CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification								DATE:			
									Febru	uary 2003	
APPROPRIATION/BUDGET ACTIVITY						R-1 ITEM NO	MENCLATURE				
RESEARCH DEVELOPMENT TEST & EVALUAT	ION, NAVY /	1	BA-4			0603502N/Su	rface and Shall	ow Water Mine	Countermeas	sure	
	Prior										Total
COST (\$ in Millions)	Years Cost	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Program
Total PE Cost	602.950	137.208	148.356	140.731	101.076	91.843	92.314	82.709	92.370	Continuing	Continuing
										J	
Remote Minehunting System/Q0260/Q2387	271.007	55.630	60.792	55.516	14.677	0.000	0.000	0.000	0.000	0.000	457.622
Integrated Combat Weapons System/Q1233/Q2388	47.522	14.036	12.477	3.758	2.823	3.625	3.243	4.256	4.199	Continuing	Continuing
Unmanned Underwater Vehicle/Q2094/Q2852	106.483	62.499	74.425	81.457	65.956	55.877	47.936	48.093	57.822	Continuing	Continuing
Shallow Water Mine Countermeasure/Q2131	177.938	5.043	0.662	0.000	17.620	32.341	41.135	30.360	30.349	Continuing	Continuing
											0.000
											0.000
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 test related to specific ship or aircraft applications.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE:			
									Febru	uary 2003	
APPROPRIATION/BUDGET ACTIVITY	PRIATION/BUDGET ACTIVITY PROGRAM ELEMENT NUMBER AND NAME PROJECT NUMBER AND NA							AME			
RDT&E, N / BA-4	0603502N, Su	603502N, Surface and Shallow Water MCM Q0260/					, Remote Minel	nunting System	S		
	Prior										Total
COST (\$ in Millions)	Years Cost	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Program
Project Cost	271.007	55.630	60.792	55.516	14.677	0.000	0.000	0.000	0.000	0.000	457.622
RDT&E Articles Qty		2	1	1	0	0					4

(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.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification	on	DATE:
		February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM	Q0260/Q2387, Remote Minehunting Systems

(U) B. Accomplishments/Planned Program

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	28.642	40.314	41.775	8.384
RDT&E Articles Quantity	2	1	1	

Complete Critical Design and continue 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.

Continue System Engineering for the RMS EDMs including supporting Critical Design Review.

Determine Award Fee

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	14.100	10.645	5.476	3.619
RDT&E Articles Quantity	2	1	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 2003				
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME					
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM	Q0260/Q2387, Remote Minehunting Systems					

(U) B. Accomplishments/Planned Program

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	10.241	8.606	7.032	2.009
RDT&E Articles Quantity	2	1	1	

Complete the Critical Item Test of the Remote Minehunting Vehicle and generate final report. Complete Developmental Test (DT) Assist for the Launch and Recovery Subsystem portion of the shipboard equipment. Conduct DT Assist of the Datalink Subsystem for the RMS Shipboard Equipment. Began test preparation for TECHEVAL Phase I on ship of opportunity. Complete test preparation and conduct TECHEVAL Phase I and II for the RMS. Conduct and complete OPEVAL.

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	2.647	1.227	1.233	0.665
RDT&E Articles Quantity	2	1	1	

Funds provided for Program Management Support and Travel.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification					DATE:	
						February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER	AND NAME		PROJECT NUMBER AN	ID NAME	
RDT&E, N / BA-4	0603502N, Surface and Shallow V	Vater MCM		Q0260/Q2387, Remote	Minehunting Systems	
(U) C. PROGRAM CHANGE SUMMARY:						
(U) Funding:	FY 2002	FY 2003	FY 2004	FY 2005		
FY03 President's Controls:	58.642	61.452	47.833	20.300		
FY04 President's Controls:	55.630	60.792	55.516	14.677		
Total Adjustments	-3.012	-0.660	7.683	-5.623		
Summary of Adjustments						
FY02 BTR July 02	-0.228					
Sec. 313 PL-107-206 - Revised	-0.125					
Economic Assumptions	-0.158					
Misc Adjustments	2.501	-0.660	7.683	-5.623		
Subtotal	-3.012	-0.660	7.683	-5.623		
(U) Schedule:						
Program changed to procure four production	n systems in FY05 and FY06.					
(U) Technical:						
Not Applicable						

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Proje	ect Justification			DATE:
				February 2003
APPROPRIATION/BUDGET ACTI	VITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	AME
RDT&E, N /	BA-4	0603502N, Surface and Shallow Water MCM	Q0260/Q2387, Remote Mine	hunting Systems

(U) D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name Line 262200, OPN	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Complete	Cost
RMS	0	0	0	33.836	35.839	0	0	0		
Support	0	0	0	1.879	4.568	0	0	0		
Total	0	0	0	35.715	40.407	0	0	0		76.122
(U) RDT&E, Line 0604373, Q0529	8.544	17.178	17.878	5.187	0	0	0	0	Continuing	Continuing

(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 AN/WLD-1(V)1 program plans to update the acquisition strategy in accordance with the new POM 04 guidance, that includes integration of the AN/WLD-1(V)1 on DDG-51 Class Flight IIA ships beginning with DDG 91. 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.

(U) F. MAJOR PERFORMERS:

- Lockheed Martin, Syracuse, NY: Primary hardware development and integration, system engineering, software development, ship integration, and integrated logistic support.
- NSWC, CSS, Panama City, FLA: Hardware development and integration, system engineering, software development, integrated logistic support, and ship integration.

CLASSIFICATION:

								DATE:				
Exhibit R-3 Cost Analysis (page	e 1)									February 200	03	
APPROPRIATION/BUDGET ACTIVIT	TY	PROGRAM E	LEMENT			PROJECT NU						
RDT&E, N / BA-4			urface and Sha	llow Water MC		Q0260/Q2387		ehunting Systen				
		Performing	Total	EV 00	FY 03	E)/ 0.4	FY 04	EV 05	FY 05	0	T. (- 1	T()/
	Method & Type	Activity & Location	-	FY 03 Cost	Award Date	FY 04 Cost	Award Date	FY 05 Cost	Award Date	Cost to Complete	Total Cost	Target Value of Contract
Hardware Development & Integration	- '	Lockheed Martin	149.992		Date	COSt	Date	COST	Date	Complete	149.992	
Hardware Development & Integration		Lockheed Martin	13.939		11/02	38.545	11/03	6.445	11/04		94.692	
Hardware Development & Integration		NWSC, CSS	4.000		10/02	1.935	10/03	0.969			8.685	
-	CPIF	Lockheed Martin	8.426		10/02	1.000	10/00	0.000	10/01		8.426	
	CPIF	Lockheed Martin	2.736		11/02	0.811	11/03	0.485	11/04		6.505	
, , ,		NWSC, CSS	1.000		10/02	0.484	10/03	0.485	10/04		2.266	
Award Fees		·	8.457								8.457	N/A
											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	
						1					0.000	
											0.000	
Subtotal Product Development			188.550	40.314		41.775		8.384		0.000	279.023	<u> </u>

Remarks:

GFE - AN/AQS-20 systems provided to RMS program were funded under PE 0604373/Q0529

