CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification								DATE:			
									Febr	uary 2003	
APPROPRIATION/BUDGET ACTIVITY						R-1 ITEM NO	MENCLATUR	Ē			
RESEARCH DEVELOPMENT TEST & EVALU	ATION, NAVY	1	BA-5			0604373N A	irborne Mine	e Counterme	asures		
	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	249.403	58.363	73.728	88.514	49.954	13.400					533.362
Airbara Mira Hunt Custom / 00520/02004*	404.000	40.744	40.005	47.475	4.000						04.4.540
Airbone Mine Hunt System / Q0529/Q2884*	164.823	10.741	16.805	17.175	4.968	1					214.512
ALMDS / Q2047	39.950	13.333	18.049	10.790	3.739						85.861
OASIS / Q2427/Q2883*	13.983	13.403	14.022	14.790	11.307	0.847					68.352
AMNS / Q2473/Q9069*	30.647	20.886	21.787	45.759	29.940	12.553					161.572
SNIUTT / Q9179			3.065								3.065
											0.000
Quantity of RDT&E Articles	3		2		5						10

^{*} Funding includes the following:

FY02 Congressional Adds: AQS-20 Airborne Minehunting Sonar-\$2.423M; RTASS Project -\$2.700M; MH-60S Untethered Airborne Mine Neutralization-\$4.155M FY03 Congressional Adds: RTASS Project -\$.977M; Surface Navy Integrated Undersea Tactical Technology - \$3.065M

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Airborne Mine Countermeasures (AMCM) programs will deploy to the fleet as sensors integrated into the MH-53E and MH-60S platforms in order to provide Mine-Like Object Detection/classification/localization, Mine Identification, mine reacquisition and neutralization, and influence clearance capabilities. The "Next Generation" AMCM systems will provide this set of capabilities to the Carrier Battle Group/Amphibious Ready Group (CVBG/ARG) beginning in Calendar Year 2005. This capability will be of critical importance in littoral zones, confined straits, choke points, and the Amphibious Objective Area (AOA). Some interest in the following areas has been expressed: search and rescue; Surface fire support; ASW operations; Protection/offense against small craft/vehicles; Air to air operations; Very shallow water MCM; Swimmer defense and Torpedo defense.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE:			
									Febru	uary 2003	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM EL	EMENT NUMI	BER AND NAM	IE	PROJECT NU	MBER AND N	AME			
RDT&E, N / BA-5	4 Airborne M	line Hunt Sys	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	164.823	10.741	16.805	17.175	4.968	0.000	0.000	0.000	0.000	0.000	214.512
RDT&E Articles Qty											0

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

This project includes a sonar for mine detection, classification and identification. The Navy does not possess a capability to conduct minefield reconnaissance (mine densitiy and location) at high area search rates. The AN/AQS-20A is being developed to address the emergent requirements for mine identification and to integrate AMCM systems with a MH-60S platform. The AN/AQS-20A will also be the minehunting sonar component for the Remote Minehunting System (RMS). The AN/AQS-20A will be developed to meet the requirements of the Organic MCM platforms. Note: The AN/AQS-20/X nomenclature designation to AN/AQS-20A was approved May 02.

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification					DATE:
					February 2003
APPROPRIATION/BUDGET ACTIVITY			!	R-1 ITEM NOMENCLAT	TURE
RESEARCH DEVELOPMENT TEST & EVALUATION	, NAVY /BA-5		(0604373N Airborne I	Mine Countermeasures
(U) B. PROGRAM CHANGE SUMMARY:					
(U) B. PROGRAM CHANGE SUMMARY:	FY 2002	FY 2003	FY 2004	FY 2005	
Previous President's Budget	61.097	67.240	67.027	24.861	
Current BES/President's Budget	58.363	73.728	88.514	49.954	
Total Adjustments	-2.734	6.488	21.487	25.093	
Summary of Adjustment					
SBIR/STTR Tansfer	-1.164				
Misc Adjustments	1.570	6.488	21.487	25.093	
	-1.164	6.488	21.487	25.093	

Schedule: Acquisition Strategy for the Organic Airborne Mine Countermeasure (OAMCM) programs has changed in order to reflect restructuring to integrate the MH-60S assets availability to support testing. AN/AQS-20A In response to a delay in a test ready MH-60S (deployment platform) and expansion of test/integration requirements, from PB03, the program schedule has been modified to incorporate platform of oportunity (MH-53) CT & DT testing during FY03 to mitigate impacts of MH-60S availability. MH-53 to MH-60S Delta DT and MH-60S OT testing will be conducted during FY04 and completed in FY05 in support of acheiving a scheduled FY05 FRPD and IOC. ALMDS Due to a 9-month delay of a test ready MH-60S (deployment platform), Developmental Testing and Operational Testing on this platform has been rescheduled. The ALMDS program will be conducting Contractor Testing and initial Developmental Testing on a alternate platform (SH-60F). This alternate platform testing will allow for an LRIP decision to support IOC. A revised Acquisition Program Baseline is currently in route with updated schedule parameters. OASIS The program is currently in the SD&D phase where three engineering development models (EDMs) will be developed for test and evaluation. Following the Milestone C program decision for Full Rate Production in FY 2006, a total of 44 OASIS systems will be produced to meet the inventory requirement over a five-year period. AMNS Due to a late approval of the Acquisition Strategy resulted in the delay of schedule for the AMNS (MH-60S) SD&D contract award until FY03. Due to unexpected growth of the AMNS (MH-63E) program caused by technical and explosive safety issues, it was necessary to utilize FY01 and FY02 RDT&E funds originally designated for the AMNS (MH-60S) program on the MH-53E variant. As such, the RDT&E and Procurement profiles for the AMNS (MH-60S) were realigned. The impact on the procurement profile has been significant. The funding realignment has caused delay of the AMNS (MH-60S) LRIP until FY06 (IOC in FY07)

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	IAME
RDT&E, N , BA-5	0604373N Airborne Mine Countermeasures	Q0529/Q2884 Airborne N	line Hunt Systems

B. Accomplishments/Planned Program

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	4.650	6.097	4.469	0.581
RDT&E Articles Quantity				

Complete EDM fabrication, including incorporation of Electro-Optic Identification (EOID) sensor capabilities. Conduct EDM testing with maintainability requirements also refurb EDMs.. Acquire EOID test units.

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	5.631	10.148	11.946	3.827
RDT&E Articles Quantity				

Continued integration of towed body with MH-60S console and parallel towed body/MH-60S Console hardware-software integration and testing.

Conduct MH-60S DT and and begin OT. Continue interface/integration with MH-60S, C4I Interface and MEDAL. Continue development of ILS & supportability products, training materials. Conduct single-site (alternative site) CAD/CAC testing and initiate CAIDC.

Conduct parallel MH-60S Console test and common console/Aircraft Integration. Conduct platform of opportunity (MH-53) testing, i.e, CT, DT, AUTEC Tests in addition to WSIT CT and AFCS.

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.460	0.560	0.760	0.560
RDT&E Articles Quantity				

Support completion of MH-60S OT events. Develop documentation in support of FRPDR. Continue development of ILS & supportability products and engineering suppport. Finalize documentation in support of MS-C requirements.

R-1 SHOPPING LIST - Item No.

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE:						
									Februa	ary 2003			
APPROPRIATION/BUDGET ACTIVITY		PROGRAM E	LEMENT NUM	BER AND NAM	ΛE	PROJECT NU	MBER AND N	AME					
RDT&E, N, BA-5		0604373N A	irborne Mine	Mine Hunt Sy	line Hunt Systems								
(U) D. OTHER PROGRAM FUNDING SUMMAI	RY:												
<u>Line Item No. & Name</u> 424800 OPN	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To <u>Complete</u>	Total <u>Cost</u>			
AQS-20 AQS-20A	22.114	13.061		32.095	25.548	48.465	69.268	58.732	CONT.	CONT.			

