CLASSIFICATION:	UNCLASSIFIED						
EXHIBIT R-2, RDT&E BUDGET ITEM JUSTIFICATION						DATE February 2008	
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**			R-1 ITEM NOMENCLATURE **0604756N/SHIP SELF DEFENSE (ENGAGE: HARD KILL)**				
COST (In Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	49.337	72.670	36.238	34.709	8.617	9.414	6.849
0167 / 5in Rolling Airframe Missile	40.394	39.864	26.585	27.438	1.650	1.648	1.692
0173 / NATO Sea Sparrow	4.574	19.847	9.653	7.271	6.967	7.766	5.157
9081 / Phalanx CIWS SEARAM	0.000	6.202	0.000	0.000	0.000	0.000	0.000
9999 / Congressional Add	4.369	6.757	0.000	0.000	0.000	0.000	0.000

A. MISSION DESCRIPTION:

This program element provides funding for the development of systems that fulfill a portion of the third phase of the Ship Self Defense: Engage Hard Kill. Development in this line will focus on hard kill capabilities in which missiles are used to intercept incoming Anti-Ship Cruise Missiles (ASCM). ENGAGEMENT: Missile and system improvements necessary to meet their requirements are being addressed via NATO SEASPARROW Missile System (NSSMS) (0173), 5" Rolling Airframe Missile (RAM) (0167), and Phalanx CIWS SeaRAM (9081/9853/9854/9999). Missile improvements include improved kinematic performance plus advanced seeker and low elevation fusing/warhead capability improvements. System improvements include incorporation of Phalanx detection capability into RAM system (SeaRAM), future concepts studies and self-destructing ammunition, and Future Phalanx Next Generation Improvements. FY07/08 Congressional Add provides funding for Future Phalanx Next Generation Improvements.

B. PROGRAM CHANGE SUMMARY:

Funding:	FY 2007	FY 2008	FY 2009
FY2008 President's Budget	50.693	67.366	36.490
FY2009 President's Budget	49.337	72.670	36.238
Total Adjustments	-1.356	5.304	-0.252
Summary of Adjustments			
Undistributed General Reductions	-1.356	-1.496	-0.252
Congressional Add	0.000	6.800	0.000

CLASSIFICATION:	UNCLASSIFIED						
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION					DATE February 2008		
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604756N/SHIP SELF DEFENSE (ENGAGE: HARD KILL)**				PROJECT NUMBER AND NAME **0167/5in Rolling Airframe Missile**		
COST (In Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost	40.394	39.864	26.585	27.438	1.650	1.648	1.692
RDT&E Articles Qty	0	0	0	0	0	0	0

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The purpose of this program is to develop a surface-to-air self-defense system utilizing a dual mode, passive Radio Frequency/Infrared 5" Rolling Airframe Missile. The baseline system (Block 0) provides a self-defense capability against active radar-guided anti-ship missiles and was developed on an equal cost share basis with the Government of the Federal Republic of Germany. The RAM Block 1 provides a capability against passive anti-ship missiles, very low altitude missiles, and maneuvering missiles through the incorporation of an infrared all-the-way mode seeker and improved fuse. The RAM Block 1 MOD 3 upgrade program, which provides an additional capability against helicopters, aircraft and surface craft, is a joint requirement of the U.S. and Federal Republic of Germany agreed to in a Memorandum of Agreement (MOA) signed by both parties. FY07-10 funding continues development and testing of a Block 2 upgrade to the RAM. This upgrade will allow RAM to regain battlespace lost to emerging, more maneuverable ASCM threats. This system is designed to counter anti-ship cruise missile raids and other threats to provide for ship survivability with accurate terminal guidance, proven lethality, and no shipboard post launch dependence.

CLASSIFICATION:	UNCLASSIFIED		
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION			DATE February 2008
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME	
RDTEN/BA 5	**0604756N/SHIP SELF DEFENSE (ENGAGE: HARD KILL)**	**0167/5in Rolling Airframe Missile**	

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 2007	FY 2008	FY 2009
RAM Block 1 Engineering/Interface Support	0.507	0.000	0.000
RDT&E Articles Quantity	0	0	0

FY07 funds on-going efforts in RAM engineering for emergent issues/obsolescence issues including EDS interface transition.