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 (pa	ge 1)					February 2003						
APPROPRIATION/BUDGET ACTIV	VITY	PROGRA	M ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-4		0603502N	I, Surface and Sha	llow Water MC	M	Q0260/Q2387	Q0260/Q2387, Remote Minehunting Systems					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Software Development	CPIF	Lockheed Martin	10.935								10.935	N/A
Software Development	CPIF	Lockheed Martin	3.700	3.759	11/02	0.414	11/03	0.388	11/04		8.261	N/A
Software Development	WR	NSWC, CSS	2.101	0.198	10/02	0.290	10/03	0.291	10/04		2.880	N/A
ILS	CPIF	Lockheed Martin	8.760								8.760	N/A
ILS	CPIF	Lockheed Martin	3.540	3.636	11/02	3.009	11/03	1.163	11/04		11.348	N/A
ILS	WR	NSWC, CSS	2.150	0.099	10/02	0.290	10/03	0.291	10/04		2.830	N/A
Ship Integration	CPIF	Lockheed Martin	1.940								1.940	N/A
Ship Integration	CPIF	Lockheed Martin	0.660	1.385	11/02	0.677	11/03	0.388	11/04		3.110	N/A
Ship Integration**	Various	Various	15.401	1.568	12/02	0.796	12/03	1.098	12/04		18.863	N/A
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
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											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Support			49.187	10.645		5.476		3.619		0.000	68.927	

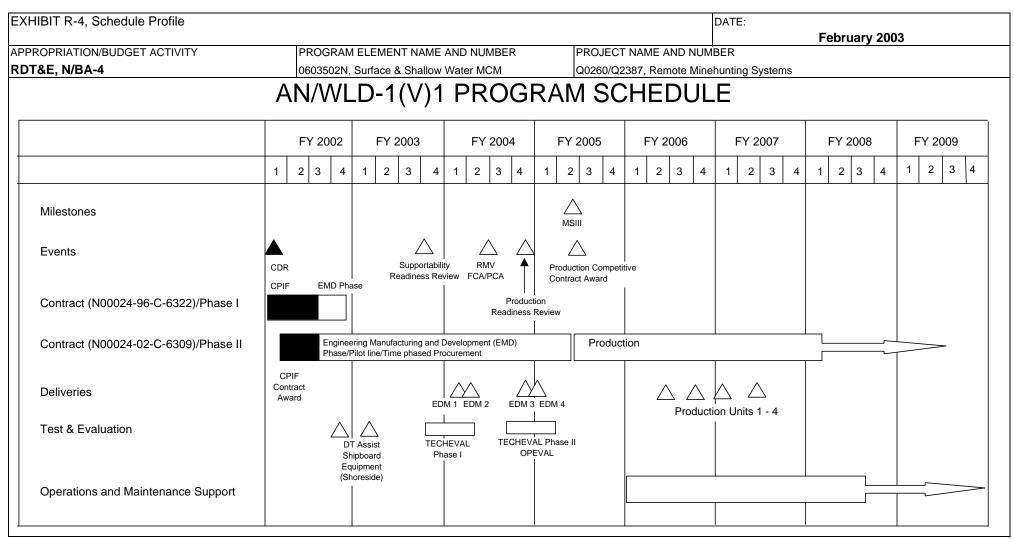
Remarks:

Various in Ship Integration provides funding to support AN/SQQ-89(V)15 ECP effort for RMS and PMS400 RMS DDG ship class integration efforts.

CLASSIFICATION:

								DATE:				
Exhibit R-3 Cost Analysis (page 1)	age 2)									February 200	3	
APPROPRIATION/BUDGET ACT		PROGR <i>A</i>	AM ELEMENT			PROJECT NU	MBER AND I	NAME				
RDT&E, N / BA-4		06035021	N, Surface and Sha	llow Water MCI	М	Q0260/Q2387	, Remote Min	ehunting System	S			
Cost Categories	Contract	Performing	Total		FY 03		FY 04		FY 05			
	Method	Activity &	PY s		Award		Award		Award		Total	Target Value
	& Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
Developmental Test & Evaluation	CPIF	Lockheed Martin	28.476					_			28.476	
Developmental Test & Evaluation	CPIF	Lockheed Martin	6.144		11/02	2.513	11/03	0.590	11/04		16.369	N/A
Developmental Test & Evaluation	WR	NSWC, CSS	2.500	1.484	10/02	4.519	11/03	1.419	10/04		9.922	N/A
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal T&E			37.120	8.606		7.032		2.009		0.000	54.767	
Contractor Engineering Support	CPIF	Lockheed Martin	4.500								4.500	N/A
Government Engineering Support	WR	NSWC, CSS	34.525								34.525	N/A
Program Management Support	CPFF	Vredenburg	2.677	1.138	11/02	1.146	11/03	0.578	11/04		5.539	N/A
Travel	Various	NAVSEA	0.270	0.089	Various	0.087	Various	0.087	Various		0.533	N/A
SBIR Assessment	Various	Various	9.808								9.808	N/A
											0.000	
Subtotal Management			51.780	1.227		1.233		0.665		0.000	54.905	
Remarks: Award dates for management ar	e various bed	cause multiple activities a	re receiving tasks a	different times	during the fis	scal year.						
Total Cost			326.637	60.792		55.516		14.677		0.000	457.622	
Remarks:												

CLASSIFICATION:



CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:		
							February 20	03
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	LEMENT			PROJECT NU	CT NUMBER AND NAME		
RDT&BA-4	0603502N, Su	rface & Shallov	v Water MCM		Q0260/Q2387	0260/Q2387, Remote Minehunting Systems		
Schedule Profile: AN/WLD-1 (V)1	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Milestone III (MSIII)				2Q				
Critical Design Review (CDR)	1Q							
Supportability Readiness Review		4Q						
Functional & Physical Configuration Audit (FCA)/(PCA)			2Q-3Q					
Production Readiness Review (PRR)			4Q					
Production Competitive Contract Award				2Q				
Cost Plus Incentive Fee (CPIF), EMD Phase I	1Q-4Q							
Engineering Manufacturing & Development(EMD) Phase	2Q-4Q	1Q-4Q	1Q-4Q	1Q-2Q				
Production Start				3Q-4Q				
EDM 1 Delivery			1Q					
EDM 2 Delivery			2Q					
EDM 3 Delivery			4Q					
EDM 4 Delivery				1Q-2Q				
Production Unit 1-4 Delivery					2Q-3Q	1Q-3Q		
Developmental Testing (DT) Shipboard Equip (shoreside)	4Q	1Q						
Technical Evaluation (TECHEVAL), Phase I		4Q	1Q-2Q					
Technical Evaluation (TECHEVAL), Phase II			3Q-4Q	1Q				
Operational Evaluation (OPEVAL)			3Q-4Q	1Q				
Opeations and Maintenance Support Start					1Q			

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE:			
									Febru	uary 2003	
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		Q1233/Q2388	Integrated Co	mbat Weapons	System		
	Prior										Total
COST (\$ in Millions)	Years Cost	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Program
Project Cost	47.522	14.036	12.477	3.758	2.823	3.625	3.243	4.256	4.199	Continuing	Continuing
RDT&E Articles Qty											0

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

(1) Integrated Combat Weapon System (ICWS) is an open architecture system which will demonstrate common control of multiple unmanned systems with optimal manning and provide a foundation for future
improvement / modernization of Combat Systems on MCM and MHC class ships and future mine warfare platforms. (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) Organic MCM C4I connectivity to the
rest of the fleet is provided through GCCS-M; design and implement MIW C4I Surveillance and Reconnaissance (C4ISR) architecture to fully integrate and optimize organic and dedicated systems within the Navy's
C4ISR architecture.

CLASSIFICATION:

	DATE:
	February 2003
PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
0603502N, Surface and Shallow Water MCM	Q1233/Q2388, Integrated Combat Weapons System

(U) B. Accomplishments/Planned Program

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	4.499	2.542	0.372	0.000
RDT&E Articles Quantity				

ICWS Block I

Continue / complete hardware design for ICWS.