(U) E. ACQUISITION STRATEGY: *

Procure two (2) AN/AQS-20 towed bodies in FY02 to be modified to AN/AQS-20A units. Upon successful completion of DT and MS C, Sole Source MH-60S systems procurement will begin in FY05 with a Full Rate Procurement contract following a Full Rate Production Decision Review (FRPDR).

(U) F. MAJOR PERFORMERS: **

Raytheon Corp, Portsmouth, RI - Prime development contractor. Software and hardware developer for AN/AQS-20A towed body and integration with MH-60S platform.

Arete Corp, Tucson, Arizona - Major Subcontractor to Raytheon Corp. Responsible for design and development of Electro-Optic Identification (EOID) capability within AN/AQS-20A towed body.

CSS Panama City, FI. - Technical Design Agent. Provide AN/AQS-20A system design, development, integration and contractor oversight; ensure operational requirements are satisfied during all SD&D test events.

CLASSIFICATION:

E 13.500 . A 1	41								DATE:		-		
Exhibit R-3 Cost Analysis (pag	<u>, , </u>										February 200	13	
APPROPRIATION/BUDGET ACTIV	ΊΤΥ		PROGRAM E	LEMENT			PROJECT NU						
RDT&E, N / BA-5			0604373N A	irborne Mine	Counterme	asures	Q0529/Q288	4 Airborne I	Mine Hunt Sy	stems			
Cost Categories	Contract	Performing		Total		FY 03		FY 04		FY 05			
	Method	Activity &		PY s	FY 03	Award	FY 04	Award	FY 05	Award	Cost to	Total	Target Value
	& Type	Location		Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
Hardware/Software Development	SS/CPIF	Raytheon, Po	ortsmouth, RI	18.257	6.470	10/02	4.469	10/03	0.581	10/04		29.777	
Hardware/Software Development	C/CPFF	Raytheon, Po	ortsmouth, RI	60.150								60.150	
Hardware/Software Development	WR	CSS Panama	City, FL	4.966								4.966	
Hardware/Software Development	C/FP	Northrop, Gru	ımman	4.572								4.572	
Hardware/Software Development	SS/CPIF	Raytheon, RI	(Cong Add)	0.965								0.965	
												0.000	
												0.000	
												0.000	
												0.000	
												0.000	
			•									0.000	
Subtotal Product Development				88.910	6.47)	4.469		0.581		0.000	100.430	

Remarks:

Engineering Services	WR	CSS Panama City, FL	22.003	2.200	10/02	4.100	10/03	1.737	10/04		30.040	
Engineering Services	C/CPFF	Raytheon, Portsmouth, RI	1.500	0.500	10/02						2.000	
Engineering Services	VAR	Various	49.889	1.908	10/02	1.757	10/03	0.250	10/04		53.804	
Engineering Services	SS/CPIF	Raytheon, Portsmouth, RI	1.941			1.323	10/03	0.300	10/04		3.564	
											0.000	
ILS Functions	WR	CSS Panama City, FL	4.269	0.600	10/02	0.900	10/03		10/04		5.769	
ILS Functions	SS/CPIF	Raytheon, Portsmouth, RI	0.326	0.500	10/02						0.826	
ILS Functions	VAR	Various	0.736					0.700	10/04		1.436	
Subtotal Support			80.664	5.708		8.080		2.987		0.000	97.439	

Remarks:

CLASSIFICATION:

												DATE:					
Exhibit R-3 Cost Analysis (pag	e 2)														February 200)3	
APPROPRIATION/BUDGET ACTIVI	TY		PROGRAM E								MBER AND N				-		
RDT&E, N / BA-5			0604373N A	irborne	e Mine	Counter			Q0529		Airborne I	Mine Hur					
Cost Categories	Contract	Performing		Total				FY 03			FY 04			FY 05			
	Method	Activity &		PY s		FY 03		Award	FY 04		Award	FY 05		Award	Cost to	Total	Target Value
	& Type	Location		Cost		Cost		Date	Cost	I	Date	Cost		Date	Complete	Cost	of Contract
T&E Functions	WR	CSS Panama			3.409	3	367	10/02		3.104	10/03		0.400	10/04		10.280	
T&E Functions	SS/CPIF	Raytheon, Por	tsmouth, RI		0.422					0.562	10/03		0.300	10/04		1.284	
T&E Functions	VAR	Various			0.543	0	700	10/02		0.200	10/03		0.140	10/04		1.583	
																0.000	
																0.000	
																0.000	
																0.000	
Subtotal T&E					4.374	4	.067			3.866			0.840		0.000	13.147	
Management Support					1.287	C	.500	10/02		0.700	10/03		0.500	10/04		2.987	
Travel					0.329	C	.060	10/02		0.060	10/03		0.060	10/04		0.509	
																0.000	
																0.000	
																0.000	
																0.000	
Subtotal Management					1.616	C	.560			0.760			0.560		0.000	3.496	
Remarks:																	
Total Cost				1	175.564	16	.805			17.175			4.968		0.000	214.512	
Remarks:																	

CLASSIFICATION:

EXHIBIT R4, Schedule																									DATI	E:	F	ebru	ary 20	03		
APPROPRIATION/BUDGE														R AND							PROJ											
RDT&E, N /	BA-5	5			I				06043	73N	Airbo	rne N	line C	ounte	rmea	sures					Q052	9/Q28	84 A	irbor	ne Mii	ne H	unt Sy	stems	<u> </u>			
Fiscal Year		20	02			20	03			20	04			200)5			200	06			200	07			2	2008		2009			
	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
Acquisition Milestones											MS 	<u>у</u>		FF	RP Dec	: IOC																
SD&D Phase																																
EDMs Delivery					\triangle																											
Software Delivery V 5.X SW Delivery			Final [eliver	у																											
Test & Evaluation Milestones Development Test Operational Test				SDCT	7	ст / V	MH- Sys	DT		MH Int	-60S DT	\rightarrow	ИН-603 ОТ	6																		
Production Milestones																																
LRIP I FY 05																AN/	AQS-2	0A LR	IP & P	Produc	ction N	1H 60S	;	•				<u> </u>	1			ot one in the properties of
FRP FY 06																									AN	/AQS-2	OA Del	iveries				
																																T
Deliveries																							2	2	2	1	1	2	2	2	2	2

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

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:		
							February 20	03
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	LEMENT			PROJECT NU	MBER AND N	AME	
RDT&E, BA-5	0604373N Ai	irborne Mine	Countermea	sures	Q0529/Q288	4 Airborne M	ine Hunt Sys	tems
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Software Delivery V5.X	4Q							
SDCT Dry Run	4Q							
SDCT Conduct	4Q							
EDM Delivery		2Q						
Contractor Test		2Q						
MH-53E System DT		3Q						
MH-60S Int. DT			2Q					
Milestone C (MS C)			3Q					
MH-60S OT			4Q	2Q				
AN/AQS-20A Low Rate Initial Production (LRIP) Decision				2Q				
AN/AQS-20A Full Rate Production (FRP) Decision				3Q				
IOC				4Q				
AN/AQS-20A Full Rate Production (FRP) Start					1Q			
First Deployment						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-5	0604373N A	Airborne Mir	ne Countern	easures		Q2047 Airb	orne Laser	Mine Detect	ion System	1	
	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	39.950	13.333	18.049	10.790	3.739	0.000	0.000	0.000	0.000	0.000	85.861
RDT&E Articles Qty	3										3

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

The Airborne Laser Mine Detection System (ALMDS), designation AN/AES-1, is a non-acoustic Airborne Mine Countermeasures (AMCM) high area coverage system that detects, classifies, and localizes floating, drifting, and near-surface moored sea mines. The system is deployed from the MH-60S helicopter and will provide organic airborne mine defense for the Carrier Battle Groups and Amphibious Ready Groups. The system represents a capability that does not exist in the current Mine Countermeasures (MCM) inventory.