	FY 2007	FY 2008	FY 2009
Improvement for Missile Deficiency	1.851	0.000	0.000
RDT&E Articles Quantity	0	0	0

FY07 funds improvements of emergent RAM missile/launcher deficiencies.

	FY 2007	FY 2008	FY 2009
Block 2	37.870	39.695	26.412
RDT&E Articles Quantity	0	0	0

FY07-09 funds development of RAM Block 2 upgrade.

	FY 2007	FY 2008	FY 2009
Travel	0.166	0.169	0.173
RDT&E Articles Quantity	0	0	0

FY07-09 funds travel.

C. OTHER PROGRAM FUNDING SUMMARY:

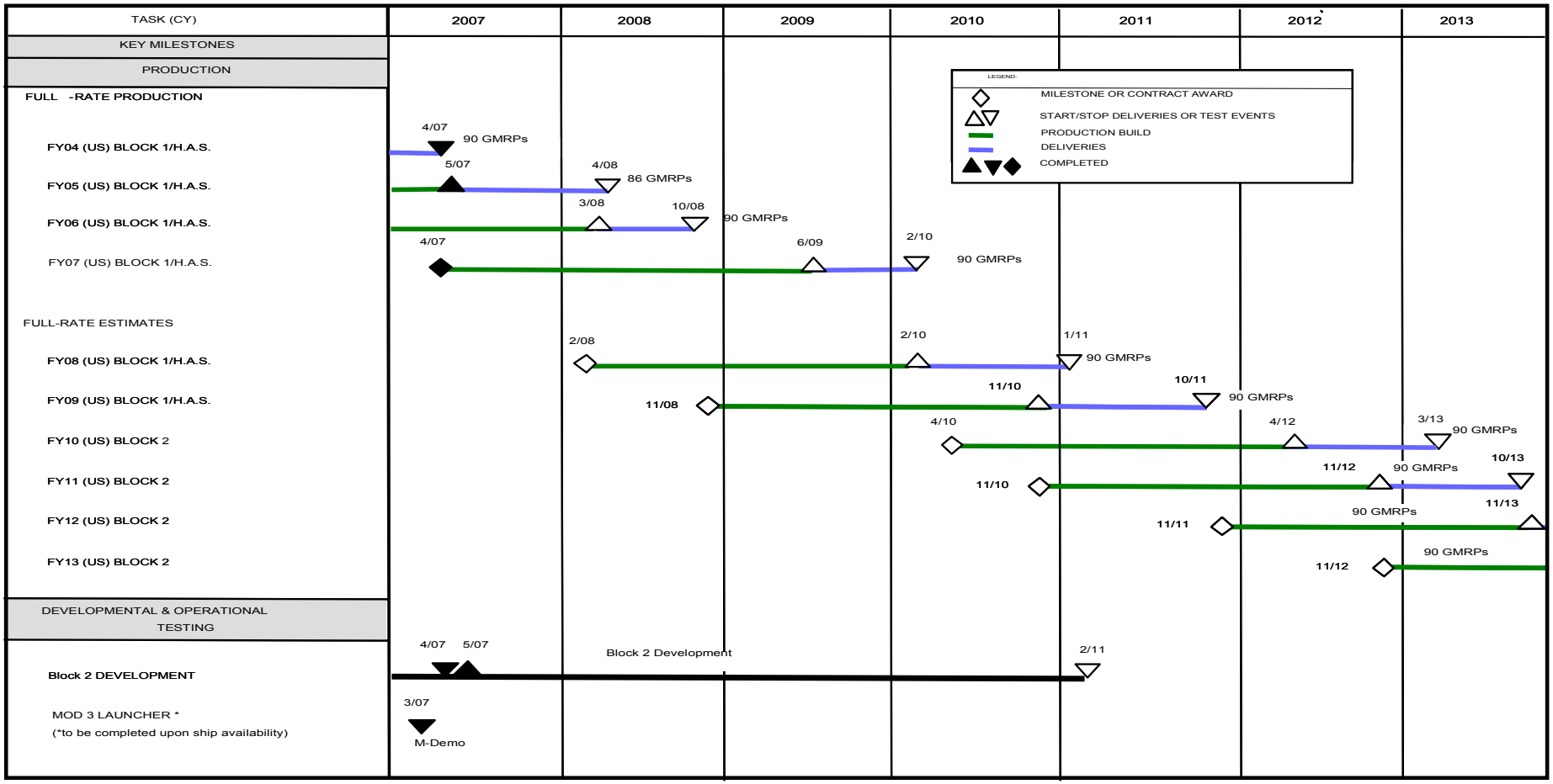
Line Item No. and Name	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
OPN LINE 5238 (RAM)	10.934	3.958	23.492				
WPN LINE 2242 (RAM)	56.630	75.526	74.287				