ORGANIC MCM C4I

Complete MUW data content standards characterization. Complete MUW C4ISR architecture/data requirements. Continue MOD/SIM effort. Initiate and implement Phase 1 of the design of MUW Network Centric Warfare database and support network. Initiate and complete MEDAL/TEDS integration, MUW network centric warfare collaborative planning tools, and MCM/MHC classified LAN integration design. Initiate organic/dedicated MUW tactics development. Begin planning and evaluation models/algorithms. Update C4I SR assessment plan. Continue organic/dedicated MUW tactics development. Initiate the development of thru sensor technology. Continue planning and evaluation of models/algorithms. Initiate advanced MUW TDA development. Continue organic/dedicated MUW tactics development. Continue thru sensor technology development. Continue advanced MUW TDA development.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification	on	DATE:
		February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM	Q1233/Q2388, Integrated Combat Weapons System

(U) B. Accomplishments/Planned Program

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	6.629	7.889	2.911	2.343
RDT&E Articles Quantity				

ICWS Block I

Complete software design/code/test for ICWS, complete subsystem integration and testing, and begin EDM 1 integration and testing in the laboratory. Complete EDM 1 integration and testing in the laboratory. Install on ship of opportunity.

MEDAL

Complete Build 8. Initiate development of Build 9 and initiate integration and testing. Complete integration and testing of Build 9. Complete Build 9. Initiate the development of Build 10. Complete development of Build 10. Initiate integration and testing of Build 10. Initiate development of Build 11. Complete development of Build 11. Initiate development of Build 11. Initiate development of Build 12.

ORGANIC MCM C4I

Complete the development of phase 1 MUW Network Centric Warfare database and support network. Initiate development of Phase II MUW network centric warfare database and support network

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	2.908	2.046	0.475	0.480
RDT&E Articles Quantity				

Provide program management support and travel for ICWS Block I, MEDAL, and ORGANIC MCM C4I programs.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification					DATE:
·					February 2003
PPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER A	ND NAME	F	PROJECT NUMBER A	ND NAME
RDT&E, N / BA-4	0603502N, Surface and Shallow Wa	ater MCM	C	Q1233/Q2388, Integrate	ted Combat Weapons System
(U) C. PROGRAM CHANGE SUMMARY:					
(U) Funding:	FY 2002	FY 2003	FY 2004	FY 2005	
FY03 President's Controls:	14.619	12.758	6.501	6.216	
FY04 President's Controls:	14.036	12.477	3.758	2.823	
Total Adjustments	-0.583	-0.281	-2.743	-3.393	
Summary of Adjustments					
FY02 BTR July 02	-0.288				
Sec. 313, PL 107-206 - Revised	-0.031				
Economic Assumptions	-0.039	-0.072			
Misc Adjustments	-0.225	-0.209	-2.743	-3.393	
Subtotal	-0.583	-0.281	-2.743	-3.393	
(U) Schedule:					
Because of program restructure and funding	issues, EDM-2 and 3 will not be procured	d.			
(U) Technical:					
Not Applicable					
	D 4 CHODDIA			14	

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	AME
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM	Q1233/Q2388, Integrated Co	mbat Weapons System

(U) D. OTHER PROGRAM FUNDING SUMMARY:

									10	ıotai
Line Item No. & Name	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Complete	Cost
Line 262200, OPN										
ICWS	2.477	1.383	2.724	5.099	1.503	1.679	13.677	23.332	Continuing	Continuing

(U) E. ACQUISITION STRATEGY:

ICWS is a series of major incremental upgrades to the current systems. The original equipment manufacturers have teamed with the Navy to develop the changes. FY 00 through FY 05 tasks will be accomplished under Firm Fixed Price (FFP) contract. Contract was awarded in FY00. MEDAL is an evolutionary program with a development cycle of one year per software build to coincide with GCCS-M build schedule.

(U) F. MAJOR PERFORMERS:

- Lockheed Martin, Manassas, VA: Primary hardware contractor for ICWS Block 1.
- NSWC, CSS, Panama City, FLA: System Engineering Support.
- ONR/SAIC, Arlington, VA: Primary software developer for MEDAL.

CLASSIFICATION:

								DATE:				
Exhibit R-3 Cost Analysis (pag	ge 1)									February 200	03	
APPROPRIATION/BUDGET ACTIV	/ITY	PROGRAM E	LEMENT			PROJECT NU	JMBER AND	NAME				
RDT&E, N / BA-4		0603502N, S	urface and Sha	llow Water MCI	M	Q1233/Q2388	s, Integrated C	Combat Weapon	s System			
Cost Categories		Performing	Total		FY 03		FY 04		FY 05			
		Activity &			Award	FY 04	Award	FY 05	Award	Cost to	Total	Target Value
		Location			Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
Primary Hardware Development	_	Raytheon, RI	2.960								2.960	
Primary Hardware Development		Lockheed Martin	3.484								3.484	
Primary Hardware Development	WR/RCP	NSWC, CSS/NAWC	2.705	0.701	11/02						3.406	N/A
Systems Engineering	Various	NSWC, CSS/NAVAIR	10.777	1.841	11/02	0.372	11/03			Continuing	Continuing	N/A
Award Fees	SS/CPIF		0.439								0.439	N/A
											0.000	
											0.000	
											0.000	
											0.000	
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	1										0.000	
Subtotal Product Development			20.365	2.542		0.372		0.000)	0.000	23.279	

Remarks:

Due to a large projected cost overrun on ICWS, all work contracted to Raytheon on the CPIF contract was transferred to Lockheed Martin FP contract and NSWC, CSS Panama City, Florida.

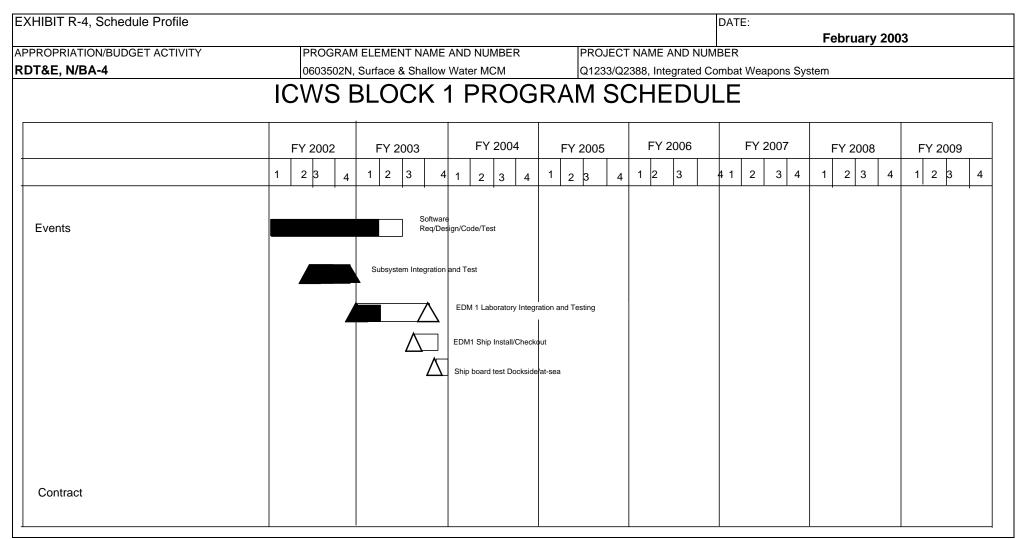
CLASSIFICATION:

										DATE:				
Exhibit R-3 Cost Ana	alysis (pag	e 1)										February 200	13	
APPROPRIATION/BUD	GET ACTIVI	TY	PROGRAM E					PROJECT NU						
RDT&E, N /	BA-4			urface and Shal	low Wate					ombat Weapons				
Cost Categories		Method	Performing Activity & Location		FY 03 Cost		FY 03 Award Date	FY 04	FY 04 Award Date	FY 05	FY 05 Award Date		Total Cost	Target Value of Contract
Software Development			NSWC	12.296		1.956	11/02	0.573				Continuing		
Software Development			Lockheed Martin	5.815		3.754	11/02			1			9.569	
Software Development			NSWC/CD, ARL/UT, ONR	14.817		2.179		2.338	11/03	2.343	11/04	Continuing		
Software Development		SS/FFP	SAIC	0.100						<u> </u>		Continuing	Continuing	N/A
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							<u></u>						0.000)
							<u></u>						0.000)
Subtotal Support		<u> </u>		33.028		7.889	<u> </u>	2.911		2.343		0.000	46.171	
Remarks:														