CLASSIFICATION:

ROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUM	IBER AND NAME	PROJECT NUMBER AND N	IAME	
T&E, N / BA-5	0604373N Airborne Mine	e Countermeasures	Q2047 Airborne Laser M	line Detection System	
D. A	·		·		
B. Accomplishments/Planned Program					
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	11.495	9.427	2.259		
Accomplishments/Enon/Subtotal Cost					
RDT&E Articles Quantity EDM development, fabrication, software codi	ng.	AL.			
RDT&E Articles Quantity EDM development, fabrication, software codi Continue to conduct technical studies, MH-60	ng.) S Interface, C4I Interface, and MED		EV 04	EV 05	
RDT&E Articles Quantity EDM development, fabrication, software codi Continue to conduct technical studies, MH-60	ng.) S Interface, C4I Interface, and MED	FY 03	FY 04 2 191	FY 05	
RDT&E Articles Quantity EDM development, fabrication, software codi Continue to conduct technical studies, MH-60 Accomplishments/Effort/Subtotal Cost	ng.) S Interface, C4I Interface, and MED		FY 04 2.191	FY 05 1.183	
RDT&E Articles Quantity EDM development, fabrication, software codi Continue to conduct technical studies, MH-60	ng.) S Interface, C4I Interface, and MED	FY 03			

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost		6.117	6.340	2.556
RDT&E Articles Quantity				

Contractor Testing, Developmental Testing-IIB/Operational Assessment on platform of opportunity (FY03)
Developmental Testing-IIC, and begin Operational Testing (OPEVAL) (FY04)
Completion of Operational Testing (OPEVAL) (FY05)

R-1 SHOPPING LIST - Item No.

111

CLASSIFICATION:

LAHIDH K-Za, KDIQL	i rojeci susilication								DATE.			
										Febru	ary 2003	
APPROPRIATION/BUDGET	ACTIVITY		PROGRAM EL	EMENT NUM	BER AND NAM	ΛE	PROJECT NU	JMBER AND N	AME			
RDT&E, N /	BA-5		0604373N Ai	rborne Mine	e Counterme	asures	Q2047 Airbo	orne Laser M	line Detectio	n System		
(U) D. OTHER PROG	RAM FUNDING SUMMARY	·:										
										То	Total	
Line Item No. & Nar	<u>me</u>	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	<u>Complete</u>	<u>Cost</u>	
424800 OPN		0.000	0.000	11.120	21.407	23.358	52.418	53.584	54.542	0.000	216.429	

(U) E. ACQUISITION STRATEGY: *

EXHIBIT R-2a RDT&F Project Justification

In April 2000, the ALMDS program received MS II approval to enter the Engineering and Manufacturing Development (E&MD) phase. Northrop Grumman won the competitively awarded E&MD contract.

The ALMDS E&MD contract with Northrop Grumman has 3 types of incentives: schedule incentive for early delivery of EDM units; technical incentive for performance reliability and maintainability; and a cost incentive - a cost sharing percentage both for an overrun and an underrun. Successful completion of DT-IIB, on an alternate platform (SH-60F), will support a Low-Rate Initial Production (LRIP) decision (2 units), which will be an option to the current E&MD contract. These LRIP units will be used to meet initial capability requirements. After a successful OPEVAL on the intended deployment platform (MH-60S), Full-Rate Production will begin. The first full-rate production lot will be an option to the current E&MD contract to prove out the producibility of the system. The remaining 38 production units will be awarded after a full and open competition.

(U) F. MAJOR PERFORMERS: **

Northrop Grumman, Melbourne, FL - Prime Contractor for Engineering, Manufacture Development, awarded 4/00. Costal Systems Station, Panama City, FL - Technical Direction Agent

R-1 SHOPPING LIST - Item No. 111

DATE:

CLASSIFICATION:

Exhibit R-3 Cost Analysis (pag	ie 1)									February 200)3	
APPROPRIATION/BUDGET ACTIV		PROGRAM E	LEMENT			PROJECT NU	MBER AND N	NAME				
RDT&E, N / BA-5			Airborne Mi	ne Counterr	neasures	Q2047 Airb	orne Laser	Mine Detec	tion Syste	em		
Cost Categories	Contract	Performing	Total		FY 03		FY 04		FY 05			
	Method	Activity &	PY s	FY 03	Award	FY 04	Award	FY 05	Award	Cost to	Total	Target Value
	& Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
Hardware/Software Development	WR	CSS, Panama City	0.465	0.250	10/02	0.217	10/03				0.932	
Hardware/Software Development	RCP	CSS, (Prime Contractor)	19.086	1.454	10/02	0.433	10/03				20.973	
Hardware/Software Development	RCP	Metron	0.625								0.625	
Hardware/Software Development	RCP	CSS, Panama City		0.200	10/02	0.200	10/03				0.400	
Hardware/Software Development		SAIC		0.400	10/02						0.400	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Product Development			20.176	2.304		0.850		0.000		0.000	23.330	

Remarks:

Engineering Services	WR	CSS, Panama City	7.441	1.173	10/02	0.677	10/03	0.300	10/04		9.591	
Engineering Services	RCP	CSS, (Prime Contractor)	9.632	0.780	10/02	0.100	10/03				10.512	
Engineering Services	VAR	Various	4.080	2.638	10/02	1.418	10/03	0.449	10/04		8.585	
Engineering Services	RCP	Metron/NRL Stennis	2.871								2.871	
ILS Functions	WR	CSS, Panama City	1.097	0.498	10/02	0.375	10/03	0.219	10/04		2.189	
ILS Functions	RCP	CSS, (Prime Contractor)	4.405	1.750	10/02	0.341	10/03	0.670	10/04		7.166	
ILS Functions	VAR	Various/NRL Stennin	1.062	0.025	10/02	0.025	10/03	0.025	10/04		1.137	
ILS Functions	RCP	CSS, Panama City		0.232	10/02			0.400	10/04		0.632	•
Subtotal Support			30.588	7.096		2.936		2.063		0.000	42.683	

Remarks:

CLASSIFICATION:

								DATE:				
Exhibit R-3 Cost Anal	vsis (page 2)							D/(TE.		February 200	13	
APPROPRIATION/BUDG	ET ACTIVITY	PROGRAM E	LEMENT			PROJECT NU	IMBER AND N	NAME		. 0.0. 0.0. y =00		
RDT&E, N /	BA-5	0604373N	Airborne Mi	ne Counter	measures	Q2047 Airb	orne Laser	Mine Detect	ion Systen	n		
Cost Categories	Contract	Performing	Total		FY 03		FY 04		FY 05			
	Method	Activity &	PY s	FY 03	Award	FY 04	Award		Award	Cost to	Total	Target Value
	& Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
Testing and Evaluation	RCP	CSS, (Prime Contractor)	1.008	3.100	10/02	1.307	10/03	0.063	10/04		5.478	
Testing and Evaluation	WR	CSS, Panama City	0.199		1	3.847	10/03	0.113	10/04		7.176	
Testing and Evaluation	VAR	Various	0.392	0.050	10/02						0.442	
Testing and Evaluation	RCP	CSS, Panama City				0.400	10/03				0.400	
											0.000	
											0.000	
											0.000	
Subtotal T&E			1.599	6.167	,	5.554		0.176		0.000	13.496	
			T	1	1	ı	I	T		1		
Management Support		Travel	0.220	0.050	10/02	0.050	10/03	0.050	10/04		0.370	
Management Support	VAR	Various	0.700		1	0.700		0.310	10/04		2.410	
Management Support	RCP	CSS, (Prime Contractor)		1.282	10/02	0.500	10/03	0.890	10/04		2.672	
Management Support	WR	CSS, Panama City		0.450	10/02	0.200	10/03	0.250	10/04		0.900	
											0.000	
											0.000	
Subtotal Management			0.920	2.482	2	1.450		1.500		0.000	6.352	
Remarks:												
Total Cost			53.283	18.049)	10.790		3.739		0.000	85.861	
Remarks:												