D. ACQUISITION STRATEGY:

The RAM Program uses directed sole source contracts with Raytheon Systems Company, Tucson, AZ.

CLASSIFICATION:	UNCLASSIFIED											
EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS									DATE February 2008			
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**		PROGRAM ELEMENT NUMBER AND NAME **0604756N/SHIP SELF DEFENSE (ENGAGE: HARD KILL)**					PROJECT NUMBER AND NAME **0167/5in Rolling Airframe Missile**					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY Cost ($000)	FY 2007 Cost ($000)	FY 2007 Award Date	FY 2008 Cost ($000)	FY 2008 Award Date	FY 2009 Cost ($000)	FY 2009 Award Date	Cost to Complete ($000)	Total Cost ($000)	Target Value of Contract
Primary Hardware Development	SS/CPFF	Raytheon/Tucson, Louisville	6.223	1.211	JAN-07	0.000		0.000		0.000	7.434	0.000
Primary Hardware Dev Support	WR	China Lake/CA	0.626	0.640	NOV-06	0.000		0.000		0.000	1.266	0.000
Block 1 Eng/Interface Support	SS/CPFF	Raytheon/Tucson, Louisville	0.000	0.400	JAN-07	0.000		0.000		0.000	0.400	0.000
Block 1 MOD 3 Interface Support	CPFF	JHU/APL	0.874	0.107	NOV-06	0.000		0.000		0.000	0.981	0.000
Block 2 Upgrade	SS/CPAF	Raytheon/Tucson, Louisville	29.595	21.988	APR-07	19.923	JAN-08	14.305	NOV-08	CONT	CONT	0.000
Block 2 Upgrade	WR	China Lake/NRL/Dahlgren	6.241	6.952	NOV-06	6.352	JAN-08	4.787	NOV-08	CONT	CONT	0.000
Block 2 Upgrade	CPFF	JHU/APL	0.700	0.400	NOV-06	0.400	JAN-08	0.200	NOV-08	CONT	CONT	0.000
Subtotal Product Development			**44.259**	**31.698**		**26.675**		**19.292**		**CONT**	**CONT**	**0.000**
Remarks:												
Studies and Analyses			0.000	0.600	JAN-07	0.610	JAN-08	0.630	NOV-08	CONT	CONT	0.000
Subtotal Support Costs			**0.000**	**0.600**		**0.610**		**0.630**		**CONT**	**CONT**	**0.000**
Remarks:												
DT&E/OT&E/FOT&E/	SS/CPAF	Raytheon/Tucson, Louisville	2.284	0.000		0.000		0.000		0.000	2.284	0.000
FOT&E	WR	China Lake/CA, PHD/CA	4.674	0.000		0.000		0.000		0.000	4.674	0.000
Test Support	WR	China Lake/CA, PHD/CA	0.734	7.930	NOV-06	12.410	JAN-08	6.490	NOV-08	CONT	CONT	0.000
Miscellaneous		various	1.421	0.000		0.000		0.000		0.000	1.421	0.000
Subtotal Test and Evaluation			**9.113**	**7.930**		**12.410**		**6.490**		**CONT**	**CONT**	**0.000**
Remarks:												
Travel			0.318	0.166	JAN-07	0.169	JAN-08	0.173	JAN-09	CONT	CONT	0.000
Subtotal Management Services			**0.318**	**0.166**		**0.169**		**0.173**		**CONT**	**CONT**	**0.000**
Remarks:												
Total Cost			**53.690**	**40.394**		**39.864**		**26.585**		**CONT**	**CONT**	**0.000**