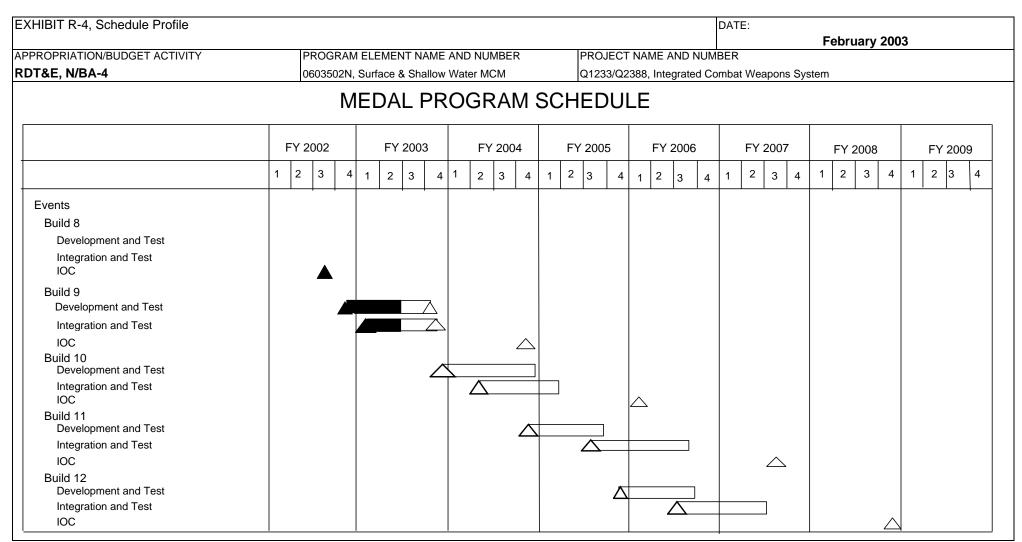
CLASSIFICATION:

								DATE:				
Exhibit R-3 Cost Analysis (pa	ge 2)									February 200	3	
APPROPRIATION/BUDGET ACTIV	/ITY	PRO	OGRAM ELEMENT			PROJECT NU	JMBER AND I	NAME		-		
RDT&E, N / BA-4			3502N, Surface and Sha	low Water MCI		Q1233/Q2388		Combat Weapon				
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to	Total Cost	Target Value of Contract
Developmental Test & Evaluation	CPIF	Lockheed Martin	0.200							1	0.200	
Operational Test & Evaluation	CPIF	Lockheed Martin	1.592								1.592	N/A
•											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal T&E			1.792	0.000		0.000		0.000		0.000	1.792	
Contractor Engineering Support			0.153								0.153	N/A
Government Engineering Support			0.500								0.500	
Program Management Support	Various	NAVSEA	4.858	1.751	11/02	0.233	11/03	0.220	11/04	Continuing	Continuing	N/A
Program Management Support	CPFF	Vredenburg	0.506	0.234	11/02	0.181	11/03	0.197	11/04	Continuing	Continuing	N/A
Travel			0.160	0.061	11/02	0.061	11/03	0.063	11/04	Continuing	Continuing	N/A
SBIR Assessment			0.196								0.196	N/A
Subtotal Management			6.373	2.046		0.475		0.480		0.000	9.374	
Remarks: Award dates for management are Total Cost	various bed	ause multiple activit	ties are receiving tasks at		during the fis		0.00	00 2.823	0.00	0.000	80.616	
Remarks:												

CLASSIFICATION:

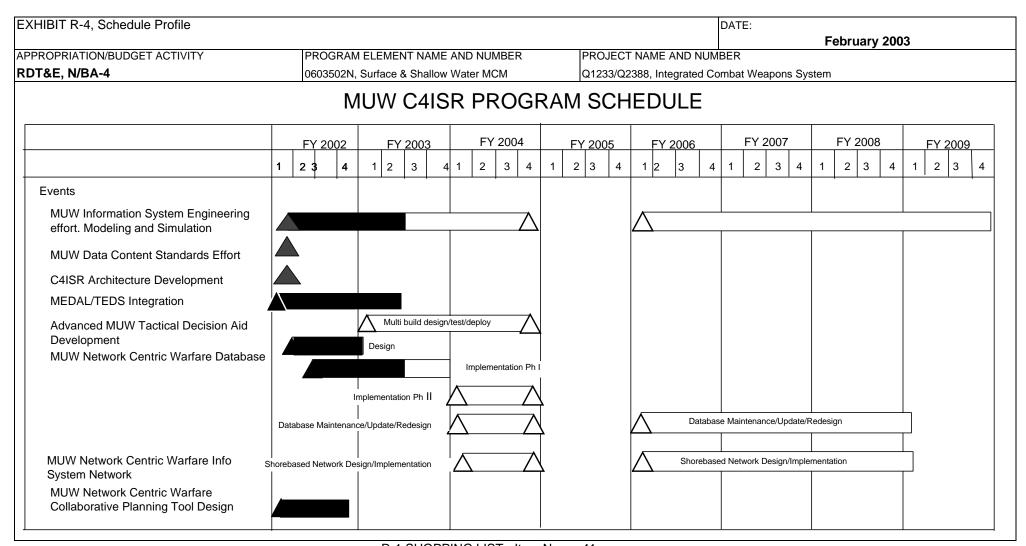


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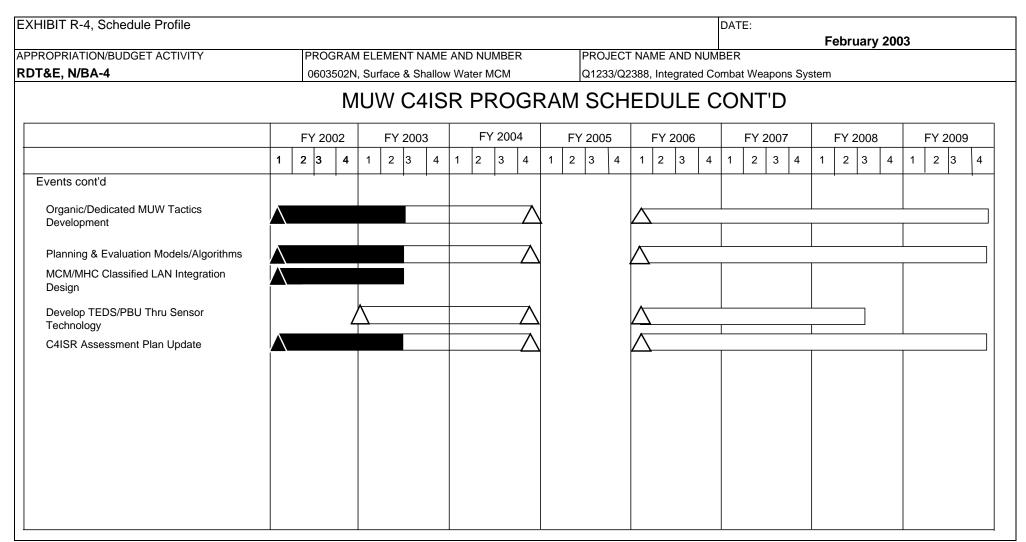


R-1 SHOPPING LIST - Item No.

