			0.000	
Nomeno.			0.000	-I
Remarks:				
Subtotal Support 0.000 0.000 0.000 0.000	0.000	0.00		
	-		0.000) N/A
Remarks:				Tour
Subtotal Product Development 0.000 0.000 0.000 0.475	0.000	0.0	0.475	5
			0.000	
			0.000)
			0.000	
Systems Engineering Various NSWC, PC/NAVAIR 0.475 11/05	0031	0.00		
Method Activity & PY's FY 04 Award FY 05 Award FY 06 Award & Type Location Cost Cost Date Cost Date Cost Date		Award Cost to Date Complete	Total Cost	Target Val
Cost Categories Contract Performing Total FY 04 FY 05 FY 06		FY 07		
RDT&E, N / BA-4 0603502N, Surface and Shallow Water MCM 1233, Mine Counter Measures Mid-Life Upgrades				
Exhibit R-3 Cost Analysis (page 1) IPPROPRIATION/BUDGET ACTIVITY PROGRAM ELEMENT PROJECT NUMBER AND NAME		1 Columny 2003		
DATE:		February 2005		

CLASSIFICATION:

Remarks: Developmental Test & Evaluation	lwx	NSWC:PC, ARL:UT	1					0.175	11/05	0.725	11/06	Continuing	Continuing	1
Remarks:												•		
												•		
Subtotal Support		, .	0.000	0.000	0	0.00	00	2.600		2.500		0.000	5.100	
(HFWB) Integrated Logistics Support	WX	NSWC, Panama City, FL						0.850		1.100		Continuing		
(HFWB) Software Development	WX	ARL:UT; NSWC:PC						1.750	11/05	1.400	11/06	Continuing	· · · · · · · · · · · · · · · · · · ·	
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Nemarks.														
Remarks:														
Oubtotal i Todact Bevelopment	i		0.000	0.00	0	0.0	50	3.333		3.723	l	0.000	11.000	1
Subtotal Product Development			0.000	0.00	0	0.0	20	5.335		5.725		0.000	11.060	
Ship Integration	wx	NSWC, Panama City, FL						0.425		0.245		Continuing	Continuing	
Tow Cable Development	WX	NSWC, Panama City, FL						0.850		0.330		Continuing	Continuing	
Ancillary Hardware Development	TBD	Contractor (TBD)						0.650	03/06	1.400	11/06	Continuing	Continuing	
Primary Hardware Development	WX	ARL:UT			-			3.410	11/05	3.750	11/06	Continuing		
		Location	Cost	Cost	Date	Cost	Date		Date			· ·	Cost	
	Method & Type	Activity &		FY 04	Award	FY 05	Award		Award	FY 07	Award Date	Cost to	Total	Target Valu of Contrac
Cost Categories	Contract	Performing	Total		FY 04	=> / 0=	FY 05		FY 06		FY 07			_
,	10		Surface and Shal	low water MC		1233, Mine		sures Mid-Life Upgr			E) (07	1	1	1
RDT&E, N / BA-4	IVIII			\A/=4== \ AC	20.4									
APPROPRIATION/BUDGET ACT		PROGRAM	ELEMENT.			PRO IECT N	NUMBER ANI	D NAME			. ob. aa.	, 2000		
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CLASSIFICATION:

Cost Categories Contract Method Act	ctivity & F	ace and Shall otal Ys			PROJECT NU					Februar	2005		
RDT&E, N / BA-4 Cost Categories Contract Method Act	0603502N, Surferforming Tetrivity & F	ace and Shall otal Ys			PROJECT NU					rebruar	y 2 003		
Cost Categories Contract Method Act	erforming T ctivity & F	Total PY s				MBER AND I	NAME						
Method Act	ctivity & F	PY s			1233, Mine Co	unter Measu	res Mid-Life Upg	rades					
			EV 04	FY 04		FY 05		FY 06		FY 07			
& Type Loc	ocation (Cost	1104	Award	FY 05	Award	FY 06	Award		Award	Cost to	Total	Target Value
			Cost	Date	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
												0.000	
												0.000	N/
												0.000	
												0.000	
Subtotal Product Development		0.000	0.000		0.000		0.000		0.000		0.000	0.000	
Software Development SS/FFP SAI	AIC		2.084	11/03	2.306	11/04	2.150	11/05	2.145	11/06	Continuing	Continuing	N/A
	SWC, Panama, City, FL		0.221	11/03	2.500	11/04	2.100	11/03	2.140	11/00	Continuing	Continuing	14/75
Subtotal Support	7110; 1 anama; 0.ty; 1 2	0.000	2.305		2.306		2.150		2.145		0.000	8.906	
												0.000	
Subtotal T&E		0.000	0.000		0.000		0.000		0.000		0.000		
Remarks:	<u>,cı</u>		0.106	11/02	0.004	11/04	0.150	10/05	0.125	10/06	Continuing	Continuing	N
Program Management Support CPFF CA	(CI		0.196 0.061	11/03	0.094	11/04	0.150		0.125	10/06	Continuing	Continuing Continuing	N _i
Program Management Support CPFF CA	(C I		0.061	11/03	0.094 0.063	11/04	0.150 0.015		0.125	10/06	Continuing	Continuing	N.
Program Management Support CPFF CA Travel SBIR Assessment				11/03		11/04			0.125	10/06			N.
Program Management Support CPFF CA Travel SBIR Assessment Government Engineering Support WX NS	ACI SWC, Panama, City, FL AVSEA		0.061	11/03		11/04	0.015			10/06	Continuing 0.000	Continuing 0.054 Continuing	N N

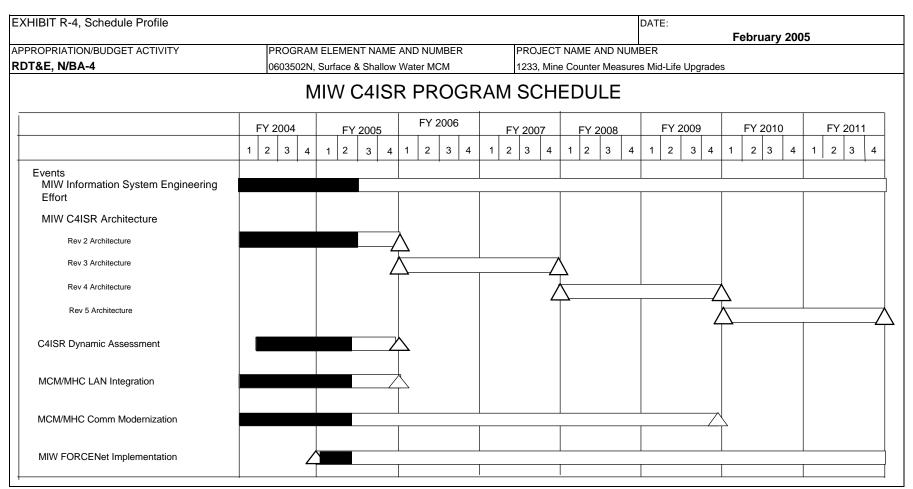
CLASSIFICATION:

								DATE:						
Exhibit R-3 Cost Analysis (p	age 1)										Februar	y 2005		
APPROPRIATION/BUDGET ACT	IVITY	PROGRAM	ELEMENT			PROJECT N	JMBER AND	O NAME				-		
RDT&E, N / BA-4		0603502N,	Surface and Sha	llow Water MC	M	1233, Mine C	ounter Meas	sures Mid-Life l	Jpgrades					
Cost Categories	Contract	Performing	Total		FY 04		FY 05		FY 06		FY 07			1
	Method	Activity &	PY s	FY 04	Award	FY 05	Award	FY 06	Award	FY 07	Award	Cost to	Total	Target Valu
	& Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
Primary Hardware Development	TBD	TBD								1.669	11/06	Continuing	Continuing	3
Primary Hardware Development	WX/RCP	NSWC, Panama City, FL								0.300		Continuing	Continuing	1 0
													0.000)
Subtotal Product Development			0.000	0.00	0	0.000)	0.	000	1.969		0.000	1.969	
Remarks: All work contracted to Raytheon	on the CPIF	contract was transferred to	Lockheed Martin	FP contract a	nd NSWC, C	CSS Panama City,	Florida.							
Logistics Support and Integration	Various	TBD								0.800		Continuing	Continuing	N/A
												Ĭ	0.000	أز
													0.000	j
Subtotal Support			0.000	0.000)	0.000)	0.0	000	0.800		0.000	0.800)
Remarks: Developmental Test & Evaluation	CPIF	TBD								0.600	11/06	Continuing	Continuing	
													0.000	
													0.000	
Subtotal Support			0.000	0.000)	0.000)	0.0	000	0.600		0.000	0.600)
Remarks:														
Contractor Engineering Support	CPIF	CACI								0.200	11/06	Continuing		
Government Engineering Support	WX	NSWC, Panama City, FL								0.325		Continuing		
Travel		NAVSEA	0.000	0.00		2.22		0.4	200	0.075		Continuing		
Subtotal Support			0.000	0.000	J	0.000)	0.0	000	0.600		0.000	0.600	<u>) </u>
Remarks:														
USV TOTAL			0.000	0.00	ol .	0.000	ol .	0.	000	3.969	l	0.000	3.969	9

CLASSIFICATION:

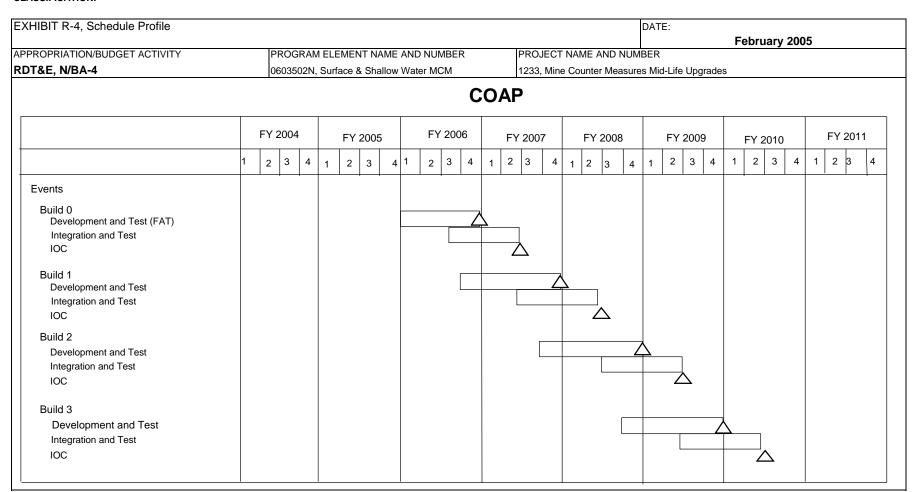
EXHIBIT R-4, Schedule Profile																						C	ATE	<u>:</u>			F	eb	ruai	ry 20	005	;			
APPROPRIATION/BUDGET ACTIVITY								NAM					?						NAME		DΝ	UMB	ER												
RDT&E, N/BA-4		C)6035					Shallov											e Pro																
				В	S	P	P	RO	\mathcal{O}	G۱	R	A۱	N	S	Cŀ	16	Ξ[Οl	JL	E															
		FY	2004	1		FY	200	05		F	Y 20	006		ı	FY 2	2007	7		F	Y 20	08		F	Y 20	009			FY	201	0		FY	′ 201	11	
	1	2	3	4	1	2	;	3 4	ı	1	2	3	4	1	2	3	4	1	1	2 3	3	4	1	2	3	4	1	2	2 3	3 4		1	2	3 4	
HW/SW Design and Development																																			
Preliminary Design Review											4	Δ	^																						
Critical Design Review													\triangle			1																			
Env., Shock, & Safety Testing																																			
EDM Installation & C/O														\triangle																					

CLASSIFICATION:



R-1 SHOPPING LIST - Item No. 36

CLASSIFICATION:



CLASSIFICATION:

EXHIBIT R-4, Schedule Profile																				С	ATE	:				
																									February 20	005
APPROPRIATION/BUDGET ACTIVITY									AND N								NAMI									
RDT&E, N/BA-4		06	0350)2N,	Surfa	ace 8	، Sha	<u>wolls</u>	Water	MCN	М			12	33, N	/line	Cour	nter N	Meas	ures	Mid	-Life	Upgr	rades	8	
												C	OAP	•												
											(Co	on	tinu	ed)											
		FY 2	004			FY	200{	5	l r	FY 2	006		F	Y 2	007		F	Y 20	800			FY:	2009	,	FY 2010	FY 2011
	1	2	3	4	1	2	3	4	1	2	3 4	1	1 2	2 3	3	4	1 2	2 3	3	4	1	2	3	4		4 1 2 3 4
Events																										
Build 4 Development and Test Integration and Test IOC Build 5 Development and Test Integration and Test																										

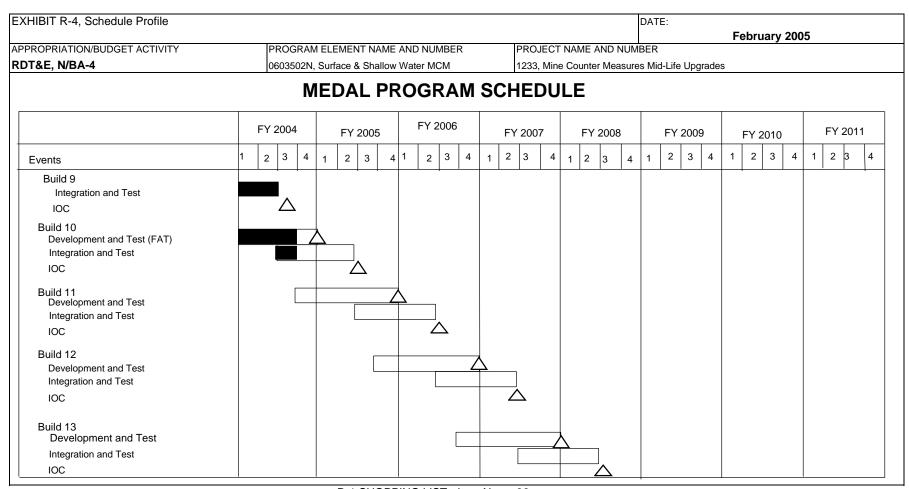
CLASSIFICATION:

XHIBIT R-4, Schedule Profile																		DATI	E:			Fe	bruary	200)5		
PPROPRIATION/BUDGET ACTIVITY		PRO	GRAN	Л EL	EMEN	T NAI	ME /	AND N	JMBE	R		F	PROJE	T T	NAME	ANI	NUM	IBER									
RDT&E, N/BA-4		0603	502N	, Sui	face 8	Shall	low \	Water I	ИСМ			1	1233, N	line	Coun	ter M	easure	es Mic	l-Life	Upg	rades						
			G	C	CS	-M	4.	x fo	or N	ЛC	M F	PF	300	€R	RAI	N S	SCH	ΗEI	DU	L	Ε						
		FY 200)4		FY 2	2005		F	Y 200	06		FY	2007		F	Y 20	08		FY 2	2009	9	ı	FY 2010)		FY 2	011
Events	1	2 3	4	1	2	3	4	1 2	3	4	1	2	3	4	1 2	3	4	1	2	3	4	1	2 3	4	1	2	3 4
Development and Integration of GCCS-M 4.x hardware: M-class ships Expeditionary units						•																-					

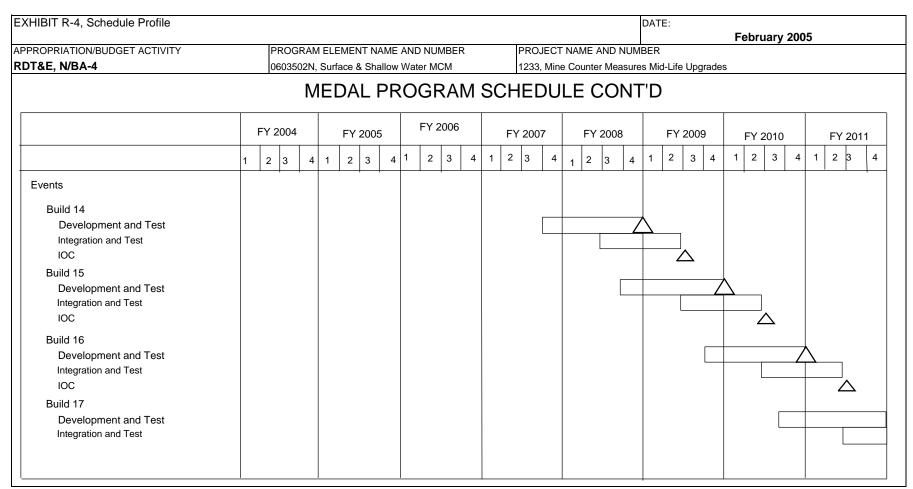
CLASSIFICATION:

EXHIBIT R-4, Schedule Profile																	DAT	E:				Febr	uar	v 200	05			
APPROPRIATION/BUDGET ACTIVITY					PROG	RAM E	ELE	MENT							R-1 I	ITEM N	IOMEN	CLA	TURE	E	<u> </u>	CDI	uai	y 200	03			
RDT& E, N/BA-5					06035					low V	Vater N	исм					Counte				d-Lif	fe Up	grad	es				
E. Schedule Profile																							<u> </u>					
HFWE	SC SC)N	AR	IN	/IPF	RO	V	ΈΝ	/IEI	N٦	ΓР	RC)G	R/	۸۲	/IS	СН	ΙEΙ	Dl	JL	E							
	FY 2004		′ 2004 F			FY 2005		FY 2006		FY 2007		FY 2008		800	B FY 2009			FY 2010			0 FY		FY 20	′ 2011				
				1	2	3 4		1 2	3	4	1 2	3	4	1	2	3 4	1	2	3	4	1	2	3	4	1	2	3	4
		• •	'		'	'		'	'		'	•	•			·									•		'	
Events																												
Design & Fabrication						۷	/ \ T		^																			
Integration Contractor Award										ا د																		
Tow Cable Integration													Δ	l	\sum	7												
In-water Component Tests													_															
Component EQT Tests																												
Ship Integration and At-sea Test															_													

CLASSIFICATION:



CLASSIFICATION:



CLASSIFICATION:

ROPRIATION/BUDGET ACTIVITY	PROGRAM	1 ELEMENT NAME	AND NUMBER	PROJECT	NAME AND NUM	BER	February 200	5
T&E, N/BA-4		Surface & Shallow			e Counter Measure		es	
		USV PF	ROGRAI	M SCHE				
	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
	1 2 3 4	12 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
USV Contract Award								
SDD Phase								
CT/DT								
ОТ								
LRIP Decision/Milestone C								
LRIP Production								
Full Rate Production Decision							\triangle	

CLASSIFICATION:

HIBIT R-4, Schedule Profile						DATE:	.	_
PROPRIATION/BUDGET ACTIVITY	IDDOCDA	M ELEMENT NAME	AND NUMBER	IDDO IECT	NAME AND NUM	DED	February 200	5
T&E, N/BA-4		I, Surface & Shallov				es Mid-Life Upgrade:	6	
rial, NDA-4		•				ss Mid-Life Opgrade:	5	
	IC	WS PR	OGRAM	SCHEL	JULE			
	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
	1 2 3 4	1 2 3	4 1 2 3 4	1 2 3 4	1 2 3	41 2 3 4	1 2 3 4	1 2 3 4
Events								' '
Ship board test Dockside/at-sea								

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:	ebruary 200	05
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	EMENT			PROJECT NU	MBER AND NA	AME	
RDT&BA-4	0603502N, St	urface & Shallo	w Water MCM		1233, Mine Co	unter Measure	s Mid-Life Upg	ades
Schedule Profile: BSP	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
HW/SW Design and Development	=00.		1Q-4Q	1Q				
Prelminary Design Review			3Q					
Critical Design Review			4Q					
Env., Shock, & Safety Testing			3Q-4Q	1Q-2Q				
EDM Installation & C/O				1Q				

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:		
	<u> </u>				T== = .===		ebruary 20	05
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI					IMBER AND NA		
RDT&BA-4	0603502N, St	urface & Shallo	w Water MCM		1233, Mine Co	ounter Measure	s Mid-Life Upg	ades
Schedule Profile: MIW C4ISR	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
MIW Information System Engineering Effort	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
MIW C4ISR Architecture:								
Rev 2 Architecture	1Q-4Q	1Q-4Q						
Rev 3 Architecture			1Q-4Q	1Q-4Q				
Rev 4 Architecture					1Q-4Q	1Q-4Q		
Rev 5 Architecture							1Q-4Q	1Q-4Q
C4ISR Dynamic Assessment	2Q-4Q	1Q-4Q						
MCM/MHC LAN Integration	1Q-4Q	1Q-4Q						
MCM/MHC Communication Modernization	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q		
MIW FORCEnet Implementation		1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:		
							February 20	05
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	LEMENT			PROJECT NU	IMBER AND N	AME	
RDT&BA-4	0603502N, St	urface & Shallo	w Water MCM		1233, Mine Co	ounter Measure	s Mid-Life Upgı	ades
Schedule Profile: COAP	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 201
Build 0 Development and Test			1Q-4Q					
Build 0 Integration and Tests			3Q-4Q	1Q-2Q				
Build 0 IOC				3Q				
Build 1 Development and Test			4Q	1Q-4Q				
Build 1 Integration and Test				3Q-4Q	1Q-2Q			
Build 1 IOC					3Q			
Build 2 Development and Test				4Q	1Q-4Q			
Build 2 Integration and Test					3Q-4Q	1Q-2Q		
Build 2 IOC						3Q		
Build 3 Development and Test					4Q	1Q-4Q		
Build 3 Integration and Test						3Q-4Q	1Q-2Q	
Build 3 IOC								
Build 4 Development and Test						4Q 1Q-4Q		
Build 4 Integration and Test							3Q-4Q	1Q-2Q
Build 4 IOC								3Q
Build 5 Development and Test							4Q	1Q-4Q
Build 5 Integration and Test								3Q-4Q
•								

R-1 SHOPPING LIST - Item No.