CLASSIFICATION:	UNCLASSIFIED	
EXHIBIT R-4, SCHEDULE PROFILE		DATE February 2008
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604756N/SHIP SELF DEFENSE (ENGAGE: HARD KILL)**	PROJECT NUMBER AND NAME **0167/5in Rolling Airframe Missile**



CLASSIFICATION:	UNCLASSIFIED						
EXHIBIT R-4a, SCHEDULE DETAIL					DATE February 2008		
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604756N/SHIP SELF DEFENSE (ENGAGE: HARD KILL)**			PROJECT NUMBER AND NAME **0167/5in Rolling Airframe Missile**			
Schedule Profile	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
FY04 FRP DELIVERIES	1Q-3Q						
FY05 FRP DELIVERIES	3Q-4Q	1Q-3Q					
FY06 FRP DELIVERIES		2Q-4Q	1Q				
FY07 FRP CONTRACT AWARD	3Q						
FY07 FRP DELIVERIES			3Q-4Q	1Q-2Q			
FY08 FRP CONTRACT AWARD		2Q					
FY08 FRP DELIVERIES				2Q-4Q	1Q-2Q		
FY09 FRP CONTRACT AWARD			1Q				
FY09 FRP DELIVERIES					1Q-4Q	1Q	
FY10 FRP CONTRACT AWARD				3Q			
FY10 FRP DELIVERIES						3Q-4Q	1Q-2Q
FY11 FRP CONTRACT AWARD					1Q		
FY11 FRP DELIVERIES							1Q-4Q
FY12 FRP CONTRACT AWARD						1Q	
FY13 FRP CONTRACT AWARD							1Q
BLOCK 2 DEVELOPMENT	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-2Q		
M-DEMO	2Q						

CLASSIFICATION:	UNCLASSIFIED						
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION					DATE February 2008		
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604756N/SHIP SELF DEFENSE (ENGAGE: HARD KILL)**				PROJECT NUMBER AND NAME **0173/NATO Sea Sparrow**		
COST (In Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost	4.574	19.847	9.653	7.271	6.967	7.766	5.157
RDT&E Articles Qty	0	0	0	0	0	0	0

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project encompasses three (3) primary efforts to enhance ship self defense:

1. (U) EVOLVED SEASPARROW MISSILE (ESSM): A cooperative effort among 10 NATO SEASPARROW Nations and the U.S., to improve the capability of the SEASPARROW Missile to counter the low altitude, highly maneuverable Anti-Ship Cruise Missile threat. The program consists of evolving the SEASPARROW Missile through the development of a new rocket motor with tail control; thrust vector control and ordnance (warhead) upgrade; modifications to the MK 41 VLS to fire from a single cell with 4 ESSM (QuadPack); and modifications to the NATO SEASPARROW Missile System (NSSMS) to provide ESSM capability.

2. (U) NATO SEASPARROW - MK 91 Rearchitecture/SDSMS: The MK 91 Rearchitecture Program integrates NSSMS into the Ship Self Defense System (SSDS) Architecture to provide ship missile defense utilizing an open architected system. This effort consists of combining the Firing Officer Console and Radar Set Console functionality into a single Advanced Display System Console (AN/UYQ-70); modifying the Signal Data Processor and eliminating the MK 157 Computer Signal Data Converter and System Evaluation and Trainer, and redistributing this functionality within SSDS compatible microprocessors. This approach will eliminate the analog, point-to-point architecture, limited input-output channel and computer processing reserve deficiencies resident in the existing MK 57 NSSMS, and is required for ESSM. This modification also allows for full exploitation of the capabilities of the future ESSM and provides significant reductions (over 50%) in NSSMS cost of ownership and manning requirements.