CLASSIFICATION:



CLASSIFICATION:



CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:	February 20	03
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	LEMENT			PROJECT NU	MBER AND NA	AME	
RDT&BA-4	0603502N, St	urface & Shallo	w Water MCM		Q1233/Q2388	, Integrated Co	mbat Weapons	s System
Schedule Profile: ICWS Block 1	FY 2002	FY 2003	FY 2004	FY 2005		FY 2007		FY 2009
Software Req/Design/Code/Test	1Q-4Q	1Q-3Q						
Subsystem Integration and Test	2Q-4Q							
EDM 1 Laboratory Integration and Testing	4Q	1Q-3Q						
EDM 1 Ship Install/Checkout		3Q-4Q						
Shipboard Test Dockside/At-Sea		4Q						
					1			
					+			
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					+			
					1			
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CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:	ebruary 20	03
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	LEMENT			PROJECT NU	MBER AND NA	AME	
RDT&BA-4	0603502N, St	urface & Shallo	w Water MCM		Q1233/Q2388	, Integrated Co	mbat Weapons	System
Schedule Profile: MEDAL	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006		FY 2008	FY 2009
Build 8 IOC	3Q				1 1 1 1 1 1 1			
Build 9 Development and Test	4Q	1Q-4Q						
Build 9 Integration and Test		1Q-4Q						
Build 9 IOC			4Q					
Build 10 Development and Test		4Q	1Q-4Q					
Build 10 Integration and Tests			2Q-4Q	1Q				
Build 10 IOC					1Q			
Build 11 Development and Test			4Q	1Q-3Q				
Build 11 Integration and Tests				3Q-4Q	1Q-3Q			
Build 11 IOC						3Q		
Build 12 Development and Test				4Q	1Q-3Q			
Build 12 Integration and Tests					3Q-4Q	1Q-2Q		
Build 12 IOC							4Q	

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:		
						l	February 20	03
APPROPRIATION/BUDGET ACTIVITY	PROGRAM E	LEMENT			PROJECT NU	MBER AND NA	AME	
RDT&BA-4	0603502N, S	urface & Shallo	w Water MCM		Q1233/Q2388	, Integrated Co	mbat Weapons	System
Schedule Profile: MUW C4ISR	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
MUW Info System Engineering (Modeling & Simulation)	1Q-4Q	1Q-4Q	1Q-4Q		1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
MUW Data Content Standards Effort	1Q							
C4ISR Architecture Development	1Q							
MEDAL/TEDS Integration	1Q-4Q	1Q - 2Q						
Advanced MUW Tactical Decision Aid Development		1Q-4Q	1Q-4Q					
MUW Network Centric Warfare Database:								
- Design	1Q-4Q	1Q						
- Implementation Phase I	2Q-4Q	1Q-4Q						
- Implementation Phase II			1Q-4Q					
- Database Maintenance/Update/Redesign			1Q-4Q		1Q-4Q	1Q-4Q	1Q-4Q	
MUW Network Centric Warfare Info System Network			1Q-4Q		1Q-4Q	1Q-4Q	1Q-4Q	
MUW Network Centric Warfare Collaborative Planning Tool								
Organic/Dedicated MUW Tactics Development	1Q-4Q	1Q-4Q	1Q-4Q		1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
Planning & Evaluation Models/Algorithms	1Q-4Q	1Q-4Q	1Q-4Q		1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
MCM/MHC Classified LAN Integration Design	1Q-4Q	1Q - 2Q						
Develop TEDS/PBU Thru Sensor Technology		1Q-4Q	1Q-4Q		1Q-4Q	1Q-4Q	1Q-3Q	
C4ISR Assessment Plan Update	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 2003	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM EL	EMENT NUME	BER AND NAM	1E	PROJECT NU	MBER AND N	AME			
RDT&E, N / BA-4	0603502N, Su	rface and Shall	low Water MCN	Л		Q2131, Assau	It Breaching Sy	stems			
	Prior										Total
COST (\$ in Millions)	Years Cost	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Program
Project Cost	177.938	5.043	0.662	0.000	17.620	32.341	41.135	30.360	30.349	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 family of systems (Countermine/Counter Obstacle, Intelligence/Surveillance/reconnaissance/targeting, Navigation/Virtual Marking/Integration, C4I/Data Fusion) to provide a full assault breaching capability.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	İAME
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM	Q2131, Assault Breaching S	Systems

(U) B. Accomplishments/Planned Program

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.200	0.000	0.000	11.335
RDT&E Articles Quantity				

Product Development:

Primary Hardware Development \$11.535: Component Advanced Development for ABS Counter Mine-Counter Obstacle System (\$4.569 FY05), ISR/Targeting Development (\$3.516 FY05). Government Furnished Equipment (GFE): Mine Threat Procurement for Development (\$0.200 FY02, \$1.000 FY05), Nav System acquisition/integration (\$2.250 FY05)

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.593	0.375	0.000	2.075
RDT&E Articles Quantity				

Support:

<u>Development Support Equipment \$0.825:</u> Tactical Decision Aid Development (\$0.825 FY05)

System Engineering, \$0.593: Systems Effectiveness Model for MAA/AOA Preparation (\$0.593 FY02).

Studies and Analysis \$1.625: ABS Mission Area Analysis (MAA) (\$0.375 FY03). Modeling and Simulation in support of Far-Term Development (\$0.250 FY05). Mine Migration Studies in support of requirements development (\$0.200 FY05). Mine Vulnerability Studies (\$0.200 FY05). C4l/Data Fusion (\$0.200 FY05), ABS Scalability study (\$0.400 FY05)

R-1 SHOPPING LIST - Item No.

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^{*} FY04 funding in 0603782N.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justifica	tion			DATE: February 2003	
PROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBE	ER AND NAME	PROJECT NUMBER AND		
OT&E, N / BA-4	0603502N, Surface and Shallo	w Water MCM	Q2131, Assault Breaching	Systems	
B. Accomplishments/Planned Program					
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	1.953	0.000	0.000	0.010	
RDT&E Articles Quantity		0.000	5.555	3.0.0	
<u>Developmental Test and Evaluation, \$1.963:</u> vulnerability(\$1.953 FY02). Navigation Opera	Tests/studies in support of requiremen	its development inclu	de: lane width study, mine buria	/migration, mine burial effects, mine	
valiforability (φ1.500 1 102). Travigation opera	tional Test Support (\$0.010 FY05).				
valiorability (\$1.550 1 102). Navigation opera	tional Test Support (\$0.010 FY05).				
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valiforability (\$\psi\$1.555 1 162). Navigation opera	tional Test Support (\$0.010 FY05).				
valiolability (\$\psi\$1.555 1.752). Navigation opera	tional Test Support (\$0.010 FY05).				
valiolability (\$\psi\$1.555 \text{1.555} \text{1.62}). Navigation opera	tional Test Support (\$0.010 FY05).				
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valiorability (\$1.550 1 102). Navigation opera	tional Test Support (\$0.010 FY05).				
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valiorability (\$\psi\$1.550 1 102). Navigation opera	tional Test Support (\$0.010 FY05).				