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CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:		
						s	eptember 20	004
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	LEMENT			PROJECT NU	MBER AND NA	AME	
RDT&BA-4	0603502N, S	urface & Shallo	w Water MCM		1233, Mine Co	Counter Measures Mid-Life Upgrades		
Schedule Profile: GCCS-M4.X	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Development and Integration of GCCS-M 4.x hardware:								
MCM Class			Q1-Q4					
Expeditionary Units			Q1-Q4					
					<u> </u>			
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				1				
				1				

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:	ebruary 20)5
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	LEMENT			PROJECT NU	MBER AND NA	AME	
RDT&BA-4	0603502N, St	urface & Shallo	w Water MCM		1233, Mine Co	ounter Measure	s Mid-Life Upg	ades
Schedule Profile: HFWB	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Design/Fabrication			1Q-4Q	1Q-4Q	1Q-3Q			
Integration Contract Award			3Q					
Tow Cable Integration				3Q-4Q	1Q-2Q			
In-Water Component Tests					1Q-2Q			
Component EQT Tests				1Q-4Q				
Ship Integration and At-sea Test					3Q-4Q			
					1			

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:		
							September 2	004
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	LEMENT			PROJECT NU	MBER AND N	AME	
RDT8BA-4	0603502N, S	urface & Shallo	w Water MCM		1233, Mine Co	ounter Measure	s Mid-Life Upgra	ades
Schedule Profile: MEDAL	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Build 9 Integration and Test	1Q-2Q							
Build 9 IOC	3Q							
Build 10 Development and Test	1Q-4Q							
Build 10 Integration and Tests	3Q-4Q	1Q-2Q						
Build 10 IOC		3Q						
Build 11 Development and Test	4Q	1Q-4Q						
Build 11 Integration and Tests		3Q-4Q	1Q-2Q					
Build 11 IOC			3Q					
Build 12 Development and Test		4Q	1Q-4Q					
Build 12 Integration and Tests			3Q-4Q	1Q-2Q				
Build 12 IOC		3Q						
Build 13 Development and Test		4Q 1Q-4Q						
Build 13 Integration and Test				3Q-4Q	1Q-2Q			
Build 13 IOC					3Q			
Build 14 Development and Test				4Q	1Q-4Q			
Build 14 Integration and Test					3Q-4Q	1Q-2Q		
Build 14 IOC						3Q		
Build 15 Development and Test					4Q	1Q-4Q		
Build 15 Integration and Test						3Q-4Q	1Q-2Q	
Build 15 IOC							3Q	
Build 16 Development and Test						4Q	1Q-4Q	
Build 16 Integration and Test							3Q-4Q	1Q-2Q
Build 16 IOC								3Q
Build 17 Development and Test							4Q	1Q-4Q
Build 17 Integration and Test								3Q-4Q
								·

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:	ebruary 200	05
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	EMENT			PROJECT NU	MBER AND NA	AME	
RDT&BA-4	0603502N, St	urface & Shallo	w Water MCM		1233, Mine Co	ounter Measure	s Mid-Life Upg	rades
Schedule Profile: USV	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008			FY 2011
USV Contract Award	1 1 200 1	1 1 2000	1 1 2000	2Q	1 1 2000	2000	2010	20
SDD Phase				2Q-4Q	1Q-4Q	1Q		
CT/DT						1Q		
ОТ						4Q		
LRIP Decision/Milestone C							1Q	
LRIP Production							2Q	
Full Rate Production Decision							4Q	
	+							
								
	1							
	1							
	1							

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: February 2005		
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	LEMENT			PROJECT NU	MBER AND NA	AME	
RDT&BA-4	0603502N, St	urface & Shallo	w Water MCM		1233, Mine Co	ounter Measure	s Mid-Life Upg	rades
Schedule Profile: ICWS	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008		FY 2010	FY 2011
Shipboard Test Dockside/At-Sea	1Q-2Q							
					+			

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE:			
									Febr	uary 2005	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM EI	EMENT NUME	BER AND NAM	1E	PROJECT NU	MBER AND N	AME			
RDT&E, N / BA-4	Surface & Sha	llow Water MC	M, 0603502N			Unmanned Un	dersea Vehicle	2094/2852			
	Prior										Total
COST (\$ in Millions)	Years Cost	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to Complete	Program
Project Cost	238.167	62.799	59.965	54.633	52.176	74.707	165.358	157.816	154.912	Continuing	Continuing
RDT&E Articles Qty			1	1							2

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The November 2004 UUV Master Plan establishes Intelligence, Surveillance, and Reconnaissance (ISR) as the Navy's top UUV priority. The second priority is to provide a clandestine, mine reconnaissance capability and Anti-Submarine Warfare is priority three.

The UUV project funds development of the UUV Program Plan. The AN/BLQ-11 Long-Term Mine Reconnaissance System (LMRS) was being developed to provide a robust, long-term Fleet capability to conduct clandestine minefield reconnaissance. The Navy was developing a Mission Reconfigurable UUV (MRUUV) system that was capable of performing different missions to conduct surveillance, intelligent and tactical oceanography. The LMRS Engineering Development Model (EDM) will be completed to mature and test critical technology for follow-on UUVs. The LMRS EDM may be used for fleet conops development and experimentation. The Advanced Development UUV (ADUUV) development will continue to mature and test critical modular UUV design technology for follow-on UUV programs. The UUV programs will continue to mature key UUV technologies and sonar sensors as risk reduction for follow-on UUV programs. Planning has begun for a new acquisition program to develop a modular, reconfigurable 21" MRUUV to support contract award in FY06. The first payload developed by this program will support the MCM mission. Other modular payload developments will be initiated beginning in FY09. An AOA for the Large Displacement (LD) MRUUV was completed in FY04. The Office of Naval Research will develop technologies for payload sensors and increased autonomy to support risk mitigation for the UUV program. Technologies from these systems will transition to UUV during the FNC demonstration year. Technology Transition agreements between the Program office and ONR have been signed.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:	
				February 2005
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	IAME	
RDT&E, N / BA-4	Surface & Shallow Water MCM, 0603502N	Unmanned Undersea Vehicle	le 2094/2852	

(U) B. Accomplishments/Planned Program

LMRS	FY 04	FY 05	FY 06	FY07
Accomplishments/Effort/Subtotal Cost	34.326	18.964	0.000	0.000
RDT&E Articles Quantity		1		

Complete development and fabrication of prototype LMRS system, prototype testing and conduct TECHEVAL.

ADUUV	FY 04	FY 05	FY 06	FY07
Accomplishments/Effort/Subtotal Cost	16.882	19.931	8.600	0.000
RDT&E Articles Quantity			1	

Complete development of an Advanced Development Unmanned Undersea Vehicle (ADUUV) and modification of Forward Look Sonar (FLS) for 21" MRUUV risk reduction.

LMRS P3I	FY 04	FY 05	FY 06	FY07
Accomplishments/Effort/Subtotal Cost	7.391	0.000	0.000	0.000
RDT&E Articles Quantity				

Funded engineering studies and technology integration development of LMRS P3I. Sensor technology will be used for risk reduction for the 21" MRUUV.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification	on			DATE:	2005
PROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBE	ED AND NAME	PROJECT NUMBER AND N	February 2	2005
T&E, N / BA-4	Surface & Shallow Water MC	M, 0603502N	Unmanned Undersea Vehicl	e 2094/2852	
B. Accomplishments/Planned Program					
UUV Sensor Risk Reduction	FY 04	FY 05	FY 06	FY07	
Accomplishments/Effort/Subtotal Cost	4.200	5.220	5.580	0.000	
RDT&E Articles Quantity					
21" Reconfigurable UUV Risk Reduction	FY 04	FY 05	FY 06	FY07	
Accomplishments/Effort/Subtotal Cost	0.000	15.850	23.574	0	
RDT&E Articles Quantity					
	FY 04	FY 05		E) (0.7	
21" Reconfigurable UUV			FY 06	FY07	
Accomplishments/Effort/Subtotal Cost	0.000	0.000	FY 06 16.879	52.176	
Accomplishments/Effort/Subtotal Cost	0.000				

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE:	
								February 2005
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	EMENT NUM	BER AND NAM	1E	PROJECT NU	MBER AND N	AME	
RDT&E, N / BA-4	Surface & Sh	allow Water M	CM, 0603502N	I	Unmanned Un	dersea Vehicle	e 2094/2852	
(U) D. OTHER PROGRAM FUNDING SUMMARY:								
Line Item No. & Name	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
2171/OPN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	94.619

(U) E. ACQUISITION STRATEGY:

The LMRS acquisition strategy was structured to maximize competition during system development. In FY97 three one year contracts were awarded for development of preliminary design. In early FY98, two of the preliminary design contrctors were selected to continue development through a critical design review. Selection of these two contractors was based primarily on the contractor's performance during the preliminary design contract. In early FY00, Boeing was selected to complete the LMRS design, fabricate a prototype system and support in-water testing. The LMRS Engineering Development Model will be used to mature and test UUV technology and for fleet conops development. The Advanced Development UUV (ADUUV) will be completed to mature and test critical modular UUV design technology that will be used for follow-on UUVs. A new acquisition program to develop a modular, reconfirgurable 21" MRUUV will be initiated with a competatively awarded contract planned for FY06.

CLASSIFICATION:

									DATE:				
Exhibit R-3 Cost Analysis (page 1)											February 20	05	
APPROPRIATION/BUDGET ACTIVITY			PROGRAM E	LEMENT			PROJECT NU	IMBER AND N	IAME				
RDT&E, N / BA-4			Surface & Sha	allow Water MC	M, 0603502N			dersea Vehic					
Cost Categories	Contract	Performing		Total		FY 04		FY 05		FY 06		FY07	
	Method & Type	Activity & Location		PY s Cost	FY 04 Cost	Award Date	FY 05 Cost	Award Date	FY 06 Cost	Award Date	FY07 Costs	Award Date	
LMRS	CPAF/IF	Boeing		86.849			8.340		Cost	Date	COSIS	Date	
Fees	CFAI /II	Boeing		9.553		1	8.340	N/A					
LMRS	Various	Various		45.533			4.293						
ADUUV	CPIF	Lockheed Mar	tin	6.750			11.084		5.000				
ADUUV	Various	Various	uii	10.485			2.532		1.500				
UUV P3I	Various	Various		31.103	6.280		2.552		1.300				
UUV Sensor Risk Reduction	Various	Various		0.000	1		5.220	N/A	5.580	N/A			
21" Reconfigurable UUV Risk Reduction	Various	Various		0.000		1	15.850		17.010				
21" Reconfigurable UUV	Various	Various		0.000		IN/A	15.650	IN/A	10.416		31.874	N/A	
LD MRUUV Risk Reduction	Various	Various		0.000					10.416	טפו	31.074	IN/A	
UUV Test center	Various	Various		7.502									
Subtotal Product Development	various	various		197.775			47.319		39.506		31.874		
Development Support													
Software Development													
Integrated Logistics Support													
Configuration Management													
Technical Data													
Studies & Analyses													
GFE													
Award Fees													
Subtotal Support				0.000	0.000)	0.000		0.000		0.000	0.000	
Remarks:													

CLASSIFICATION:

									DATE:				
Exhibit R-3 Cost Analysis (pag	e 2)										February 200)5	
APPROPRIATION/BUDGET ACTIV	TY		PROGRAM ELEME	NT			PROJECT NU	IMBER AND N	NAME		•		
RDT&E, N / BA-4			Surface & Shallow V	Vater MC			Unmanned Ur						
Cost Categories	Contract	Performing	Total			FY 04		FY 05		FY 06		FY07	
	Method	Activity &	PY s			Award		Award		Award		Award	
	& Type	Location	Cost			Date	Cost	Date	Cost	Date	Costs	Dare	
Developmental Test & Evaluation	Various	Various		2.731	3.247		1.758		ļ	N/A		N/A	
Operational Test & Evaluation	WR	Various		0.000		N/A		N/A		N/A		N/A	
GFE/GFI	Various	Various		0.644		N/A		N/A	2.000	TBD	7.000	N/A	
TTLRF	WR	Various		6.282	0.799	N/A		N/A		N/A		N/A	
Award Fees													
Subtotal T&E				9.657	4.046		1.758		2.000		7.000		
Contractor Engineering Support				5.024	1.000	N/A	1.500	N/A	1.750	N/A	2.000	N/A	
Government Engineering Support				20.507	3.612	N/A	3.783	N/A	3.500	N/A	3.750	N/A	
Program Management Support				5.204	2.795	N/A	5.605	N/A	7.877	N/A	7.552	N/A	
									-				
Subtotal Management				30.735	7.407		10.888		13.127		13.302		
Subtotal Management				30.735	7.407		10.000		13.127		13.302		1
Remarks:													
Total Cost				238.167	62.799		59.965		54.633		52.176		

VIRGINIA CLASS FOT&E

CLASSIFICATION:

EXHIBIT R4, Schedule Pro																					DATE				F	ebrua	ary 20	005				
APPROPRIATION/BUDGET AC	CTIVITY						ELEM					E						JECT N														
RDT&E, N /					Surfa	ce & S	hallow	Water	MCM.	0603	502N						Unma	anned l	Unders	ea Vel	nicle 20	094/28	52									
Fiscal Year		20	004			20	05			20	06			20	07			20	08			200	09			20	10			201	11	
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Complete LMRS Baseline				7																												
			DVT/E	DVTIIA	DT IIB		TECH	EVAL/C)A																							
ADUUV Development							<u> </u>																									
Sensor Risk Reduction																																
				21" \/	obiolo (s	hort to	rm)																									
21" Vehicle / Launch and Recovery Risk Reduction				21 00	ehicle (s	inort-te	'!''' 																									
Competition Planning/Execution																																
				-										Docian	/Dovol	opmon	t / Tost	Phase														
21" Vehicle Development Contract										_				Design	Devel	ортнеп	17 1651	I												Produc	tion	
											MS B																		M:	s c		
ISR Payloads Development Phase																																
201010411111111111111111111111111111111																																
																		Large	Displac	ement \	Vehicle	(long-te	erm)									
Large Diameter Vehicle Launch and Recovery																				l						I						
Risk Reduction																																
			1																													
LD MR UUV																																
Development Phase																										I						
																				MS	SB											
				<u> </u>					0115		IG LIS				36					l]						

 $^{^{\}star}$ Not required for Budget Activities 1, 2, 3, and 6

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:	ebruary 20	05
APPROPRIATION/BUDGET ACTIVITY	PROGRAM E	LEMENT			PROJECT NU	MBER AND NA	AME	
RDT&BA-4	Surface & Sha	allow Water MC	M, 0603502N		Unmanned Ur	ndersea Vehicle	2094/2852	
Schedule Profile	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY2011
LMRS								
DVT/DVTIIA	3Q-4Q							
DT II B		1Q						
TECHEVAL / Operational Assessment		3Q						
21" Reconfigurable UUV								
MS B			2Q - 3Q					
MS C								1Q
LD MRUUV								
MS B					4Q			
		<u> </u>		†	†			

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE:			
									Febru	uary 2005	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM EL	EMENT NUME	BER AND NAM	E	PROJECT NU	MBER AND N	AME			
RDT&E, N / BA-4	0603502N, Su	rface and Shall	low Water MCM	1		2131, Assault I	Breaching Syst	tems			
	Prior										Total
COST (\$ in Millions)	Years Cost	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to Complete	Program
Project Cost	187.561	2.932	26.808	29.215	37.530	36.551	35.897	31.246	30.446	Continuing	Continuing
RDT&E Articles Qty											0

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

This program provides for a combination of joint US Marine Corps and US Navy projects planned to counter the threat to amphibious landing forces from known and projected foreign land/sea mines and obstacles in the beach zone and surf zone approaches to amphibious assault areas. It develops a system of systems (Countermine/Counter Obstacle, Intelligence/Surveillance/Reconnaissance/Targeting (ISR/T), Navigation/Virtual Marking/Integration, C4I/Data Fusion) to provide a full assault breaching capability. Funding in FY 2004 is a Congressional Plus-Up for Venom Penetrator (part of the Counter mine demonstration). The ABS System of Systems (SoS) will obtain a Milestone B decision in early FY06.

The Counter Mine (CM) system will transition from a 6.3 S&T Concept Demonstration effort to a 6.4 development program after a concept decision/AoA in FY05. Three 6.3 S&T concepts will demonstrate the countermine technology by the beginning of FY05. A concept/decision/AoA will occur in FY05 and one of the concepts or a combination of the technologies will be chosen to move into the 6.4 development phase as the CM System (far-term). The CM Milestone B will occur in FY06 with a contract award to follow.

A near-term Counter Mine/Counter Obstacle (CMCO) system is also being characterized at the 6.3 S&T level to be used in the Fleet as an interim CM/CO capability until the "Far-Term" CM system is developed. This near-term system (JDAM Assault Breaching System - JABS) consists of in-service MK 84 general purpose bombs with a JDAM (Joint Directed Attack Munition) tail kit. This system is already being used in the fleet, however it is being characterized for a limited assault breaching mission. Some Follow-On-Test and Evaluation (FOT&E), risk mitigation, logistics, and operational readiness concerns need to be addressed for the ABS mission with ABS funding.

The ISR/T capability is being provided by the Coastal Battlefield Reconnaissance & Analysis (COBRA) system. This program will transition from the Marine Corps to the Navy program office at the beginning of FY05. COBRA consists of three block capabilities which will all be integrated into the Fire Scout UAV as LCS Mission Modules. Block I capability is to detect surface laid mine lines on the beach (daytime) using Multi-spectral imaging. Block II will incorporate Infrared technology which will transition from 6.3 S&T to detect surface laid mine lines in the surf zone (day and night). Block III will transition technology from 6.3 S&T to detect buried mine lines. COBRA Block I/II milestone B is scheduled to occur in FY05.

The navigation effort involves requirements development and program planning to choose the navigational upgrades for the Landing Craft, Air Cushion (LCAC) and Landing Craft, Utility (LCU) to enable the craft to safely navigate the neutralized assault lanes. OP,N will fund the CRAFTALTS to upgrade the navigation systems.

After the assault lane has been neutralized, virtual or physical marking systems need to be developed to mark where the lane has been cleared and guide the assault craft through the lane.

Command, Control, Computers, Communications and Intelligence (C4I) will tie all of the above systems together under an integrated ABS architecture and also tie in with the integrated Mine Warfare architecture.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2005
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	NAME
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM	2131, Assault Breaching Sys	rstems

(U) B. Accomplishments/Planned Program

Product Development	FY04	FY05	FY06	FY07
Accomplishments/Effort/Subtotal Cost	0.651	11.425	18.759	29.423
RDT&E Articles Quantity				

Product Development:

Venom Penetrator. Far term technology maturity (Counter mine), ISR/Targeting Development (COBRA), Government Furnished Equipment (GFE): Mine Threat Acquisition for R&D Development and Testing, DDGPS Development (Marking). Counter Mine System Development Contract beginning in FY06.

Support	FY04	FY05	FY06	FY07
Accomplishments/Effort/Subtotal Cost	1.595	1.052	1.125	0.157
RDT&E Articles Quantity				

Support:

Venom Penetrator. Mine Burial Effects/Mine Case/TNT Studies in support of requirements development, Fuze Vulnerability Studies. Tactical Decision Aid Development, Modeling and Simulation in support of Far-Term Development. ABS Scalability study.

^{*} Associated FY04 funding is in 0603782N for all items except Venom Penetrator.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justificati	on			DATE:	
				Febr	uary 2005
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUM	IBER AND NAME	PROJECT NUMBER AND I	NAME	-
RDT&E, N / BA-4	0603502N, Surface and Sha	allow Water MCM	2131, Assault Breaching Sy	rstems	
(U) B. Accomplishments/Planned Program					_
Test and Evaluation	FY04	FY05	FY06	FY07	
Accomplishments/Effort/Subtotal Cost	0.159	0.331	2.865	0.170	

Test and Evaluation:

RDT&E Articles Quantity

Venom Penetrator. Near Term (JABS) Risk Mitigation Testing; Commander Operational Test & Evaluation Forces Test Support.

Management	FY04	FY05*	FY06	FY07
Accomplishments/Effort/Subtotal Cost	0.527	14.000	6.466	7.780
RDT&E Articles Quantity				

Management:

Venom Penetrator. Program management support, In-house contractor support (CACI, COMOPTEVFOR, and Northrop Grumman). Technical Direction Agent/Design Agent (TDA/DA) Engineering Support of Mission Area Analysis, Analysis of Alternatives, Milestone B preparation, contract and acquisition documentation, Requirements Generation - Initial Capabilities Document (ICD), Capability Development Documents (CDD), Capability Production Documents (CPD), Analysis of Material approvals and Functional needs analysis/functional solutions analysis, Mine magazine inventory management and shipping, contract management and tests/studies, C4I/Data fusion.

Total	2.932	26.808	29.215	37.530

R-1 SHOPPING LIST - Item No.

UNCLASSIFIED

CLASSIFICATION:

						DATE:			
							Febru	ary 2005	
PROGRAM EI	LEMENT NUM	BER AND NAM	ΛΕ	PROJECT NU	MBER AND N	AME			
0603502N, Su	ırface and Sha	llow Water MC	М	2131, Assault	Breaching Sys	stems			
<u>FY 2004</u> 0.000	FY 2005 0.000	FY 2006 2.277	FY 2007 8.325	FY 2008 9.091	FY 2009 14.759	FY 2010 14.066	FY 2011 18.143	To <u>Complete</u> Continuing	Total <u>Cost</u> Continuing
	0603502N, Su	0603502N, Surface and Sha <u>FY 2004</u> <u>FY 2005</u> 0.000 0.000	0603502N, Surface and Shallow Water MCI FY 2004 FY 2005 FY 2006 0.000 0.000 2.277	0.000 0.000 2.277 8.325	0603502N, Surface and Shallow Water MCM 2131, Assault FY 2004 FY 2005 FY 2006 FY 2007 FY 2008 0.000 0.000 2.277 8.325 9.091	FY 2004 FY 2005 FY 2006 FY 2007 FY 2008 FY 2009 0.000 0.000 2.277 8.325 9.091 14.759	PROGRAM ELEMENT NUMBER AND NAME PROJECT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM 2131, Assault Breaching Systems FY 2004 FY 2005 FY 2006 FY 2007 FY 2008 FY 2009 FY 2010 0.000 0.000 2.277 8.325 9.091 14.759 14.066	Febru PROGRAM ELEMENT NUMBER AND NAME PROJECT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM 2131, Assault Breaching Systems FY 2004 FY 2005 FY 2006 FY 2007 FY 2008 FY 2009 FY 2010 FY 2011 0.000 0.000 2.277 8.325 9.091 14.759 14.066 18.143	February 2005 PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM PROJECT NUMBER AND NAME 2131, Assault Breaching Systems FY 2004 FY 2005 FY 2006 FY 2007 FY 2008 FY 2009 FY 2010 FY 2011 Complete Complete 0.000 0.000 2.277 8.325 9.091 14.759 14.066 18.143 Continuing

*\$12M is ABS specific. Funding exists across the FYDP in this PE for other mine warfare efforts.

The FY04 and FY05 Initial Capabilities Document (ICD) and Capability Development Documents (CDD) tasks specifically complete the requirements generation process for the overarching mission area of Amphibious Operations in a Mined Environment leading to a MS B decision during FY06. The Functional Area Analysis (FAA) will provide the foundation for the "system of systems ICD/CDD required for Amphibious Operations in a Mined Environment. The FY04 and FY05 tasks will also allow the Navy to demonstrate the viability of concepts for Far Term System of Systems capabilities and justify the need for future funding. The FY04 funding was crucial to maintaining the inventory of threat mines that will be required for future mine lethality and vulnerability tests. The FY04 and FY05 tasks will develop ISR/Targeting systems and Navigation systems to support the Assault Breaching Mission. Milestone B for Countermine system development will occur in FY06 followed by a development contract award for the Countermine system development in FY06. Development of Block I COBRA(ISR/T) will continue into FY06 to prepare for a delivery of a Block I system for LCS Flight 0. FY06 funding will begin development of the COBRA Block II system to detect mine lines in the Surf Zone. The OPN in FY06 will go toward funding Navigational upgrades to the LCAC and LCU craft for more accurate navigation through the surf zone. FY07 OPN will also continue the Navigation upgrades to the LCAC and LCU as well as procure Block I COBRA systems for LCS Mission Modules.