CLASSIFICATION:

EXHIBIT R4, Schedule	Profile																								DATE	≣:	F	ebrua	ary 20	03		
APPROPRIATION/BUDGE RDT&E, N /	T ACTIVI BA-5													R AND								ECT N					ection	Svet	om.			
Fiscal Year			02			20	03		00040	20		ille iv		200		sures		20	06		Q201	200		Lasc			008	Oysu		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
Acquisition Milestones									мѕ	S C				FRPDI	₹		ioc															
Fabrication						EDM	Units							LRI	P Unit	S																
System Development										F	CA	4	PRR																			
Production Awards											Releas oductio RF	n /			FR	P Awa	ard															
Test & Evaluation Milestones Contractor Test Development Test Operational Test				(SH	DT-IIA I-60F) DT-I MH-60	ĺ	(SH	IIB/OA -60F) AL Eve	ents (O	(MI	-IIC H-60S)		PEVA	L (MH-é	60S)																	
Production Milestones LRIP FY 04 FRP FY 05										LRI	P Start		FRP	Start	\triangle		FI	RP 2 S	Start		F⊓	RP 3 S	tart		F	RP 4	Start		FI	RP 5 S	tart	
Deliveries													LRIF	2 (2)				_	FRP	1 (4)	FRF	2 (4)				FRP	3 (11)			FRP 4	1 (11)	

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

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:	February 20	03
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	LEMENT			PROJECT NU	MBER AND NA	AME	
RDT&BA-5	0604373N A	irborne Mine	Countermea	asures	Q2047 Airbo	rne Laser Mi	ine Detectior	n System
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
EDM Fabrication	Continue	1Q						
Milestone C (MS C)			1Q					
Contractor Testing (CT-IIA - SH-60F)		2Q						
Developmental Testing (DT-IIA - MH-60S)		2Q						
Developmental Testing (DT-IIB/OA - SH-60F)		3Q - 4Q						
Developmental Testing (DT-IIC - MH-60S)			1Q - 2Q					
Start Low-Rate Initial Production I (LRIP I)			2Q					
Physical Configuration Audit			2Q					
Operational Testing (OPEVAL - MH-60S)			3Q - 4Q	1Q				
Preproduction Readiness Review (PRR)				1Q				
Full Rate Production (FRP) Decision				2Q				
Low-Rate Initial Production I Delivery				1Q - 2Q				
Full Rate Production Start (FRP 1)				3Q				
IOC					1Q			
Full Rate Production Start (FRP 2)					1Q			
Full Rate Production Delivery (FRP 1)					3Q - 4Q			
Full Rate Production Start (FRP 3)						1Q		
Full Rate Production Delivery (FRP 2)						1Q - 3Q		
Full Rate Production Start (FRP 4)							1Q	
Full Rate Production Delivery (FRP 3)							1Q - 4Q	
Full Rate Production Start (FRP 5)								1Q
Full Rate Production Delivery (FRP 4)								1Q - 4Q
• • • • • • • • • • • • • • • • • • • •								

R-1 SHOPPING LIST - Item No.

111

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-5	0604373N A	Airborne Mir	ne Countern	neasures		Q2427/Q28	83 Organic	Airborne an	d Surface I	nfluence Sweep)
	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	13.983	13.403	14.022	14.790	11.307	0.847	0.000	0.000	0.000	0.000	68.352
RDT&E Articles Qty					3						3

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

The OASIS system is a towed Minesweeping System that is deployed from specially configured MH-60S helicopters or surface craft in support of the Carrier Battle Group (CVBG) and the Amphibious Ready Group (ARG). The system provides a rapid response sweeping capability against bottom and moored, acoustic and magnetic, or combination acoustic/magnetic influence mines in support of mine clearance operations where mine hunting is ineffective. The system consists of a towed body, a magnetic/acoustic influence capability, a control/monitoring system under software control and interfaces to the helicopter Carriage, Stream, Tow, and Recovery System and the Common Console. The program is currently in the SD&D phase where three engineering development models (EDMs) will be developed for test and evaluation. Following the Milestone C program decision for Full Rate Production in FY 2006, a total of 44 OASIS systems will be produced to meet the inventory requirement over a five-year period.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	IAME
RDT&E, N / BA-5	0604373N Airborne Mine Countermeasures	Q2427/Q2883 Organic A	irborne and Surface Influence Sweep

B. Accomplishments/Planned Program

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	4.975	4.822	4.992	0.899
RDT&E Articles Quantity				

Obtained Milestone B approval. Awarded SD&D Contract for engineering design and Engineering Development Model (EDM) fabrication and begin to integrate EDMs into platform.

Awarded SD&D contract to complete Design, Conduct CDR, Fabricate 3 EDM, and begin to integrate EDMs into platform.

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	7.813	7.724	9.228	9.843
RDT&E Articles Quantity				

Conduct technical studies on MHC60S interface and other technical studies.(Cong. add) Conducted remote technical assistance to MCM ship.

Conduct TECHEVAL and OPEVAL

Conducted shock test and other technical studies.

Conduct studies on C4I Interface and MEDAL.

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.615	1.476	0.570	0.565
RDT&E Articles Quantity				

Monitored Contractor performance and techincal review of CDRLs. Conduct HCDR and PDR.

Continue to monitor Contractor performance and technical review of CDRLs.

Support platform integration.

R-1 SHOPPING LIST - Item No.

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CLASSIFICATION:

APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM FI								ry 2003
ADIQE, N / DA-3		0604373N A	_	BER AND NAM		PROJECT NU			Surface Influen	•
(U) D. OTHER PROGRAM FUNDING SUMMAR	Y:	1					<u> </u>		То	Total
<u>Line Item No. & Name</u> 424800 OPN	FY 2002 0.000	FY 2003 0.000	FY 2004 0.000	FY 2005 0.000	FY 2006 11.120	FY 2007 28.388	<u>FY 2008</u> 29.012	FY 2009 29.532	Complete CONT.	<u>Cost</u> CONT.

(U) E. ACQUISITION STRATEGY:

After Milestone B review in FY02, a SD&D contract was awarded. In FY06, following a successful DT and MS C, procurement options will be exercised.

(U) F. MAJOR PERFORMERS:

EDO Corporation, Amityville, NY. - Production of EDM units, participate in engineering, system integration, and meeting ILS requirements. Coastal Systems Station, Panama City, Fl. - Contributing to ILS, program management, engineering, and system integration.

CLASSIFICATION:

								1				
								DATE:				
Exhibit R-3 Cost Analysis (pag	je 1)									February 200)3	
APPROPRIATION/BUDGET ACTIV	ITY	PROGRAM E	LEMENT			PROJECT NU	JMBER AND N	NAME				
RDT&E, N / BA-5		Airborne N	line Counte	rmeasures/	0604373N	Q2427/Q288	3 Organic A	irborne and S	Surface Influ	ence Sweep		
Cost Categories	Contract	Performing	Total		FY 03		FY 04		FY 05			
	Method	Activity &	PY s	FY 03	Award	FY 04	Award	FY 05	Award	Cost to	Total	Target Value
	& Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete		of Contract
Hardware/Software Development	C/CPFF	EDO Corp.	1.722								1.722	
Hardware/Software Development	C/CPIF	EDO Corp.	2.200	3.845	10/02	4.992	10/03	0.899	10/04	0.000	11.936	
Hardware/Software Development	SS/CPFF	Aeptec Microsystems Inc	5.681	0.977	,						6.658	
		Rockville, MD									0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Product Development			9.603	4.822		4.992		0.899		0.000	20.316	
										·		
Remarks:												