41

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE:
		February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM	Q2131, Assault Breaching Systems

(U) B. Accomplishments/Planned Program

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	2.297	0.287	0.000	4.200
RDT&E Articles Quantity				

Management:

Program Management Support, \$2.764: (\$0.344 FY02, \$0.040 FY03, \$2.380 FY05)

Contractor Engineering Support, \$1.000: In-house contractor support (Vredenberg and Northrop Grumman) (\$0.400 FY02, \$0.600 FY05)

Government Engineering Support, \$2.947: Technical Direction Agent/Design Agent (TDA/DA) Engineering Support of Mission Area Analysis, Analysis of Alternatives, Milestone A and B preparation, contract and acquisition documentation, Mission Needs Statement and Operational Requirements Document development, Mine magazine inventory management and shipping, contract management and tests/studies. (\$1.480 FY02, \$0.247 FY03, \$1.220 FY05)

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification					DATE:	Falancana 0000
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER	AND NAME		PROJECT NUMBER AN	ND NAME	February 2003
RDT&E, N / BA-4	0603502N, Surface and Shallow V			Q2131, Assault Breachi		
(U) C. PROGRAM CHANGE SUMMARY:	1				<u> </u>	
(U) Funding:	FY 2002	FY 2003	FY 2004	FY 2005		
FY03 President's Budget:	5.235	4.698	4.811	9.906		
FY04 President's Budget	5.043	0.662	0.000			
Total Adjustments	-0.192	-4.036	-4.811	7.714		
Summary of Adjustments						
SBIR	-0.073					
BTR Threshhold Adj.		0.699				
Economic Assumptions	-0.014	-0.026				
Misc Adjustments	-0.105	-4.709	-4.811	7.714		
Subtotal	-0.192	-4.036	-4.811	7.714 7.714		
(U) Schedule:						
Schedule is restored to show full ABS	capability development.					
(U) Technical:						
Not Applicable						
	D 4 0110 DD			44		

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE:	
		1	February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME	
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM	Q2131, Assault Breaching Systems	
(II) D. OTHER RECORDS THE FUNDING SHAMEDY			

(U) D. OTHER PROGRAM FUNDING SUMMARY:

Total To

Line Item No. & Name

FY 2003

FY 2004

FY 2005 FY 2006 FY 2007

FY 2008

FY 2009

Complete

Cost

0603782N Shallow Water MCM Demos

FY 2002

12.0*

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

(U) E. ACQUISITION STRATEGY:

The FY03 and FY04 MAA, MNS and ORD 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 2Q FY05. The MAA will provide the foundation for the "family of systems MNSs/ORDs" required for Amphibious Operations in a Mined Environment. The FY03 and FY04 tasks will also allow the Navy to demonstrate the viability of concepts for Far Term Family of Systems capabilities and justify the need for future funding. The FY03 and FY04 funding is crucial to maintaining a pool of experienced ABS team members at the government labs and industry and for the program to maintain its inventory of threat mines that will be required for future mine lethality and vulnerability tests. The FY03 and FY04 tasks will develop ISR/Targeting systems and Navigation systems to support the Assault Breaching Mission.

(U) F. MAJOR PERFORMERS:

- NSWC, IH: Provide system engineering and test and evaluation support.
- NSWC, CSS: Provide Technical Direction Agent , systems engineering and test and evaluation support.
- TBD: Far Term ABS System contractor

CLASSIFICATION:

									DATE:				
Exhibit R-3 Cost Analysis (pa											February 200)3	
APPROPRIATION/BUDGET ACTI	VITY		PROGRAM E				PROJECT N						
RDT&E, N / BA-4			0603502N, S	Surface and Shallow Water MCM			Q2131, Assa						
Cost Categories	Contract Method & Type	Performing Activity & Location		Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	WR	IH, CSS, TBD)	54.554					8.085	07/05	Continuing	Continuing	g N/
Ancillary Hardware Development	WR	IH, CSS, TBD)	8.100							Continuing	Continuing	g N/
Aircraft Integration												0.000)
Ship Integration												0.000)
Ship Suitability												0.000)
Systems Engineering	WR	IH, CSS		16.233							Continuing	Continuing	g N/.
Training Development	WR	IH, CSS		2.000								2.000) N/
Licenses	WR	N/A		0.800								0.800	N/
Tooling	WR	IH, CSS, TBD	1	0.860								0.860) N/
GFE	WR	IH, CSS		3.650					3.250	11/04	Continuing	Continuing	g N/
Award Fees	N/A	N/A		0.500								0.500	N/
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Subtotal Product Development				86.697	0.000		0.00	0	11.335		0.000	98.032	2

CLASSIFICATION:

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Exhibit R-3 Cost Analysis (p. APPROPRIATION/BUDGET ACT	age 1)		Innoonau	I EMENT			IDDO IDOT NII	IMPER AND A	1000		February 200)3	
	IVIIY		PROGRAM E					JMBER AND N					
RDT&E, N / BA-?? Cost Categories	0	Performing	0603502N, S	urface and Sha		FY 03	Q2131, Assau	ult Breaching S		EV 05		1	
Cost Categories	Method	Activity & Location		Total PY s Cost		Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Development Support Equipment	WR	IH, CSS, TBD		11.721					0.825	11/04	Continuing	Continuing	N/A
Software Development	WR	CSS		8.037								8.037	
Integrated Logistics Support	WR	IH, CSS		2.712								2.712	. N/A
Configuration Management	WR	IH, CSS		3.744								3.744	N/A
Technical Data	WR	IH, CSS		2.588								2.588	N/A
Studies & Analysis	WR	IH,CSS			0.375	11/2002			1.250	11/04	Continuing	Continuing	
GFE	WR	IH, CSS		0.400							Ĭ	0.400	N/A
Award Fees												0.000	
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Subtotal Support				29.202	0.375		0.000		2.075		0.000	31.652	
Remarks:					. ———		. ———		. ———		. ———		

CLASSIFICATION:

								DATE:				
Exhibit R-3 Cost Analysis (pag	e 2)									February 200	03	
APPROPRIATION/BUDGET ACTIV	ITY	PROGRAM EI	LEMENT			PROJECT N	JMBER AND	O NAME				
RDT&E, N / BA-4		0603502N, Su		llow Water MCI		Q2131, Assa		g Systems				
Cost Categories	Contract		Total		FY 03		FY 04		FY 05		L	
	Method & Type	,	PY s Cost	FY 03 Cost	Award Date	FY 04 Cost	Award Date	FY 05 Cost	Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation		IH, CSS, ONR, TBD	24.893		Date	Cost	Date	0.01		Complete	1	N/A
Operational Test & Evaluation	WR, FB	IH, CSS, TBD	8.655					0.01	0 11/04	Continuing	8.655	N/A
Live Fire Test & Evaluation	VVIX	111, 000, 100	0.033								0.000	IN/A
Test Assets											0.000	
	WR	IH, CSS, TBD	0.700								0.000	N/A
Tooling	WR	IH, CSS, TBD	0.700								0.700	N/A N/A
GFE	VVIK	III, C33, 1BD	0.400									IN/A
Award Fees			04.040	2.222		0.000		0.04			0.000	
Subtotal T&E		<u> </u>	34.648	0.000		0.000)	0.01	0		34.658	
Contractor Engineering Support	CPFF	Vredenburg, Northrup Grumn	2.679	0.000				0.60	0 11/04	Continuing	Continuing	N/A
Government Engineering Support	WR	IH, CSS	17.884	0.247	11/02			1.22	11/04	Continuing	Continuing	N/A
Program Management Support	WR	IH, CSS, NAVSEA	11.281	0.000				2.30	5 11/04	Continuing	Continuing	N/A
Travel	PD	NAVSEA	0.837	0.040	11/02			0.07	11/04	Continuing	Continuing	N/A
Transportation											0.000	
SBIR Assessment	Various	Various	0.073								0.073	N/A
Subtotal Management			32.754	0.287		0.000	D	4.20	0		37.241	
Remarks:												
Total Cost			183.301	0.662		0.000		17.62	10	0.000	201.583	
Remarks:												

CLASSIFICATION:

	XHIBIT R-2a, RDT	&E Project Justi	fication				DATE:		
		•						February 200	03
APPROPRIATION/BUDGET ACTIVITY	PROGRAM	I ELEMENT NAME	AND NUMBER		PROJECT	NAME AND NUM	BER		
RDT&E, N/BA-4		Surface & Shallow				ssault Breaching Sy	/stems		
	Α	BS PRC	GRAM	SC	HED	ULE			
	FY 2002	FY 2003	FY 2004	FY	2005	FY 2006	FY 2007	FY 2008	FY 2009
	1 2 3 4	1 2 3 4	1 2 3 4	1 2	2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
Milestones				MS B					
ONR 6.3 Demo Efforts		СМ	and CO Exploration/Techr	1,0					
		CM - B	Z CO Demo						
CMCO Acquisition/Development 6.4	MAA/MNS/Ris Requirements I	Development	Draft ORD/Approval				CM and CO System D	evelopment	
CMCO System Design and Test		Ana		rep for MS ontract Award	CM - BZ CO Contract Awar				
						System Desig	n/Platform Integra		em Fabrication
CMCO Technical Reviews					Contract Kickoff	SRR SFR SSR	*		Air Quals Air Quals DT- DT/OT TRR OT
ISR/Navigation/C4I Development						ISR/Nav/C4I Sys	tem Development		