⁽U) E. ACQUISITION STRATEGY:

CLASSIFICATION:

Remarks:

									DATE:						
Exhibit R-3 Cost Analysis (page	ge 1)											Februa	ary 2005		
APPROPRIATION/BUDGET ACTIV			PROGRAM E	LEMENT			PROJECT N	UMBER AND	NAME						
RDT&E, N / BA-4			0603502N, St	urface and Sh	allow Water N		2131, Assau		Systems						
Cost Categories	Contract Method & Type	Performing Activity & Location		Total PY s Cost	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07	FY 07 Award Date			Target Value of Contract
Primary Hardware Development	WX	IH, NSWC:PC	TBD	54.554	0.651	11/03	11.425	11/04	18.759	02/06	29.423	02/07	Continuing	Continuing) N/
Ancillary Hardware Development	WX	IH, NSWC:PC	TBD	8.100)								0.000	8.100) N/
Aircraft Integration														0.000)
Ship Integration														0.000)
Ship Suitability														0.000)
Systems Engineering	WX	IH, NSWC:PC		17.033									Continuing	Continuing) N/
Training Development	WX	IH, NSWC:PC		2.000)									2.000	N/.
Tooling	WX	IH, NSWC:PC	TBD	0.860)									0.860) N/
GFE	WX	IH, NSWC:PC		4.700)		0.000						Continuing	Continuing	g N/
														0.000)
														0.000)
														0.000	j
														0.000	j
														0.000	j
														0.000	j
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														0.000)
														0.000)
														0.000	1
														0.000)
														0.000)
														0.000)
Subtotal Product Development				87.247	0.651		11.425		18.759	ol .	29.423		0.000	147.505	ز

CLASSIFICATION:

									DATE:						
Exhibit R-3 Cost Analysis (p	age 1)											Februa	ary 2005		
APPROPRIATION/BUDGET ACT	IVITY		PROGRAM E				PROJECT N								
RDT&E, N / BA-??	la	T=	0603502N, S	urface and Sh	allow Water N		2131, Assau				1	I=1 / a=	Т	T	1
Cost Categories	Method & Type	Performing Activity & Location		Total PY s Cost	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date		FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Development Support Equipment	WX	IH, NSWC:PC	C, TBD	11.721			0.000		0.725	11/05	0.057	11/06	Continuing	Continuing	N/
Software Development	WX	NSWC:PC		8.037										8.037	7 N/
Integrated Logistics Support	WX	IH, NSWC:PC	;	2.712										2.712	2 N/
Configuration Management	WX	IH, NSWC:PC	;	3.744										3.744	N/
Technical Data	WX	IH, NSWC:PC	;	2.588										2.588	B N/
Studies & Analysis	WX	IH, NSWC:PC	;	0.992	1.595	01/03	1.052	11/04	0.400	11/05	0.100	11/06	Continuing	Continuing	1
GFE	WX	IH, NSWC:PC	;	0.400										0.400) N/
Award Fees														0.000)
														0.000)
														0.000)
														0.000)
														0.000)
														0.000)
														0.000)
														0.000)
														0.000)
														0.000)
														0.000)
														0.000)
														0.000)
														0.000)
														0.000)
														0.000)
Subtotal Support				30.194	1.595		1.052		1.125		0.157	7	0.000	34.123	3

CLASSIFICATION:

								DATE:						
Exhibit R-3 Cost Analysis (page	ge 2)	1				1		<u> </u>			Febru	ary 2005		
APPROPRIATION/BUDGET ACTIV	ITY	PROGRAM E					NUMBER AND							
RDT&E, N / BA-4	0	0603502N, S		allow Water N	IFY 04	2131, Assau	It Breaching S	Systems	EV 00	1	FY 07	1		1
Cost Categories	Contract Method	Activity &	Total PY s	FY 04	Award	FY 05	Award	FY 06	FY 06 Award	FY 07	Award	Cost to	Total	Target Value
	& Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
Developmental Test & Evaluation	WX, PD	IH, NSWC:PC TBD	26.263			0.331	+	2.865		0.170		Continuing		
Operational Test & Evaluation	WR	IH, NSWC:PC TBD	8.655										8.655	
Live Fire Test & Evaluation													0.000	
Test Assets													0.000	
Tooling	WX	IH, NSWC:PC TBD	0.700										0.700	N/A
GFE	WX	IH, NSWC:PC TBD	0.400)									0.400	N/.
Award Fees													0.000	
Subtotal T&E			36.018	0.159	9	0.331		2.865	5	0.170		0.000	39.713	1
Contractor Engineering Support	CPFF	CACI, Northrup Grumman	3.089)		0.750	11/04	0.522	11/05	0.537	11/06	Continuing	Continuing	l N/
0 11		' '												
Government Engineering Support	WX WX	IH, NSWC:PC IH, NSWC:PC, NAVSEA	18.737			1.891		1.835	1	1.950		Continuing	Continuing	1
Program Management Support	PD		11.326		1/04	1.784		4.034		5.218		Continuing	Continuing	
Travel Transportation	PD	NAVSEA	0.877			0.075	11/04	0.075	11/05	0.075	11/06	Continuing	Continuing 0.000	1
Assessment*	Various	Various	0.073			9.500							9.573	1
Subtotal Management	ranous	Valledo	34.102		7	14.000		6.466	3	7.780)	0.000	1	
Remarks:														
Total Cost			187.561	2.932	2	26.808	3	29.215	5	37.530		0.000	284.046	

CLASSIFICATION:

EXHIBIT R-4, Schedule Profile						DATE:	Echruary 200	NE.
APPROPRIATION/BUDGET ACTIVITY	IDDOGDAN	I ELEMENT NAME	AND NI IMBER	DPO IECT	Γ NAME AND NUM	RED	February 200	<u></u>
RDT&E, N/BA-4		Surface & Shallow			sault Breaching Sys			
NOTAL, NOA-4						items		
	А	BS PRC)GRAM	SCHED	ULE			
	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
Milestones			MS B (CN)				
ONR 6.3 Demo Efforts		CM and CO Exp	oloration/Technology Demo	stration 6.3				
		L D7 00 Dame						
	CIV	1 - BZ CO Demo						
CMCO Acquisition/Development 6.4		DD/Approval	Draft			CM and CO System Devel	opment	
			Prep for MS					
CMCO System Design and Test			B/Contract Award	CM - BZ CO Contract Award				
Owo Oyston Bosign and Tost					System Design	/Platform Integration	n J	
			_					
CMCO Technical Reviews			Contract Kickoff	SRR SFR SSF	R PDR	EOA CDR		
ISR/Navigation/C4I Development				av/C4I System Develo	opment			
		✓ MS B	(COBRA)					
<u> </u>	1	1	1	1		I .	1	

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:		
						F	ebruary 20)5
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	LEMENT			PROJECT NU	MBER AND NA	AME	
RDT&BA-4	Program Elem	ent (PE) No. a	nd Name		2131, Assault	Breaching Sys	tems	
Schedule Profile: ABS	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
CM and CO Exploration/Technology Demonstration 6.3(O	1Q-4Q	1Q-4Q	1Q-4Q	1Q-3Q				
CM-BZ CO Demo	4Q							
MAA/MNS/Risk Mitigation/Requirements Devel:								
Draft CDD/Approval	1Q-4Q	1Q-4Q	1Q					
MS B (CM-BZ CO)			2Q					
Prep for MS B/Contract Award			1Q-3Q					
CM and CO System Development			2Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
CM- BZ CO Contract Award			4Q					
System Design/Platform integration			2Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
Technical Reviews:								
Contract Kickoff			4Q					
SRR - System requirements Review				1Q				
SFR- System Functional Review				3Q				
SSR - System Software Review				4Q				
PDR - Preliminary Design Review					1Q			
EOA - Early Operational Assessment						1Q		
CDR- Critical Design Review						2Q		
ISR/NAV/C4I Development	2Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
COBRA Milestone B		2Q						
			-			-	-	

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE:			
									Febru	uary 2005	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM EL	EMENT NUM	BER AND NAM	E	PROJECT NU	MBER AND N	AME			
RDT&E, N / BA-4	0603502N, Su	rface and Shall	low Water MCN	И		4025, Expenda	able Mine Neut	ralization Syste	em		
	Prior										Total
COST (\$ in Millions)	Years Cost	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to Complete	Program
Project Cost	0.000	0.000	2.155	11.506	14.030	0.000	0.000	0.000	0.000	0.000	27.691
1 10/601 0031	0.000	0.000	2.100	11.500	14.030	0.000	0.000	0.000	0.000	0.000	27.091
RDT&E Articles Qty											0

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

Expendable Mine Neutralization System (EMNS) is a replacement to the existing AN/SLQ-48 Mine Neutralization System (MNS). The current program replaces the MNS with EMNS on the 14 MCM Avenger Class Ships. EMNS will leverage off of on-going efforts in the Airborne Mine Countermeasures Program to develop an Airborne Mine Neutralization System (AMNS).

CLASSIFICATION:

					February 2005
PROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUM	BER AND NAME	PROJECT NUMBER AND N	AME	
T&E, N / BA-4	0603502N, Surface and Sha	0603502N, Surface and Shallow Water MCM		ralization System	
B. Accomplishments/Planned Program					
Product Development	FY 04	FY 05	FY 06	FY 07	7
Accomplishments/Effort/Subtotal Cost	0.000	1.533	9.326	4.730	7
RDT&E Articles Quantity					
Product Development: Award Development Contract for Expendable M		developer. Initiate hard	ware design and development. M	odify software for use on an	MCM class ship. Integrate EMNS Engineering
		developer. Initiate hard	ware design and development. M	odify software for use on an	MCM class ship. Integrate EMNS Engineering
Award Development Contract for Expendable M Development Model (EDM) aboard MCM-1 Clas	ss Ship.	FY 05	FY 06	FY 07	MCM class ship. Integrate EMNS Engineering
Award Development Contract for Expendable M Development Model (EDM) aboard MCM-1 Clas	ss Ship.				MCM class ship. Integrate EMNS Engineering

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justifica	tion				DATE:
PROPRIATION/BUDGET ACTIVITY	IPROGRAM ELEMENT NUM	DED AND NAME	PROJECT NUMBER AND N	ANAF	February 2005
T&E, N / BA-4	0603502N, Surface and Sha	llow Water MCM	4025, Expendable Mine Neu	tralization System	
B. Accomplishments/Planned Program					
Test and Evaluation	FY 04	FY 05	FY 06	FY 07	7
Accomplishments/Effort/Subtotal Cost	0.000	0.100	0.750	7.970	
RDT&E Articles Quantity					
Management	FY 04	FY 05	FY 06	FY 07	7
Accomplishments/Effort/Subtotal Cost	0.000	0.430	0.430	0.430	
RDT&E Articles Quantity					
	•	•	•		
Management: Provide program management support and tra	vel for EMNS.				
Total	0.000	2.155	11.506	14.030]

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification]	DATE:
			February 2005
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NA	ME
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM	4025, Expendable Mine Neutr	alization System

(U) D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name 2622 / OPN	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To <u>Complete</u>	Total <u>Cost</u>
EMNS	0.000	0.000	0.000	0.000	14.534	13.933	15.019	12.499	Continuing	55.985
4225 / WPN	0.000	0.000	0.000	0.000	0.000	0.000	3.735	6.157	Continuing	9.892
Total	0.000	0.000	0.000	0.000	14.534	13.933	18.754	18.656	0.000	65.877

(U) E. ACQUISITION STRATEGY:

The Airborne Mine Countermeasures Program is developing two Airborne Mine Neutralization variants for the H-53 and H-60 helicopters. Based on Surface Ship requirements, one of these two variants will be selected for use on the MCM Avenger Class Ships. The acquisition strategy will be to either compete between the two alternatives, or select the one that best meets fleet requirements.