Support											0.000	
Engineering Services	C/CPIF	EDO Corp	3.663	1.993	10/02	1.913	10/03	0.750	10/04	0.200	8.519	
Engineering Services	WR	CSS Panama City	7.012	2.003	10/02	1.291	10/03	0.375	10/04	0.647	11.328	
Engineering Services	WR	NSWC Carderock MD	0.725								0.725	
Engineering Services/ILS	VAR	Various	1.255	0.000	10/02	1.231	10/03	0.935	10/04		3.421	
Engineering Services	PD	ONR	0.000	0.000		0.992	10/03	0.643	10/04		1.635	
ILS Functions	C/CPIF	EDO Corp	0.732	0.664	10/02	0.667	10/03	0.675	10/04		2.738	
ILS Functions	WR	CSS Panama City	0.876	0.305	10/02	0.307	10/03	0.250	10/04		1.738	
Subtotal Support			14.263	4.965		6.401	•	3.628	•	0.847	30.104	

Remarks:

CLASSIFICATION:

											DATE:				
Exhibit R-3 Cost Analysis (pag	e 2)												February 20	03	
APPROPRIATION/BUDGET ACTIVI	TY		PROGRAM E							MBER AND I					
RDT&E, N / BA-5			0604373N		e Mir	e Counte		Q2427/			Airborne and		nfluence Sweep		
Cost Categories	Contract	Performing		Total			FY 03			FY 04		FY 05	_		
	Method	Activity &		PY s		FY 03	Award	FY 04		Award	FY 05	Award	Cost to	Total	Target Value
Tarter de Frankriër e Frankriër	& Type	Location		Cost		Cost	Date	Cost		Date	Cost	Date	Complete	Cost	of Contract
Test and Evaluation Functions	0/00/5				0.700		0 40/00		0.007	10/00		10/04		0.000	
T&E Functions	C/CPIF	EDO Corp			0.732	2.65	-		2.827	10/03	4.2			10.470	
T&E Functions	WR	CSS Panama	City, FL		1.186	0.10	0 10/02		0.000	10/03	1.9	3 10/04		3.249	
T&E Functions	VAR	Various			0.554									0.554	
														0.000	1
														0.000	
														0.000	
Subtotal T&E					2.472	2.7	9		2.827		6.2	15	0.000	14.273	
Management Support														0.000	
Management Support	VAR	Various			0.913	1.4	6 10/02		0.540	10/03	0.5	40 10/04	,	3.439	
Management Support		Travel			0.135	0.03	10/02		0.030	10/03	0.0	25 10/04	,	0.220	
														0.000	
														0.000	
														0.000	
Subtotal Management					1.048	1.4	'6		0.570		0.5	65	0.000	3.659	
Remarks:															
Total Cost			•	2	27.386	14.02	22		4.790		11.3	07	0.847	68.352	
Remarks:															

CLASSIFICATION:

EXHIBIT R4, Schedu	e Profile	Э																								DATE	:	Fe	ebrua	ry 20	03		
APPROPRIATION/BUDG	ET ACTIV	/ITY								PROC	SRAM	ELEM	IENT N	IUMBE	ER AND	NAM	E					PROJ	ECT N	IUMBE	R AN	D NAN	ΛE			-			
RDT&E, N /	BA-	5								0604	373N	Airbo	orne N	line C	Counte	rmea	sures	;				Q242	7/Q28	883 Or	gani	c Airk	orne	and S	urfac	e Influ	ence	Swee	р
Fiscal Year			2002				20	03			20	04			20	05			20	06			200	07			20	08			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
Acquisition Milestones			MS B EDM	AW	ARD	IBR													MS C Decis								ioc						
System Development					SRDF	 _	PDR	Н	DR	SCDR							Milesto PRR	one															
EDM OASIS Delivery													S	Sys Sys 1	Sys 3																		
Test & Evaluation Milestones															DT-II C	TRR	OPEV	AL															
Development Test Operational Test																																	
Production Milestones																			,														
																				\ F	RP Sta	rt											
Deliveries																																	

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:		20
APPROPRIATION/BUDGET ACTIVITY RDT&BA-5	PROGRAM E 0604373N A	LEMENT	Countermea	asures	PROJECT NU Q2427/Q288	MBER AND N	February 20 AME	<u>03</u>
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Milestone B	3Q				1 1 1 1 1 1 1			
SD&D Contract Award	3Q							
System Requirements Design Review	4Q							
IBR		1Q						
Preliminary Design Review (PDR)		2Q						
Hardware Critical Design Review		4Q						
Software Critical Design Review			1Q					
EDM System 1 Delivery				1Q				
EDM System 2 Delivery				1Q				
EDM System 3 Delivery				2Q				
DTII Testing				2Q-4Q				
OTRR Testing				2Q-4Q				
OPEVAL				4Q				
Milestone C					2Q			
Full Rate Production Decision					2Q			
FRP Contract Award					2Q			
Initial Operational Capability							2Q	
-								

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE:			
									Febru	uary 2003	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM EL	EMENT NUM	BER AND NAM	E	PROJECT NU	MBER AND N	AME			
RDT&E, N / BA-5	0604373N Ai	irborne Mine	Countermea	sures		Q2473/Q906	9 Airborne M	line Neutraliz	ation Syster	ms	
	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	30.647	20.886	21.787	45.759	29.940	12.553	0.000	0.000	0.000	0.000	161.572
			AMNS		RAMICS						
RDT&E Articles Qty			2		2						4

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

The **Airborne Mine Neutralization Systems (AMNS)** research and development effort was restarted in FY97 in Project Q0529 P.E. 0604373N. AMNS will provide the MH-60S with the capability to neutralize bottom and moored mines using an airborne delivered expendable mine neutralization device. The AMNS is being tested on the MH-53E to prove out the neutralization effectiveness. The system will also be deployed from the MH-60S helicopter and will provide organic airborne mine defense for Carrier Battle Groups (CVBG) and Amphibious Ready Groups (ARG). This capability will be of critical importance in littoral zones, confined straits, choke points, and the Amphibious Objective Area (AOA).

The Rapid Airborne Mine Clearance System (RAMICS) program began Concept & Technoogy Development phase in FY00. RAMICS will satisfy the U.S. Navy's need for a rapid mine clearance capability required to neutralize near-surface and surface (floating) moored sea mines. RAMICS will use geo-location data provided by other minehunting and mine reconnaissance systems, use a laser system to reacquire targets and to direct the fire of supercavitating projectiles that will render the mines inoperable. RAMICS includes the following major subsystems and components:

- (a) Gun Subsystem (including gun and turret)
- (b) Munition Subsystem MK258 Mod 1 Armor Piercing, Fin Stabilized, Discarding Sabot-Tracer (APFSDS-T)
- (c) Targeting Sensor Subsystem.
- (d) Fire Control Subsystem.
- (e) Software

The system will be deployed from the MH-60S helicopter and will provide organic airborne mine defense for Carrier Battle Groups (CVBG) and Amphibious Ready Groups (ARG). This capability will be of critical importance in littoral zones, confined straits, choke points, and the Amphibious Objective Area (AOA). Some interest in the following areas has been expressed: search and rescue; Surface fire support; ASW operations; Protection/offense against small craft/vehicles; Air to air operations; Very shallow water MCM; Swimmer defense and Torpedo defense.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	IAME
RDT&E, N / BA-5	0604373N Airborne Mine Countermeasures	Q2473/Q9069 Airborne M	Mine Neutralization Systems

(U) B. Accomplishments/Planned Program

AMNS	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	16.486	11.723	14.539	15.711
RDT&E Articles Quantity		2		

FY02 ACCOMPLISHMENTS:

Complete MH-53E TECHEVAL. Conduct MH-53E OPEVAL. Investigate/Award Untethered Airborne Mine Neutralization Systems (Congressional Add).

FY03 PLAN: Award SD&D contract, initiate design, develop software, and integrate aboard MH-60S for test and evaluation.