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:	ebruary 20	03
APPROPRIATION/BUDGET ACTIVITY	PROGRAM E	LEMENT			PROJECT NU	MBER AND NAME		
RDT&BA-4	Program Elem	nent (PE) No. a	nd Name	Q2131, Assault Breaching Systems				
Schedule Profile: ABS	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
CM and CO Exploration/Technology Demonstration 6.3(C	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-3Q		
CM-BZ CO Demo			1Q					
MAA/MNS/Risk Mitigation/Requirements Devel.	1Q-4Q	1Q-4Q						
Draft ORD Development/Approval			1Q-4Q	1Q				
Analysis of Alternatives		4Q	1Q-4Q					
MS B (CM-BZ CO)				2Q				
Prep for MS B/Contract Award			4Q	1Q-2Q				
CM CO System Development				3Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
CM- BZ CO Contract Award				4Q				
System Design/Platform integration				3Q-4Q	1Q-4Q	1Q-4Q	1Q-2Q	
System Fabrication							3Q-4Q	1Q-4Q
IM Quals/System Safety Tests							4Q	1Q-2Q
Air Quals (If Air Platform System is selected during AoA)							·	3Q-4Q
DT-OT (continue into FY10)								3Q-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	
DT/OT TRR - Test Readiness Review								2Q-4Q
ISR/NAV/C4I Development			1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
				-, -,				

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE:			
									Febru	uary 2003	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM EL	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	Q2094/Q2852	2		
	Prior										Total
COST (\$ in Millions)	Years Cost	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Program
Project Cost	106.483	62.499	74.425	81.457	65.956	55.877	47.936	48.093	57.822	Continuing	Continuin
RDT&E Articles Qty					1						1

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project was completely restructured in FY 1994 in response to Congressional direction provided in the FY 1994 DOD Appropriations Act. Specifically, the office of the Secretary of Defense and the Navy were directed to (1) establish priorities among various proposed UUV programs, (2) focus on near-term mine countermeasures issues, and (3) establish affordable, cost-effective programs. The Navy developed an overall UUV Program Plan, which was approved by ASN(RD&A) June 1994, endorsed by USD(A&T) and forwarded to Congress to support FY 1995 budget deliberations.

The UUV Program Plan establishes a clandestine, near-term mine reconnaissance capability as the Navy's top UUV priority; a long term-mine reconnaissance system as priority two; the conduct of surveillance, intelligence and tactical oceanography missions as priority three; and exploring advanced UUV designs for the future as priority four.

The UUV project funds development of the UUV Program Plan. The Near-Term Mine Reconnaissance System (NMRS) is a minehunting UUV system launched and recovered from an SSN-688 class submarine capable of mine detection, classification, and localization. One NMRS Operational Prototype (OP) system was made available to the Commander Submarine Development Squadron-Five in FY 1999. No further development/production of the NMRS is planned. The AN/BLQ-11 Long-Term Mine Reconnaissance System (LMRS) is being developed to provide a robust, long-term Fleet capability to conduct clandestine minefield reconnaissance. A quantity of 10 LMRSs will be procured in the FYDP begining in FY05. The LMRS Inventory Objective is TBD. The Navy's third priority is the conduct of surveillance, intelligence and tactical oceanography. To meet this requirement the Navy will develop a Mission Reconfigurable UUV (MRUUV) system that is capable of performing different missions. It is envisioned that this system will adapt elements of the LMRS design to develop a more modular UUV capable of accommodating multiple payload sensors appropriate to meet various mission requirements. ONR will develop technologies for payload sensors and increased autonomy under the Autonomous Operations Future Naval Capability (FNC) programs to support risk mitigation for the MRUUV program. Technologies from these systems will transition to MRUUV during the FNC demonstration year. Technology Transition agreements between the Program office and ONR have been signed.

Congress appropriated \$1.5M in FY01 and \$6.1M in FY02 for a National Unmanned Underwater Vehicle Test Center (NUTEC) at NUWC DIVKPT. Funds are being used to develop a program plan to define current and future UUV testing requirements. Begining in FY03 NUTEC was transferred to a new PE.

The Long-Term Mine Reconnaissance System (LMRS) is currently in development. The fabrication of a prototype system began in FY02 and will transition to fleet operations in FY05.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	AME
RDT&E, N / BA-4	Surface & Shallow Water MCM, 0603502N	Unmanned Undersea Vehic	cle Q2094/Q2852

(U) B. Accomplishments/Planned Program

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	48.630	32.100	31.059	12.676
RDT&E Articles Quantity	0	0	0	0

Continued development phase and fabrication of prototype LMRS system, prototype testing and conduct TECHEVAL/OPEVAL.

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	2.100	20.375	25.400	42.580
RDT&E Articles Quantity	0	0	0	0

Initiated MRUUV concept studies & trades, initiate requiements definition, acquistion planning and prototype designs.

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	4.753	21.950	24.998	10.700
RDT&E Articles Quantity	0	0	0	0

UUV P3I Enginnering Studies/Prototype design, Standardization Studies, initiate transition to baseline design.

CLASSIFICATION:

on			DATE: February 2003	
PROGRAM ELEMENT NUM	IBER AND NAME	PROJECT NUMBER AND N		
Surface & Shallow Water I	MCM, 0603502N	Unmanned Undersea Veh	icle Q2095/Q2852	
FY 02	FY 03	FY 04	FY 05	
6.016	0.000	0.000	0.000	
FY 02	FY 03	FY 04	FY 05	
1.000	0.000	0.000	0.000	
FY 02	FY 03	FY 04	FY 05	
0.000	0.000	0.000	0.000	
	PROGRAM ELEMENT NUM Surface & Shallow Water I FY 02 6.016 FY 02 1.000	PROGRAM ELEMENT NUMBER AND NAME Surface & Shallow Water MCM, 0603502N	PROGRAM ELEMENT NUMBER AND NAME Surface & Shallow Water MCM, 0603502N	PROGRAM ELEMENT NUMBER AND NAME Surface & Shallow Water MCM, 0603502N Unmanned Undersea Vehicle Q2095/Q2852 FY 02

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification					DATE:	
						February 2003
PPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER	AND NAME	F	PROJECT NUMBER A	ND NAME	
RDT&E, N / BA-4	Surface & Shallow Water MCM,	060325N	ι	Inmanned Undersea	Vehicle Q2094/ Q2852	
(U) C. PROGRAM CHANGE SUMMARY:						
(U) Funding:	FY 2002	FY 2003	FY 2004	FY 2005		
FY03 President's Controls:	61.619	76.108	16.421	22.979		
FY04 President's Controls:	62.499	74.425	81.457	65.956		
Total Adjustments	0.880	-1.683	65.036	42.977		
Summary of Adjustments						
FY2003 SBIR	-1.343					
Misc Adjustments	2.223	-1.683	65.036	42.977		
Subtotal	0.880	-1.683	65.036	42.977		
(U) Schedule:						
Not Applicable						
(U) Technical:						
Not Applicable						

CLASSIFICATION:

EXHIBIT R-2a, RDT&E	Project Justification								DATE:			
										Febru	ary 2003	
APPROPRIATION/BUDGET	ACTIVITY		PROGRAM E	LEMENT NUM	BER AND NAM	ИΕ	PROJECT NU	MBER AND N	AME			
RDT&E, N /	BA-4		Surface & Sh	allow Water N	ICM, 06035021	N	Unmanned Un	dersea Vehicle	e Q2094/Q285	52		
(U) D. OTHER PROG	GRAM FUNDING SUMMAR	RY:								To	Total	
Line Item No. & Na	<u>me</u>	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Complete	Cost	
OPN PE 020481N; L	ine Item 217100	0.000	0.000	0.000	61.391	49.153	63.461	63.606	64.326	Continuing	Continuing	

(U) E. ACQUISITION STRATEGY: *

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The LMRS acquisition strategy is 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 contractors 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. Procurement of the LMRS will be sole source to Boeing. A competitive procurement is not cost effective due to the limited (6-12) number of systems planned for procurement. PBD 130C added \$40M to FY03 to accelerate the development of more advanced UUVs. Funding will be used to accelerate the development of Synthetic Aperture Sonar (SAS), LMRS Precision Underwater Mapping (L-PUMA), and Mission Reconfigurable UUV (MRUUV) to address multiple missions. The MRUUV project is conducting an AOA and has commenced acquisition planning and specification development in

(U) F. MAJOR PERFORMERS: **

Boeing - Anaheim, CA - Design and fabrication of prototype LMRS.

CLASSIFICATION:

Exhibit R-3 Cost Analysis (pa APPROPRIATION/BUDGET ACTI RDT&E, N / BA-4 Cost Categories	VITY		PROGRAM EL								Februay 200	3	
RDT&E, N / BA-4			DDOCDAM EL								i Coluay 200	•	
							PROJECT NU	JMBER AND N	IAME				
Cost Categories			Surface & Sha		M, 0603502N		Unmanned Ur		e Q2094/Q2852				
		Performing		Total		FY 03		FY 04		FY 05			
	Method & Type	Activity & Location		PY s Cost	FY 03 Cost	Award Date	FY 04 Cost	Award Date	FY 05 Cost	Award Date	Cost to Complete	Total Cost	Target Value of Contract
LMRS		Boeing		74.069		1	8.129		0.842	N/A	· ·	Cost	
	CPAF/IF	bueing		5.937	2.977		1.940		1.353	N/A	Continuing Continuing	Continuing	1
Fees LMRS	Various	Various		34.168			8.317		2.893	N/A	Continuing	Continuing	
MRUUV	Various	Various		2.100		1	25.400		42.580	N/A	Continuing		
UUV P31	Various	Various		9.153			24.998		10.700	N/A	Continuing		
UUV Test center	Various	Various		7.502			0.000		0.000	N/A	Continuing	Continuing	
OOV Test center	various	various		7.302	0.000	IN/A	0.000	IN/A	0.000	IN/A	Continuing	0.000	
												0.000	
												0.000	
												0.000	
												0.000	
Subtotal Product Development				132.929	63.269		68.784		58.368		0.000		
1													
Development Support												0.000	
Software Development												0.000	
Integrated Logistics Support												0.000	
Configuration Management												0.000	
Technical Data												0.000	
Studies & Analyses												0.000	
GFE												0.000	
Award Fees												0.000	
Subtotal Support				0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:													

CLASSIFICATION:

										DAT	E:				
Exhibit R-3 Cost Analysis (pag	je 2)												February 200	3	
APPROPRIATION/BUDGET ACTIV	İTY		PROGRAM EL	EMENT				PROJECT N	JMBER AN	D NAME			•		
RDT&E, N / BA-4			Surface & Sha	llow Water M	CM, 060350)2N		Unmanned L	ndersea Ve	hicle Q20	94/Q2852				
Cost Categories	Contract	Performing		Total			FY 03		FY 04			Y 05			
	Method	Activity &		PY s	FY 03		Award	FY 04	Award	FY 0		Award	Cost to	Total	Target Value
	& Type	Location		Cost	Cost		Date	Cost	Date	Cost		Date	Complete	Cost	of Contract
Developmental Test & Evaluation	CPAF/IF	Boeing		0.34	0 2.	.555	N/A	1.18			0.000	N/A	0.000	4.081	N/A
Operational Test & Evaluation	WR	Various		0.00	0 0.	.000	N/A	0.65	N/A		0.000	N/A	0.000	0.657	N/A
GFE/GFF	Various	Various		0.64	4 0.	195	N/A	0.10	N/A		0.000	N/A	Continuing	Continuing	N/A
TTLRF	WR	Various		4.47	6 0.	.821	N/A	0.20	N/A		0.100	N/A	Continuing	Continuing	N/A
														0.000	
														0.000	
Award Fees														0.000	
Subtotal T&E				5.46	0 3	.571		2.14	3		0.100		0.000	11.274	
Contractor Engineering Support				4.20	4 0	.660	N/A	1.00	N/A		1.000	N/A	Continuing	Continuing	
Government Engineering Support				16.03	0 0	.965	N/A	0.86	N/A		2.661	N/A	Continuing	Continuing	
Program Management Support				4.30	4 0	.650	N/A	0.65	N/A		0.650	N/A	Continuing	Continuing	
Overhead				6.05	5 5	.310	N/A	8.01	N/A		3.177	N/A	Continuing	Continuing	
														0.000	
														0.000	
Subtotal Management				30.59	3 7	.585		10.53)		7.488		Continuing	Continuing	
Remarks:						,					<u>,</u>				
Total Cost				168.98	2 74	.425		81.45	7		65.956		Continuing	Continuing	
Remarks:															

VIRGINIA CLASS FOT&E

CLASSIFICATION:

EXHIBIT R4, Schedule P																									DATE		F	ebrua	ry 20	03		
APPROPRIATION/BUDGET A RDT&E, N /	CTIVIT BA-4													R AND											D NAM		12052					
Fiscal Year	DA-4		02			20	003		Suriac	20		allow Water M			2005		2006		Unmanned Undersea Ve			nicie Q	2094/0				200	9				
	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
LMRS Program Milestones				Deve	lopmen	t Phase							MS III																			
EVENTS													195X	Product	tion cor	ntract a	ward															
Test & Evaluation Milestones								DVT	DT IIA	DT IIB	TECHE		OPEV/	AL						VIRGII	NIA CL	ASS FO	T&E									
PRODUCTIION																			Produc	tion oh				1								
SAS Program Milestones Test & Evaluation								Develo	opment	Phase					FOT&E		loc		rioduc	otion pi		Produc	ction ph	nase								
L-PUMA Milestones																					I											
Test & Evaluation								Develo	opment	Phase																FOT&E				Product	ion ph	iase
MRUUV Requirments Definition, Risk Reduction and Pre-design																																
Development Phase																				Develo	I opment	Phase								$\overline{\mathcal{M}}$		
Deliveries																														íoc		

^{*} Not required for Budget Activities 1, 2, 3, and 6

CLASSIFICATION:

Exhibit R-4a, Schedule Detail			DATE: February 2003									
APPROPRIATION/BUDGET ACTIVITY	PROGRAM E	LEMENT			PROJECT NU	IUMBER AND NAME						
RDT&BA-4	Surface & Sha	allow Water MC	M, 0603502N		Unmanned Un	dersea Vehicle	Q2094/Q2852)				
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009				
LMRS												
Milestone III				1Q								
IOC				1Q								
Production Contract				2Q								
DVT		4Q										
DT II A			1Q									
DTII B			2Q									
TECHEVAL			3Q									
OPEVAL			4Q		+							
SAS												
IOC					1Q							
FOT&E				2Q-4Q								
L-PUMA												
IOC							4Q					
FOT&E							1Q-3Q					
MRUUV					+							
REDESIGN PHASE	2Q											
DEVELOPMENT PHASE (21" & LARGER)			1Q									
21"MRUUV IOC								2Q				
				ļ								