CLASSIFICATION:

				_	_	_				DATE:	_						
Exhibit R-3 Cost Ar	alysis (page	e 1)											Februar	y 2005			
APPROPRIATION/BUD	GET ACTIVIT	Υ		PROGRAM E	LEMENT			PROJECT NUMBER AND NAME									
RDT&E, N /	BA-4			0603502N, St	urface and Shal	low Water MC		4025, Expendable Mine Neutralization System									
Cost Categories			Performing		Total		FY 04		FY 05		FY 06		FY 07				
			Activity &			FY 04	Award		Award		Award		Award		Total	Target Valu	
Decision Feet decision I		& Type	Location	- O': FI	Cost	Cost	Date	Cost	Date		Date	Cost	Date	Complete	Cost	of Contract	
Develop Technical and			NSWC, Panam	na City, FL	0.000	0.000		0.917		0.000		0.000			0.917	1	
Hardware and Software			TBD		0.000	0.000		0.616		7.763		2.200		0.000		1	
Systems Engineering		WX	NSWC, Panam		0.000	0.000		0.000	1	1.563	10/05	1.530		0.000			
Shipboard Integration		ΝX	NSWC, Panam	na City, FL	0.000	0.000)	0.000		0.000		1.000	10/06	0.000		1	
															0.000		
															0.000	1	
															0.000	1	
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										İ					0.000	1	
										İ					0.000		
															0.000	1	
															0.000	1	
Subtotal Product Develor	oment				0.000	0 000		1 533		9,326		4.730		0.000		1	
Subtotal Product Develor	oment				0.000	0.000)	1.533		9.326		4.730		0.000		-	

CLASSIFICATION:

								DATE:						
Exhibit R-3 Cost Analysis (pa	ge 1)										February	2005		
APPROPRIATION/BUDGÉT ACTIV	ITY	PROGRAM E	LEMENT			PROJECT NU	MBER AND N	IAME						
RDT&E, N / BA-4		0603502N, S	urface and Shal	low Water MCI	М			tralization Syste						
Cost Categories	Method	Performing Activity & Location		FY 04 Cost		FY 05	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete		Target Value of Contract
Develop Logistics Products		TBD	0.000			0.000		0.800		0.700		0.000		
Develop Logistics Products	WX	NSWC, Panama City, FL	0.000	0.000		0.092	10/2004	0.200	10/2005	0.200		0.000	0.492	
		,											0.000	N/A
													0.000	N/A
													0.000	N/A
													0.000	N/A
													0.000	N/A
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													0.000	
													0.000	
													0.000	
Subtotal Support			0.000	0.000		0.092		1.000)	0.900		0.000	1.992	
Remarks:														

CLASSIFICATION:

E 1 11 12 B 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	٥,								DATE:							
Exhibit R-3 Cost Analysis (pa		Inno	00.11.51.51.5				long rect		February 2005							
APPROPRIATION/BUDGET ACTIV	/11 Y		GRAM ELEME		our Motor \$40	• 1.4		NUMBER AND								
Cost Categories	Contract	Performing 0603	502N, Surface Tota		ow vvater MC	FY 04	4025, Expendable Mine Neutralization System FY 05 FY 06 FY 07									
Cost Categories	Method	Activity &	PY s		FY 04	Award	FY 05	Award	FY 06	Award	FY 07	Award	Cost to	Total	Target Value	
	& Type	Location	Cost		Cost	Date	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract	
Develop TEMP	WX	NSWC, Panama Cit	y, FL				0.1	00 10/04	0.100	10/05			,	0.20	0 N/	
Environmental and Shock Testing	WX	NSWC, Panama Cit							0.350		0.500	10/06		0.85	0 N/.	
CT/DT/OT	CPIF	TBD	,						0.100	10/05	1.470			1.57	0 N/	
CT/DT/OT	WX	NSWC, Panama Cit	y, FL								4.500	10/06		4.50	0	
Safety Testing	WX	NSWC, Panama Cit							0.200	10/05	1.500	10/06		1.70	0	
		·												0.00	0	
														0.00		
Subtotal T&E				0.000	0.000)	0.1	00	0.750)	7.970		0.000			
Program Mangement Support	CPFF	CACI		0.000	0.000		0.1	50 10/04	0.150		0.150			0.45	_	
Travel	Various	NAVSEA		0.000	0.000)	0.0		0.050		0.050		1	0.15		
Government Engineering Support	WX	NSWC, Panama Cit	y, FL				0.2	30 10/04	0.230	10/05	0.230	10/06		0.69	-	
														0.00	-	
														0.00		
														0.00	0	
Subtotal Management				0.000	0.000)	0.4	30	0.430)	0.430)	0.000	1.29	0	
Remarks:																
Total Cost				0.000	0.000		2.1	55	11.506	6	14.030)	0.000	27.69	1	
Remarks:																

CLASSIFICATION:

EXHIBIT R-4, Schedule Profile					D	ATE:	February 200	5					
APPROPRIATION/BUDGET ACTIVITY	PROGRAM	I ELEMENT NAME	AND NUMBER	PROJECT	NAME AND NUMBI	ER							
RDT&E, N/BA-4		Surface & Shallow			endable Mine Neutra	lization System							
EMNS PROGRAM SCHEDULE													
	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011					
	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4					
Contract Award		Δ											
HW/SW Design and Development													
Preliminary Design Review		\triangle											
Critical Design Review			\triangle										
Contractor Testing													
Development Testing													
EMD Install / Checkout				Δ									
TECHEVAL/OPEVAL													
Milestone C													
	1	1	1		1								

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:		05			
ADDDODDIATION/DUDOCT ACTIVITY	IDDOODAME	LEMENT			IDDO IECT NII	I	February 2005				
APPROPRIATION/BUDGET ACTIVITY	PROGRAM E			T NUMBER AND NAME							
RDT&BA-4		ırface & Shallov		-	4025, Expendable Mine Neutralization System						
Schedule Profile: EMNS	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011			
Contract Aaward		3Q									
HW/SW Design & Development		3Q - 4Q	1Q - 2Q								
Preliminary Design Review		4Q									
Preliminary Design Review Critical Design Review			1Q								
Contractor Testing			2Q - 3Q								
Development Testing			4Q	1Q							
EDM Installation and Checkout				2Q							
TECHEVAL/OPEVAL				2Q-3Q							
Milestone C				4Q							

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification	HIBIT R-2a, RDT&E Project Justification										
	February 2005										
APPROPRIATION/BUDGET ACTIVITY	AME										
RDT&E, N / BA-4	0603502N, Su	rface and Shal	low Water MCN	1	quency Broadb	and					
	Prior										Total
COST (\$ in Millions)	Years Cost	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to Complete	Program
Project Cost	0.000	0.000	0.000	9.850	15.470	18.132	23.895	10.552	14.902	Continuing	Continuing
RDT&E Articles Qty											

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

Low Frequency Broadband (LFBB) is a development program for providing Low-frequency, broadband (LFBB) sensor and processor payload for an unmanned, underwater vehicle (UUV). The project provides a needed capability for detection of buried mines and identification of mines by a combination of imaging and non-imaging signal processing technologies. This technology is being transitioned from Office of Naval Research projects, which have demonstrated the technology, but need to be transitioned into a system.

CLASSIFICATION:

	eation			DATE: February	2005
PROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUM	MBER AND NAME	PROJECT NUMBER AND N		2005
T&E, N / BA-4	0603502N, Surface and Sha		3102 Low Frequency Broad		
IAL, N / DA-4	0003502N, Surface and Sha	allow water wich	3102 Low Frequency Broads	Dariu	
B. Accomplishments/Planned Program					
Product Development	FY 04	FY 05	FY 06	FY 07	
Accomplishments/Effort/Subtotal Cost	0.000	0.000	5.250	7.700	
RDT&E Articles Quantity					
roduct Development: lesign and prototyping of critical technology	components for demonstration and e	valuation.			
	FY 04	FY 05	FY 06	FY 07	
Accomplishments/Effort/Subtotal Cost	FY 04 0.000	FY 05 0.000	FY 06 2.600	FY 07 4.000	
Support Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity					

CLASSIFICATION:

PROPRIATION/BUDGET ACTIVITY DT&E, N / BA-4 B. Accomplishments/Planned Program Test and Evaluation Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Test and Evaluation: Initiate development component testing.	PROGRAM ELEMENT NUM 0603502N, Surface and Sha FY 04 0.000		PROJECT NUMBER AND NA 3102 Low Frequency Broadba		
DT&E, N / BA-4 B. Accomplishments/Planned Program Test and Evaluation Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Test and Evaluation:	FY 04	FY 05	FY 06	FY 07	
B. Accomplishments/Planned Program Test and Evaluation Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Test and Evaluation:	FY 04	FY 05	FY 06	FY 07	
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Test and Evaluation:					
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity Test and Evaluation:					
RDT&E Articles Quantity Test and Evaluation:	0.000	0.000	0.550	1.000	
Management	FY 04	FY 05	FY 06	FY 07	
Accomplishments/Effort/Subtotal Cost	0.000	0.000	1.450	1.970	
RDT&E Articles Quantity					
Management: Provide program management support and travel fo	or LFBB.				
Total	0.000	0.000	9.850	15.470	

CLASSIFICATION:

COPRIATION/BUDGET ACTIVITY	IBIT R-2a, RDT&E P	roject Justification								DATE:	F-1	0005
CU) D. OTHER PROGRAM FUNDING SUMMARY: Line Item No. & Name O.000 O	ROPRIATION/RUDGET A	CTIVITY	T	PROGRAM FI	EMENT NUME	RER AND NAM	F	PRO JECT NUM	ARER AND N	ΔME	February	2005
(U) D. OTHER PROGRAM FUNDING SUMMARY: Line Item No. & Name 0996 / OPN FY 2004 FY 2005 FY 2006 FY 2007 FY 2008 FY 2009 FY 2010 FY 2011 Complete Cost Total 0.000 0.000 0.000 0.000 0.000 45.569 45.610 Continuing Total 0.000 0.000 0.000 0.000 0.000 45.569 45.610 Continuing (U) E. ACQUISITION STRATEGY:												
Line Item No. & Name	ac, iv	DA 1		50055021 1 , Out	lace and Onain	ow water work	•	5102 Low 1 lequ	dericy broads	and		
Line Item No. & Name FY 2004 FY 2005 FY 2006 FY 2007 FY 2008 FY 2009 FY 2010 FY 2011 Complete Cost	(U) D. OTHER PROGR	AM FUNDING SUMMAR	Y:									
Total 0.000 0.000 0.000 0.000 0.000 0.000 45.569 45.610 Continuing Continuing			FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011		
(U) E. ACQUISITION STRATEGY:	0330 / OF IN		0.000	0.000	0.000	0.000	0.000	0.000	45.569	45.610	Continuing	Continuing
	Total		0.000	0.000	0.000	0.000	0.000	0.000	45.569	45.610	Continuing	Continuing
			a contract to add	dress the critica	al technologies	necessary for	he developm	ent of the LEBB	Sonar Proc	urement is sche	duled to start in FY1	0

CLASSIFICATION:

Exhibit R-3 Cost Analysis () APPROPRIATION/BUDGET ACT	TIVITY		PROGRAM	ELEMENT			PROJECT NU	IMBER AND	NAME			Februar	,		
RDT&E, N / BA-4			0603502N,	Surface and Sh	allow Water MC	M	3102 Low Fre		dband						
Cost Categories	Method	Performing Activity & Location		Total PY s Cost	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
DM Hardware Development		Contractors -	Two (TBD)						5.250	11/05	7.700	11/06	Continuing	Continuing	N/
														0.000	N/
														0.000	N/
														0.000	N/
														0.000	N/
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														0.000	
Subtotal Product Development				0.00	0.000)	0.000		5.250)	7.700		0.000	12.950)

CLASSIFICATION:

										DATE:						
Exhibit R-3 Cost Ana	alvsis (page	1)											February	v 2005		
APPROPRIATION/BUDG	GÉT ACTIVITY	′		PROGRAM I	LEMENT			PROJECT N	JMBER AND	NAME						
	BA-4			0603502N, S	urface and Shal	llow Water MC	M	3102 Low Fre	equency Broa	ndband						
Cost Categories	M	lethod	Performing Activity & Location			FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date		Total Cost	Target Value of Contract
Software Development			Contractors (TE	BD)						2.350	11/05	3.500	11/06	Continuing	Continuing	N/A
Integrated Logistics Suppor	rt W	/X	NSWC, Panar	ma, City, FL						0.250	D	0.500	10/06	Continuing	Continuing	N/A
															0.000	N/A
															0.000	N/A
															0.000	N/A
															0.000	N/A
															0.000	N/A
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															0.000	
															0.000	
Subtotal Support					0.000	0.000)	0.000)	2.600	0	4.000		0.000	6.600	
Remarks:																

CLASSIFICATION:

								DATE:						
Exhibit R-3 Cost Analysis (pa											Februar	y 2005		
APPROPRIATION/BUDGET ACTIV	/ITY	PROGRAM					NUMBER AND							
RDT&E, N / BA-4	1		Surface and Sha	Illow Water MC		3102 Low F	requency Broa		I=	_		1	1	
Cost Categories	Contract Method		Total PY s	FY 04	FY 04 Award	FY 05	FY 05 Award		FY 06 Award		FY 07 Award	Cost to	Total	Target Value
	& Type	Activity & Location	Cost	Cost	Date	Cost	Date		Date		Date		Cost	of Contract
Developmental Test & Evaluation	WX	NSWC:PC, NRL	0031	COST	Date	0031	Date	0.550		1.800		Continuing	Continuing	
Developmental Test & Evaluation	VVA	NOWC.F C, NIKE	+					0.550	11/03	1.000	11/00	Continuing	0.000	
			+										0.000	
													0.000	
			+										0.000	
													0.000	
													0.000	
Subtotal T&E			0.000	0.000	0	0.0	00	0.550		1.800		0.000		
Program Management Support	WX various CPFF	NSWC, Panama, City, FL NAVSEA CACI	0.000					0.650 0.525 0.200	11/05	1.150 0.545 0.200		Continuing Continuing Continuing	Continuing Continuing Continuing	N/
Program Management Support Program Management Support	various	NAVSEA		0.000	0			0.525		0.545	11/06	Continuing	Continuing	N/.
Program Management Support Program Management Support	various CPFF	NAVSEA CACI	0.000	0.000	0			0.525 0.200		0.545 0.200	11/06	Continuing	Continuing Continuing	N/. N/. N/.
Government Engineering Support Program Management Support Program Management Support Travel	various CPFF	NAVSEA CACI	0.000	0.000	0			0.525 0.200		0.545 0.200	11/06	Continuing	Continuing Continuing 0.075	N/. N/. N/. N/.
Program Management Support Program Management Support Travel	various CPFF	NAVSEA CACI	0.000	0.000	0	0.0	000	0.525 0.200		0.545 0.200	11/06	Continuing	Continuing Continuing 0.075 0.000	N N N
Program Management Support Program Management Support	various CPFF	NAVSEA CACI	0.000	0.000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0		0.525 0.200 0.075	11/05	0.545 0.200 0.075	11/06	Continuing Continuing	Continuing	N N N
Program Management Support Program Management Support Travel Subtotal Management Remarks:	various CPFF	NAVSEA CACI	0.000	0.000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			0.525 0.200 0.075	11/05	0.545 0.200 0.075	11/06	Continuing Continuing 0.000	Continuing	N N N

CLASSIFICATION:

																				-													
EXHIBIT R-4, Schedule Profile																					DAT	E:			F	ebı	ruary	, 200)5				
APPROPRIATION/BUDGET ACTIVITY		F	ROG	RAN	И ELE	EME	NT N	AME	AND	ΝL	JMBE	R			PRO	JEC ⁻	ГΝ	AME A	AND	NUM	BER												
RDT&E, N/BA-4		0	6035	02N	, Surf	face	& Sha	allow	Wate	er IV	1CM				310	2 Low	Fr	equen	cy Br	oadba	and												
LOW F	R	Ε	Q۱	UE	ΞN	IC	Y	Bl	RC)/	40)B	1A	V	D I	PR	?(OG	R	٩N	/ 1 :	S	Ch	ΗE	Đ	U	LE	•					
		FY:	2004	ı		FY	2005	5	F	- Y:	2006	6		F	Y 200	7		FY	2008	3		FY 2	2009)		FΥ	2010)	F	FY 20)11		
	1	2	3	4	1	2	3	4	1	2	3	4	1		2 3	4		1 2	3	4	1	2	3	. 4	1 1	2	2 3	4	1	2	3	4	
ADM Contract Award																																	
Critical Technology Development													•																				
Demonstration / Validation																																	
EDM Design and Development														L																			
PDR / CDR															\triangle	۵ ۵	\wedge	7															
EDM Integration and Development Testing																									┧								
TECHEVAL/OPEVAL																									\uparrow								
Milestone C																									\top								
P3I																																	ŀ
LRIP (4)																																	
Production (14)																																	
 																	_																4

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:	February 20	05
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	EMENT			PRO IECT NI	I IMBER AND N	AME	03
RDT&BA-4		rface & Shallov	W Motor MCM			quency Broadb		
Schedule Profile: LFBB	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
ADM Contract Award			1Q.					
Critical Technology Development			2Q - 4Q					
Demonstrate / Validation				1Q - 2Q				
EDM Contract Award				2Q				
EDM Design and Development				2Q - 4Q	1Q - 4Q			
PDR / CDR				3Q	1Q			
EDM Integration and Development Testing						1Q - 3Q		
TECHEVAL / OPEVAL						3Q - 4Q		
Milestone C							1Q	
P3I							4Q	1Q-4Q
LRIP (4)							1Q - 3Q	
Production (14)							4Q	1Q - 4Q

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE:			
									Febru	uary 2005	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM EL	EMENT NUM	BER AND NAM	IE	PROJECT NU	MBER AND N	AME			
RDT&E, N / BA-4	0603502N, Su	rface and Shall	ow Water MCN	Л		3123 SMCM U	IUV				
	Prior										Total
COST (\$ in Millions)	Years Cost	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to Complete	Program
Project Cost	0.000	0.000	0.000	1.063	1.761	3.565	1.998	2.041	2.084	Continuing	Continuing
RDT&E Articles Qty											

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

The Surface Mine Countermeasure Unmanned Undersea Vehicle (SMCM UUV) provides for development of Small Low Cost Unmanned Underwater Vehicles to support dedicated mine countermeasure operations. The UUV systems must have a small deployment footprint for rapid employment aboard various SMCM platforms. Equipment includes Launch Recovery Sub-Systems and associated systems support equipment.

*This effort was previously budgeted for in PE 0603654N, project 4024. The project was moved to 0603502N so that all of the UUV funding would fall into one R&D PE.

CLASSIFICATION:

	PROGRAM ELEMENT NUM 0603502N, Surface & Shallo FY 04 0.000		PROJECT NUMBER AND N 3123 SMCM UUV FY 06		ruary 2005
DT&E, N / BA-4 DB. Accomplishments/Planned Program SMCM UUV Accomplishments/Effort/Subtotal Cost	0603502N, Surface & Shallo	ow Water MCM FY 05	3123 SMCM UUV FY 06		7
B. Accomplishments/Planned Program SMCM UUV Accomplishments/Effort/Subtotal Cost	FY 04	FY 05	FY 06	FY 07	7
SMCM UUV Accomplishments/Effort/Subtotal Cost				FY 07	٦
Accomplishments/Effort/Subtotal Cost				FY 07	
	0.000	0.000			
RDT&E Articles Quantity		0.000	1.063	1.761	
Demonstrate operation of a UUV-based capability pa	ackage for standoff, multiple M	ICM operations from sur	face MCM platorms (e.g., MHC, H	SV, etc.)	
Starting in FY06 effort was moved from Program Ele	ement 0603654N, Project 4024	. The funding was move	d to 0603502N so that all of the U	JV funding would fall into o	ne R&D PE.
	FY 04	FY 05	FY 06	FY 07	٦
Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.000	0.000	
RDT&E Articles Quantity					
	FY 04	FY 05	FY 06	FY 07]
Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.000	0.000	

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								Februar	y 2005
	PROGRAM EI	EMENT NUM	BER AND NAM	ΛE	PROJECT NUM	IBER AND NA	ME		
	0603502N, St	urface & Shallo	ow Water MCM		3123 SMCM U	JV			
MARY:								To	Total
FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	<u>Complete</u>	Cost
				3.100	10.680	10.814	15.099	Continuing	Continuing
				300	101000		10.000	g	ia-ig
	MARY:	PROGRAM EL 0603502N, St MARY:	PROGRAM ELEMENT NUM 0603502N, Surface & Shallo	PROGRAM ELEMENT NUMBER AND NAM 0603502N, Surface & Shallow Water MCM	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface & Shallow Water MCM MARY: FY 2004 FY 2005 FY 2006 FY 2007 FY 2008	PROGRAM ELEMENT NUMBER AND NAME	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface & Shallow Water MCM 3123 SMCM UUV MARY: FY 2004 FY 2005 FY 2006 FY 2007 FY 2008 FY 2009 FY 2010	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface & Shallow Water MCM 3123 SMCM UUV MARY: FY 2004 FY 2005 FY 2006 FY 2007 FY 2008 FY 2009 FY 2010 FY 2011	PROGRAM ELEMENT NUMBER AND NAME PROJECT NUMBER AND NAME 0603502N, Surface & Shallow Water MCM 3123 SMCM UUV

(U) E. ACQUISITION STRATEGY: *

EXHIBIT R-2a RDT&F Project Justification

SMCM UUV - Analysis of Alternatives (AOA) studies are always conducted prior to the initiation of new projects. The AOA addresses and emphasizes acquisition strategies of the most cost-effective solution over the subprojects' life-cycle. The acquisition strategies observe the following hierarchy of alternatives: commercial item (including modification), non-developmental item (including modifications), and lastly, developmental programs. Contracting for RDT&E, if required, is always competitive and when feasible, production options are included.

The Surface Mine Countermeasures (SMCM) UUV program began in FY04 with a two-year experimentation phase involving Fleet Mine Warfare operators engaged in tactical experimentation with prototype UUVs operating from Surface MCM platforms. The focus of this program is to increase the current capabilities of Surface MCM ships while reducing the overall risk to MCM forces.

During this two-year initiative, these UUV Fleet operators will develop tactics for employing UUV systems from SMCM platforms along with operational requirements. Upon completion of the two-year experimentation phase, a competitive acquisition strategy will begin to field a more capable and robust first generation system.