FY04 PLAN: Continue design, develop software, and integrate aboard MH-60S, conduct 2105 testing and environmental testing. Continue to monitor Contractor performance and technical review of CDRLs.

FY05 PLAN: Prepare documentation for MH-60S contract award (production), conduct contractor test, MH-60S TECHEVAL, initiate MH-60S OPEVAL. Continue to monitor Contractor performance and technical review of CDRLs. Develop program documentation to achieve MS-C.

RAMICS	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	4.400	10.064	31.220	14.229
RDT&E Articles Quantity				2

FY02 ACCOMPLISHMENTS:

Completed ORD and other Acquisition documentation and obtained a successful Milestone (MS) B on 29 July 2002. Awarded System Development & Demonstration (SD&D) contract and initiated Design Phase including Integrated Logistics Support (ILS) and Technical Design Agent (TDA) engineering efforts. Conducted 30mm Cannon risk reduction efforts including Recoil Reduction Tests.

FY03 PLAN: Conduct Rig and MunitionTests. Continue design and development under SD&D contract. Conduct Preliminary Design Review (PDR).

FY04 PLAN: Continue design, development under SD&D contract. Conduct Critical Design Review (CDR).

FY05 PLAN: Complete design, develop, and fabrication of Engineering Development Models (EDMs). Complete Contractor's Testing (CT) and initiate Technical Evaluation (TECHEVAL).

R-1 SHOPPING LIST - Item No.

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Proje	ect Justification								DATE:			
										Februa	ry 2003	
APPROPRIATION/BUDGET ACTIV	VITY		PROGRAM EL	EMENT NUM	BER AND NAM	1E	PROJECT NU	MBER AND N	AME			
RDT&E, N /	BA-5		0604373N A	irborne Mine	Countermea	asures	Q2473/Q906	9 Airborne N	line Neutrali	zation System		
(U) D. OTHER PROGRAM	FUNDING SUMMARY:									To	Total	
<u>Line Item No. & Name</u> AMNS		FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Complete	Cost	
424800 OPN		11.200	3.365	0.000	0.000	4.452	11.475	15.285	17.548	CONT.	CONT.	
AMNS 422500 WPN		0.000	0.720	0.000	0.000	2.845	7.145	3.843	3.918	CONT.	CONT.	

(U) E. ACQUISITION STRATEGY: *

Procurement for eight (8) MH-53E system in FY02-03 will be sole source to Lockheed Martin. Full and open competition is planned for the AMNS (MH-60S) program. In FY06, following a successful DT and MS-C, an LRIP award is planned for two (2) MH-60S systems. FRPDR is planned for FY06.

(U) F. MAJOR PERFORMERS: **

Lockheed Martin Corporation (Ocean, Radar, & Sensor Systems) Syracuse, NY Modification and fabrication of a non-developmental item (NDI) AMNS prototype system and the design, construction, and integration of AMNS equipment into the MH-53E helicopter Actual OTA Award: 12/98 Projected Production Contract Award: 5/03

Naval Surface Warfare Center Coastal Systems Station Dahlgren Division Panama City, FL Serves as the Technical Direction Agent (TDA) for the AMNS program.

AMNS ONLY

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Proje	ct Justification								DATE:			
										Februar	y 2003	
APPROPRIATION/BUDGET ACTIV	/ITY		PROGRAM EL	EMENT NUME	BER AND NAM	E	PROJECT NUM	MBER AND N	AME			
RDT&E, N /	BA-5		0604373N Ai	rborne Mine	Countermea	sures	Q2473/Q9069	Airborne M	line Neutraliz	ation System		
(U) D. OTHER PROGRAM	FUNDING SUMMARY:									To	Total	
Line Item No. & Name		FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Complete	Cost	
RAMICS 422500 WPN		0.000	0.000	0.000	0.000	10.508	19.251	19.605	19.965	CONT	CONT	
RAMICS 0019600 PANMC		0.000	0.000	0.000	0.000	0.222	0.674	0.686	0.698	CONT	CONT	

(U) E. ACQUISITION STRATEGY:

RAMICS: Achieved MS B in July 2002 and awarded SD&D contract in August 2002 based on a full and open competition. Following a successful DT and MS C in FY06, a FY06 LRIP award is planned for two (2) systems for fleet use. Full Rate Production (FRP) is scheduled to start in FY07.

(U) F. MAJOR PERFORMERS:

SD&D Contractor, Northrop Grumman Melbourne, FL - Awarded RAMICS SD&D contract in August 2002 for two RAMICS Engineering Development Models (EDMs) scheduled for delivery in FY05.

Alliant TechSystems (ATK) - Awarded RAMICS Gun Subsystem contract in July 2001 via NSWC Crane. Performed PDR, CDR, and Acceptance Testing in FY02. The contract has option for production units.

NSWC CSS, Panama City, FL - As Technical Design Agent (TDA) for RAMICS; supported successful completion of CTD Phase, prepared draft Request For Proposal (RFP) for the SD&D contract, supported the proposal evaluation, and conducted a series of risk reduction tests in FY00 - FY02 and plans to conduct additional tests.

NSWC Crane, Crane IN - As a Weapon System Development, Crane is responsible for definition and selection of the RAMICS Gun Subsystem. Accordingly, awarded contract to ATK. NAWC Pax, Pautaxant River, MD - As Aircraft(A/C) Integration Agent, coordinates all tests with A/C Integration.

RAMICS ONLY

CLASSIFICATION:

Exhibit R-3 Cost Analysis (pag	ne 1)									February 200	03	
APPROPRIATION/BUDGET ACTIV		PROGRAM E	LEMENT			PROJECT NU	IMBER AND N	IAME		,	<u> </u>	
RDT&E, N / BA-5		0604373N A	irborne Mine	Countermea	asures	Q2473/Q906	9 Airborne I	Mine Neutraliz	zation Syste	em		
Cost Categories	Contract	Performing	Total		FY 03		FY 04		FY 05			
	Method	Activity &	PY s	FY 03	Award	FY 04	Award	FY 05	Award	Cost to	Total	Target Value
	& Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
Hardware/Software Development	C/845	Lockheed Syracuse, NY	3.331								3.331	
Hardware/Software Development	VAR	Various	0.338								0.338	3
Hardware/Software Development	WR	CSS Panama City, FL	0.290	0.383	12/02	0.483	10/03	0.150	10/04		1.306	;
Hardware/Software Development	C/CPIF	Unknown	7.176	6.487	01/03	5.156	10/03	0.965	10/04		19.784	
											0.000)
											0.000)
											0.000)
											0.000)
											0.000)
											0.000)
											0.000	
Subtotal Product Development			11.135	6.870		5.639		1.115		0.000	24.759	

Remarks:

Engineering Services	WR	Various	0.787								0.787	
Engineering Services	WR	CSS Panama City, FL	7.096	0.631	12/02	1.730	10/03	2.153	10/04	0.192	11.802	
Engineering Services	C/CPIF	Unknown	1.949	2.998	01/03	4.533	10/03	2.812	10/04	0.301	12.593	
											0.000	
ILS Functions	WR	CSS Panama City, FL	2.908	0.155	12/02	0.168	10/03	0.123	10/04	0.096	3.450	
ILS Functions	SS/BOA	Lockheed Syracuse, NY	0.227								0.227	
ILS Functions	C/CPIF	Unknown		0.570	01/03	0.747	10/03	0.509	10/04	0.344	2.170	
											0.000	
Subtotal Support			12.967	4.354		7.178		5.597		0.933	31.029	