R-1 SHOPPING LIST - Item No. 3

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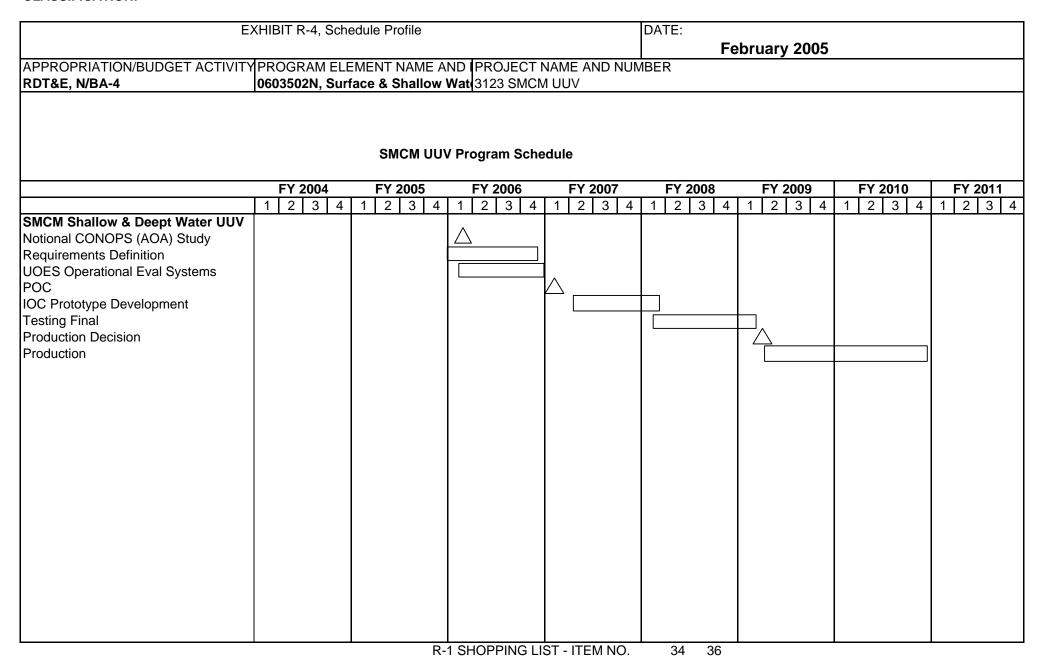
CLASSIFICATION:

												DATE:				
Exhibit R-3 Cost Analysis (page 1)												272.		F	ebruary 2005	
Exhibit R-3 Cost Analysis (page 1) APPROPRIATION/BUDGET ACTIVITY			PROGRAM E	LEMENT				PROJE	CT NUI	MBER A	AND NA	ME			, , , , , , , , , , , , , , , , , , ,	
	BA-4		0603502N, S	urface & S	Shallow	Wate	r MCM									
Cost Categories	Contract			Total			FY 04		FY 05		FY 06		FY 07	_		
	Method & Type	Activity & Location		PY s Cost			Award Date		Award Date		Award Date	FY 07 Cost	Award Date		Total Cost	Target Value of Contract
SMCM Primary Hardware Development	Contract				0.000	7031	Date	0031	Date	1.063		1.761	10/06	Continuing	Continuing	or contract
Civiow i limary hardware bevelopment	Contract	TBB			7.000					1.000	10/03	1.701	10/00	Continuing	0.000	
															0.000	
															0.000	
															0.000	
															0.000	
															0.000	
															0.000	
															0.000	
															0.000	
															0.000	
Subtotal Product Development				0	0.000	0.000		0.000		1.063		1.761		0.000	2.824	
Program Management Support															0.000	
Program Management Support															0.000	
Training Development															0.000	
Integrated Logistics Support															0.000	
Configuration Management															0.000	
Technical Data															0.000	
GFE															0.000	
Award Fees															0.000	
Subtotal Support				0	0.000	0.000		0.000		0.000		0.000		0.000	0.000	
Remarks:																

CLASSIFICATION:

											DATE:				
Exhibit R-3 Cost Analysis (pag	e 2)										D/ (TE.		Februar	y 2005	
Exhibit R-3 Cost Analysis (pag APPROPRIATION/BUDGET ACTIVI	TY		PROGRAM EI	LEMENT			PROJE	CT NUN	/IBER A	ND NAN	ИE			,	
RDT&E, N / BA-4			0603502N, St	urface & Shallo				MCM U							
Cost Categories	Contract Method & Type	Performing Activity & Location			FY 04	FY 04 Award Date	FY 05	FY 05 Award Date	FY 06	FY 06 Award Date	FY 07	FY 07 Award Date		Total Cost	Target Value of Contract
Developmental Test & Evaluation	,												'	0.000	
Operational Test & Evaluation														0.000	
														0.000	
														0.000	
														0.000	
														0.000	
														0.000	
Subtotal T&E				0.000	0.000		0.000		0.000		0.000		0.000	0.000	
Remarks: Program Management Support										<u> </u>				0.000	
Miscellaneous														0.000	
														0.000	
														0.000	
														0.000	
														0.000	
Subtotal Management				0.000	0.000		0.000		0.000		0.000		0.000	0.000	
Remarks:															
Total Cost				0.000	0.000		0.000		1.063		1.761		0.000	2.824	
Remarks:				D 4 CHOD											

CLASSIFICATION:



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Exhibit R-2, RDTEN Budget Item Justification (Exhibit R-2, page 86 of 94)

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:		
						F	February 20	05
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	LEMENT			PROJECT NU	MBER AND NA		
RDT&E,N/ BA-4	0603502N, S	urface & Shallo	w Water MCM		3123 SMCM L	JUV		
Small Shallow and Deept Water UUV	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Notional CONOPS (AOA) Study			1Q					
Requirements Definiton			1Q-4Q					
JOES Operational Eval System			1Q-4Q					
2OC				1Q				
OC Protoytpe Development				2Q-4Q	1Q			
esting Final					1Q-4Q	1Q		
Production Decision						2Q		
Production						2Q-4Q	1Q-4Q	
	I				1	1		

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE:			
									Febru	uary 2005	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM EL	EMENT NUM	BER AND NAM	1E	PROJECT NU	MBER AND N	AME			
RDT&E, N / BA-4	0603502N, Su	rface and Shall	ow Water MCI	M		9513 Battlespa	ace Preparation	Autonomous I	Undersea Veh	cile (BPAUV)	
	Prior										Total
COST (\$ in Millions)	Years Cost	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to Complete	Program
Project Cost	0.000	0.000	0.991 *	0.000	0.000	0.000	0.000	0.000	0.000		0.000
	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000		
RDT&E Articles Qty											

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

^{*} Congressional plus up of the Battlespace Preparation Autonomous Undersea Vehicle (BPAUV) is an unmanned system capable of minehunting and oceanographic data gathering. The BPAUV will be launched and recovered from Littoral Combat Ship (LCS) Flight 0. The Congressional plus up partially funds the development of two engineering development systems. BPAUV will be partially funded via the LCS mission module funding.

CLASSIFICATION:

			DATE: February 2005			
PROGRAM ELEMENT NUME	BER AND NAME	PROJECT NUMBER AND N		ary 2005		
0603502N, Surface & Shallo		9513 BPAUV				
		100.00 20				
EV 04	TV OF	EV 00	FV 07			
0.000	0.991	0.000	0.000			
A two origineering development sys	otomo.					
FY 04	FY 05	FY 06	FY 07			
0.000	0.000	0.000	0.000			
	FY 05	FY 06	5V.07			
FY 04 0.000	0.000	0.000	FY 07 0.000			
	FY 04	0.000 0.991 * st two engineering development systems.	0.000 0.991 * 0.000 st two engineering development systems.	0.000 0.991 * 0.000 0.000 st two engineering development systems. FY 04 FY 05 FY 06 FY 07		

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IIBIT R-2a, RDT&E Project Justi	ification							DATE:			
		T========						<u> </u>	Februa	ary 2005	
ROPRIATION/BUDGET ACTIVITY		PROGRAM EL				PROJECT NU		AME			
Г&E, N / ВА-4		0603502N, Su	rface & Shallov	v Water MCM		9513 BPAUV	· 				
(U) D. OTHER PROGRAM FUNDIN	G SUMMARY:								То	Total	
Line Item No. & Name	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	<u>Complete</u>	Cost	
BPAUV 0603581N/14KB - RDT&E		4.000	5.100	2.200	2.000						
(U) E. ACQUISITION STRATEGY: *											
BPAUV Two enginering deve	Nonment system Rattlesnac	e Prenaration A	utonomous I Inc	tersea Vehicles	s (RPALIV) wil	ll he produred f	for LCS Flight) experimentat	ion		
Dr AOV Two enginening deve	nopineni system Dattiespac	e r reparation At	atorioriious oric	icioca veilicie:		ii be bioculeu i	UI LUU I IIGIIL I	J EXPENNICINAL	1011.		
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Exhibit R-3 Cost Analysis (page 1) APPROPRIATION/BUDGET ACTIVITY														F	ebruary 2005	
			PROGRAM E	LEMENT				PROJE	CT NUI	MBER A	AND NA	ME				
RDT&E, N / BA-4			0603502N, S		Shallo	w Wate	r MCM									
Cost Categories	Contract	Performing		Total			FY 04		FY 05		FY 06		FY 07			_
	Method & Type	Activity & Location		PY s Cost			Award Date				Award Date	FY 07 Cost	Award Date	Cost to Complete	Total Cost	Target Value of Contract
BPAUV - Primary Hardware development	Contract	Bluefin			0.000	CUSI	Date			Cost	Date	COSI	Date	Complete	0.991	or Contract
BFAOV - Filmary Hardware development	Contract	Diueilii			0.000			0.991	03/03						0.000	
				-											0.000	
				-											0.000	
				-											0.000	
															0.000	
															0.000	
															0.000	
															0.000	
															0.000	
															0.000	
Subtotal Product Development					0.000	0.000		0.991		0.000		0.000		0.000		
Remarks: FY05 BPAUV Congressional add.																
Program Management Support															0.000	
Program Management Support															0.000	
Training Development															0.000	
Integrated Logistics Support															0.000	
Configuration Management															0.000	
Technical Data															0.000	
GFE															0.000	
Award Fees															0.000	
Subtotal Support					0.000	0.000		0.000		0.000		0.000		0.000	0.000	
Remarks:																

CLASSIFICATION:

										DATE:				
Exhibit R-3 Cost Analysis (pag	e 2)							 				Februar	y 2005	
APPROPRIATION/BUDGET ACTIVI	TY		PROGRAM EI					ЛВЕR A	ND NAM	1E				<u> </u>
RDT&E, N / BA-4	10 1 1	ID (0603502N, Si	urface & Shallo			9513 B	I	E) (00		EV 07	T		T
Cost Categories	Contract Method & Type	Performing Activity & Location		Total PY s Cost	FY 04	FY 04 Award Date	FY 05	FY 06	FY 06 Award Date	FY 07	FY 07 Award Date		Total Cost	Target Value of Contract
Developmental Test & Evaluation													0.000	
Operational Test & Evaluation													0.000	
													0.000	
													0.000	
													0.000	
													0.000	
													0.000	
Subtotal T&E				0.000	0.000		0.000	0.000		0.000		0.000	0.000	
		T		ı	Г	Г	ı	ı				I		
Program Management Support													0.000	
Miscellaneous													0.000	
													0.000	
													0.000	
													0.000	
Subtotal Management				0.000	0.000		0.000	0.000		0.000		0.000	0.000	
Remarks:		,					,		,					
Total Cost				0.000	0.000		0.991	0.000		0.000		0.000	0.991	
Remarks:				. D. 4 OLIOD										

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	XHIBIT R-4, Sche	adula Profila			DATE:			
					Fe	bruary 2005		
APPROPRIATION/BUDGET ACTIVITY					/IBER			
RDT&E, N/BA-4	0603502N, Surf	face & Shallow	Wat 9513 BPAU	V				
			Program Schedu					
	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
BPAUV Development Contract Award BPAUV Development								

R-1 SHOPPING LIST - ITEM NO.

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Exhibit R-2, RDTEN Budget Item Justification (Exhibit R-2, page 93 of 94)

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:	- h 00	0.5
APPROPRIATION/BUDGET ACTIVITY RDT&E,N/ BA-4	PROGRAM E	LEMENT urface & Shallo	w Motor MCM		PROJECT NU 9513 BPAUV	MBER AND NA	February 20 AME	<u>U5</u>
BPAUV	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Contract Award	F1 2004	2Q - 3Q	F1 2006	F1 2007	F1 2006	F1 2009	F1 2010	F1 2011
Sontract Award		2Q - 3Q						
					+			<u> </u>