Remarks: AMNS ONLY

CLASSIFICATION:

	a)							DATE:		.		
Exhibit R-3 Cost Analysis (pa		PROGRAM	EL EMENIT			PROJECT NU	IMPED AND	NAME		February 200	03	
RDT&E, N / BA-5	/11 Y		ELEMENT Airborne Mine	Countarma	euroe			Mine Neutraliz	zation Syste	am.		
Cost Categories	Contract	Performing	Total	Countenne	FY 03	Q2473/Q300	FY 04	IVIIIIe Neutraliz	FY 05	zIII		
out dategories	Method	Activity &	PY s	FY 03	Award	FY 04	Award	FY 05	Award	Cost to	Total	Target Valu
	& Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
evelopmental Test & Evaluation	VAR	Various	0.300							·	0.300	
Developmental Test & Evaluation	WR	CSS Panama City, FL	8.648					5.382	10/04		14.030	
Developmental Test & Evaluation	SS/BOA	Lockheed Syracuse, NY	1.255								1.255	
Developmental Test & Evaluation	C/CPIF	Unknown				1.103	10/03	2.937	10/04		4.040	
Operational Test & Evaluation	WR	COTF Norfolk, VA	1.400							1.068	2.468	
Operational Test & Evaluation	SS/BOA	Lockheed Syracuse, NY	0.331								0.331	
Fest Assets	SS/BOA	Lockheed Syracuse, NY	0.436								0.436	
Subtotal T&E			12.368	0.000		1.103	3	8.319		1.068	22.858	
Program Management Support	VAR	Various	0.649	0.459	10/02	0.579	10/03	0.640	10/04	0.088	2.415	
Fravel	VAIX	Various	0.043		10/02	0.040		0.040	10/04	0.030		
14761			0.001	0.040	10/02	0.040	10,00	0.010	10/01	0.010	0.000	
											0.000	
											0.000	
											0.000	
Subtotal Management			0.743	0.499		0.619		0.680		0.098	2.639	
Remarks:												
Fotal Cost			37.213	11.723		14.539)	15.711		2.099	81.285	
Remarks: AMNS ONLY												

CLASSIFICATION:

EXHIBIT R4, Schedule	Profile																								DATE							
·																											F	ebrua	ary 20	03		
APPROPRIATION/BUDGET														RAND											D NAM							
RDT&E, N /	BA-5	•							0604	373N	Airbo	rne IV	line C	ounte	rmea	sures					Q247	′3/Q9()69 Ai	irborn	ne Min	e Nei	utraliz	ation	Syste	m		
Fiscal Year		20	02			20	03			20	04			200	05			20	06			20	07			20	08			200	09	
	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
Acquisition Milestones					PDI	и (мн	-53E)									ws c △		FRPD	R (MH-	60S)		_	C Fi	L	oloyme	nt						
Prototype Phase	E&MI	D Pha	se (MH	I-53E)					SD&	D Phas	se (MF	1-60S)																				
EDM Contract Award				Contra	act Awa	ard (MI	1-60S)																									
Significant Events						PDR	4	CDR				Contra	ctor Te	esting (MH-60)S)																
EDM Deliveries											<u></u>	\triangle	\triangle																			
Test & Evaluation Milestones Development Test	TE	CHEV	AL (MI	l-53E)					0.55				Т	ECHE	VAL (N	1H-60\$,			0)												
Operational Test									OPE	VAL (N	1H-531	=) 						EVAL ((MH-60	15)												
Production Milestones PROD (MH-53E) FY 03 LRIP (MH-60S) FY 06 FRP (MH-60S) FY 07							\triangle	PROD	C (MH-	53E) S	tart					7	LR	P (MF	+-60S) \$	Start		RP (MF	ł-60S)	Start								
Deliveries											2	3	3								2(LF	RIP)			3	3	1		3	3	3	1

AMNS ONLY

R-1 SHOPPING LIST - Item No. 111

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

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE:	February 20	03
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	LEMENT			PROJECT NU			
RDT&BA-5	0604373N A	irborne Mine	Countermea	asures	Q2473/Q906	9 Airborne N	line Neutrali	zation System
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
E&MD Phase (MH-53E)	1Q-4Q	1Q						
TECHEVAL (MH-53E)	1Q-4Q	1Q						
OPEVAL (MH-53E)		3Q						
EDM Contract Award		2Q						
SD&D Phase (MH-60S)		2Q-4Q	1Q-4Q	1Q-4Q	1Q			
Preliminary Design Review (PDR)		2Q						
PDM (MH-53E)		2Q						
PROD (MH-53E) Start		3Q						
Critical Design Review (CDR)		4Q						
EDM Deliveries			3Q-4Q	1Q				
Contractor Testing (MH-60S)				1Q-2Q				
TECHEVAL (MH-60S)				2Q-3Q				
Milestone C (MS C)				4Q				
OPEVAL (MH-60S)				4Q	1Q			
LRIP (MH-60S) Start				-	1Q			
FRPDR (MH-60S)					3Q			
Low-Rate Initail Production (LRIP) Delivery						1Q		
FRP (MH-60S) Start						1Q		
Initial Operational Capability (IOC)						3Q		
First Deployment						3Q		
							<u> </u>	
							<u> </u>	
							1	
					†		 	
AMNS ONLY					1		1	
	P-1 SHO	PPING LIST	- Itam No	111	1	•	•	

CLASSIFICATION:

								DATE:				
Exhibit R-3 Cost Analysis (pag	ge 1)									February 200	03	
APPROPRIATION/BUDGET ACTIV	ΊΤΥ	PROGRAM E	LEMENT			PROJECT NU	JMBER AND N	NAME				
RDT&E, N / BA-5		0604373N A	irborne Mine	Counterme	asures	Q2473/Q906	9 Airborne I	Mine Neutralia	zation Syste	em		
Cost Categories		Performing	Total		FY 03		FY 04		FY 05			
	Method	Activity &	PY s	FY 03	Award	FY 04	Award		Award	Cost to	Total	Target Value
	& Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
Hardware/Software Development	C/CPIF	Northrop Grumman, FL	0.494	4.207	10/02	12.061	10/03	5.626	10/04	4.364	26.752	
Hardware/Software Development	Various	CSS - Panama City, FL	1.383	8							1.383	
Hardware/Software Development	RCP	Crane - Crane, IN	0.881								0.881	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Product Development			2.758	4.20	7	12.061		5.626		4.364	29.016	

Remarks: This is RAMICS only .

Engineering Services	C/CPIF	Northrop Grumman, FL	0.553	2.533	10/02	8.162	10/03	3.073	10/04	2.676	16.997	
Engineering Services	Varioius	CSS - Panama City, FL	5.024	0.971	10/02	1.314	10/03	0.860	10/04	0.784	8.953	
Engineering Services	Varioius	Crane - Crane, IN	2.200								2.200	
Engineering Services	WR	Various	0.725			2.281	10/03	1.000	10/04	0.720	4.726	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Support			8.502	3.504		11.757		4.933		4.180	32.876	

Remarks: This is RAMICS only .

CLASSIFICATION:

Evhihit P-2 Cast Analysi								DATE:				
Exhibit R-3 Cost Analysi	is (page 2)	Inno				IDD O JEOT NII	MADED AND	10045		February 200	03	
PPROPRIATION/BUDGET			GRAM ELEMENT	C		PROJECT NU			C			
Cost Categories			373N Airborne Mine		FY 03	Q2473/Q906	FY 04	Mine Neutraliz	FY 05	m T	1	
ost Categories	Method & Type	Activity & Location	PY s Cost	FY 03	Award Date	FY 04 Cost	Award Date		Award Date	Cost to Complete	Total Cost	Target Value of Contract
est & Evaluation	C/CPIF	Northrop Grumman,		0.082	10/02	2.248		0.489		0.087		
est & Evaluation	WR	CSS - Panama City,		0.200	10/02	0.100	10/03	0.661	10/04	0.600	2.491	
est & Evaluation	WR	Crane - Crane, IN		0.500	10/02						0.500	
est & Evaluation	Various	Various	0.893	1.000	10/02	4.720	10/03	2.199	10/04	0.893	9.705	
											0.000	
											0.000	
											0.000)
Subtotal T&E			1.823	1.782		7.068		3.349		1.580	15.602	:
							T	T		T	T	T
	Various	Various	1.149		10/02	0.300		0.300	10/04	0.300		
	Various	Various Travel	1.149	0.541 0.030	10/02 10/02	0.300		0.300 0.021	10/04 10/04	0.300	0.203	
	Various										0.203 0.000	
	Various										0.203 0.000 0.000	
Management Support Management Support	Various										0.203 0.000	
	Various						10/03				0.203 0.000 0.000 0.000 0.000	
flanagement Support			0.088	0.030		0.034	10/03	0.021		0.030	0.203 0.000 0.000 0.000 0.000	
Management Support Subtotal Management			0.088	0.030		0.034	10/03	0.021		0.030	0.203 0.000 0.000 0.000 0.000 2.793	
Subtotal Management Remarks: This is RAMICS	only .		1.237	0.030		0.034	10/03	0.021		0.030	0.203 0.000 0.000 0.000 0.000 2.793	
anagement Support Subtotal Management Remarks: This is RAMICS (only .		1.237	0.030		0.034	10/03	0.021		0.030	0.203 0.000 0.000 0.000 0.000 2.793	

CLASSIFICATION:

EXHIBIT R4, Schedule P																									DATE	:	F	ebrua	ry 20	03		
APPROPRIATION/BUDGET A									PROG	RAM I	ELEME	ENT N	UMBE	R AND	NAMI						PRO	JECT N	UMBE	R ANI	D NAM	E						
RDT&E, N /	BA-5	5			ı				06043	373N	Airbo	rne M	ine C	ounte	rmeas	sures					Q247	73/Q90	69 Ai	rborn	e Min	e Neu	traliza	tion S	Syster	n		
Fiscal Year		20	002			20	03			20	04			20	05			20	06			200)7			20	08			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
Acquisition Milestones			MS B							Development and Demonstration (SD&D)											2											
Program Phases	sk Red	duction	(CTD)					Syste	em Dev	+ + + + + + + + + + + + + + + + + + + +																						
Significant Events		ORD		CA			PE	R CI	DR	evelopment and Demonstration (SD&D) EDM (2)																						
EDM Delivery																																
Test & Evaluation Milestones														СТ	1	TE	CHEV	AL,														
Development Test Operational Test																				OPI	EVAL											
Production Milestones																																
LRIP FY06																				<u> </u>	 									_	_	
FRP FY 07																		RIP Sta	art				FRP	Start						 		\geq
Deliveries																						LRIP (2	2)				Prod (4	1)		1	Prod (4	4) 1

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

Exhibit R-4, Schedule Profile (Exhibit R-4, page 34 of 39)

CLASSIFICATION:

Exhibit R-4a, Schedule Detail	DATE: February 2003									
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	EMENT			PROJECT NU	JMBER AND NAME				
RDT&BA-5	0604373N A	irborne Mine	Countermea	asures	Q2473/Q906	9 Airborne N	line Neutraliz	ation System		
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009		
Concept & Technology Development (CTD) Phase	1Q-3Q									
Operational Requirements Document (ORD)	2Q									
Milestone (MS) B	3Q									
System Development and Demonstration (SD&D) Phase	3Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q					
SD&D Contract Award	4Q									
Preliminary Design Review (PDR)		4Q								
Critical Design Review (CDR)			1Q							
Contractor Testing (CT)				2Q						
Engineering Development Model (EDM) Delivery (2 units)				3Q						
Technical Evaluation (TECHEVAL)				4Q	1Q-2Q					
Milestone (MS) C					2Q					
Start Low Rate Initial Production (LRIP)					2Q					
Operational Evaluation (OPEVAL)					4Q	1Q				
Full Rate Production Decision (FRPD)						2Q				
LRIP Production Delivery (2 Units)						2Q				
Initial Operational Capability (IOC)						2Q				
Full Rate Production Start						3Q				
First Production Delivery (4 units)							3Q			
Second Production Delivery (4 units)								3Q		
					+					
					+					
RAMICS ONLY										
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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE:				
									Febru	uary 2003		
APPROPRIATION/BUDGET ACTIVITY PROGRAM ELEMENT NUMBER AND NAME PROJECT NUMBER AND N												
RDT&E, N / BA-5	0604373N A	604373N Airborne Mine Countermeasures Q9179 Surface Navy Into							tegrated Undersea Tactical Technology			
	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	0.000	0.000	3.065	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.065	
RDT&E Articles Qty											0	

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

This congressional add for Surface Navy Inegrated Undersea Tactical Technology (SNIUTT) will be used to develop an AN/AQS-20A sensor training module for the Carrier Vessel - Tactical Support Center (CV-TSC) LAN-based Surface Network Embedded Analysis and Tactical Trainer (SNEATT).

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2002
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	IAME
RDT&E, N / BA -5	0604373N Airborne Mine Countermeasures	Q9179 Surface Navy Inte	egrated Undersea Tactical Technology

B. Accomplishments/Planned Program

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost		3.065	0.000	0.000
RDT&E Articles Quantity				

Congressional Add. - Investigate development of an AN/AQS-20A sensor training module for the Carrier Vessel - Tactical Support Center (CV-TSC) LAN-based Surface Network Embedded Analysis and Tactical Trainer (SNEATT).

R-1 SHOPPING LIST - Item No.

111

CLASSIFICATION:

								DATE:						
Exhibit R-3 Cost Analysis (pa	ge 1)									February 200	03			
APPROPRIATION/BUDGET ACTIV	/ITY	PROGRAM				PROJECT NUMBER AND NAME Q9179 Surface Navy Integrated Undersea Tactical Technology								
RDT&E, N / BA-5		Airborne Mine	Counterme		Q9179 Surf		Integrated Und		tical Technology					
Cost Categories	Contract		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		
Hardway (O. fr			Cost	1		Cost	Date	Cost	Date	Complete	1			
Hardware/Software Development	RCP	CSS Panama City, FL		3.065	01/03						3.065 0.000			
											0.000			
											0.000			
											0.000			
			+								0.000			
											0.000			
											0.000			
											0.000			
Subtotal Product Development			0.000	3.065	5	0.000	n	0.00	n	0.000				
Development Support											0.000			
Software Development											0.000			
Training Development											0.000			
Integrated Logistics Support											0.000			
Configuration Management											0.000			
Technical Data											0.000			
GFE											0.000			
Award Fees											0.000			
Subtotal Support			0.000	0.000)	0.000	0	0.00	0	0.000	0.000			
Remarks:														

CLASSIFICATION:

									DATE:					
Exhibit R-3 Cost Analysis (pag	je 2)										February 200	3		
APPROPRIATION/BUDGET ACTIV	ITY		PROGRAM ELEI				PROJECT NUMBER AND NAME							
RDT&E, N / BA-5			0604373N Airb		Counterme		Q9179 Surface Navy Integrated Undersea Tactical Technology							
Cost Categories	Contract Method & Type	Performing Activity & Location	P		FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date			Target Value of Contract	
Developmental Test & Evaluation	а туре	Location		USI	COSI	Date	Cost	Date	Cost	Date	Complete	0.000	OI COIIIIACI	
Operational Test & Evaluation												0.000		
Live Fire Test & Evaluation												0.000		
Test Assets												0.000		
Tooling												0.000		
GFE												0.000		
Award Fees												0.000		
Subtotal T&E				0.000	0.00	n	0.00	0	0.000)	0.000	0.000		
Contractor Engineering Support												0.000		
Government Engineering Support												0.000		
Program Management Support												0.000		
Travel												0.000		
Labor (Research Personnel)												0.000		
SBIR Assessment												0.000		
Subtotal Management				0.000	0.00	0	0.00	0	0.000)	0.000	0.000		
Remarks:														
Total Cost				0.000	3.06	5	0.00	0	0.000		0.000	3.065		
Remarks:														