3. (U) Amphibious Self-Defense AAW Probability of Raid Annihilation (PRA) Improvement- The Amphibious Self-Defense AAW PRA Improvement program provides the L-Class Amphibious ships (LHA, LHD, LSD) with an improved PRA through full integration of the weapons and sensors of the combat system. This improvement introduces the Multi-Sensor Integration (MSI) unit that receives fire control and sensor data from ship radars, fuses them into an integrated radar picture and provides composite track reports to the combat system. Mk 15 CIWS is upgraded to a Block 2 configuration with a much improved search and track radar. No longer stand-alone, CIWS will be integrated into the sensor suite and provide fire control quality search and track data to the combat system via the MSI unit. As a fallback measure, CIWS Blk 2 can also report directly to the MK 23 Target Acquisition Radar Threat Evaluation Weapons Assignment (TEWA) providing fire control quality track data at a very fast update rate for targets to the horizon. Target Acquisition System (TAS) itself will receive an upgrade of its OSM unit to accommodate direct inputs from both the MSI and CIWS units. This improvement program provides full integration of the combat system and will meet or exceed threat detection and designation requirements through 2020. Use of the MSI will provide stable track data through a composite track picture reported to the combat system. Without this improvement, PRA of the L-Class ships would continue to degrade to an unsatisfactory point in the mid term.

CLASSIFICATION:	UNCLASSIFIED	
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION		DATE February 2008
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604756N/SHIP SELF DEFENSE (ENGAGE: HARD KILL)**	PROJECT NUMBER AND NAME **0173/NATO Sea Sparrow**

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 2007	FY 2008	FY 2009
Accomplishments/Effort/Subtotal Cost	3.105	8.084	8.655
RDT&E Articles Quantity	0	0	0

Continued AEGIS S Band development. Conducted U.S. Unique DT-IIC/OT-IIC firings on SDTS and TECHEVAL/OPEVAL (DT-IIE/OT-IID) on AEGIS platforms.
Correct engineering deficiencies identified as a result of TECHEVAL / OPEVAL. Provides funding for the ESSM Surface to Surface /Home on Helo (S2S/HOH) firings and firings associated with DT/OT on Aegis/DDG platforms.
This provides for the U.S. share of Cooperative efforts associated with ESSM engineering studies and other development Initiatives.

	FY 2007	FY 2008	FY 2009
Accomplishments/Effort/Subtotal Cost	0.500	0.000	0.000
RDT&E Articles Quantity	0	0	0

Development: Utilizing existing technology and the Mk 29 Trainable Launcher, develop a program for the adaptation and U.S. certification of the launching system and make available for U.S. Navy deployment. Provide for the development to accommodate Evolved SEASPARROW Missiles which will provide full dimensional protection against the evolutionary threat of ASCMs on non-AEGIS platforms.

	FY 2007	FY 2008	FY 2009
Accomplishments/Effort/Subtotal Cost	0.000	10.767	0.000
RDT&E Articles Quantity	0	0	0

FY08 Amphibious Self-Defense AAW improvement for LHD 1-6 and LHA class ships Leveraging the MK 15 CIWS Blk 2 upgrade program, the MSIT unit developed for the Self-Defense Test Ship and the RAM MOD 3 Launcher upgrade program, L-Class PRA will be greatly enhanced. Improvements to the MK 23 TAS made to support and integrate the RAM Mod 3 Launcher will be leveraged to integrate the MSI unit and the CIWS Blk 2 GFCS. The MSI will have the greatest positive impact on PRA as composite track data will be developed and provided to the combat system. The short range air radar picture will be significantly improved through the use of the CIWS upgraded search and track radar providing track data at a very fast update rate.

	FY 2007	FY 2008	FY 2009
Accomplishments/Effort/Subtotal Cost	0.969	0.996	0.998
RDT&E Articles Quantity	0	0	0

FY07-09 Provides funding for the Combat System Integration Technical Direction Agent (TDA) who will provide engineering support for combat system performance and risk mitigation. The TDA will leverage it's technical expertise & leadership to cover a broad range of activities such as defining near-term and future requirements for current systems and future upgrades, maintain system performance models to evaluate system improvements, threat changes and operational environment conditions, verify models and simulations to promote program success through application of rigorous and disciplined systems engineering principles and practices in a consistent manner across system elements over the program life cycle, make prudent use of authoritative technical expertise for advice and independent review, identify a range of technically acceptable alternatives to resolve engineering issues, assist in development of T&E planning, and continue to maintain NSPO essential research and engineering capabilities and corporate

memory.

C. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. and Name	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
WPN Line 2307 (ESSM)	99.143	82.712	85.061				
OPN Line 5237 (NATO SEA SPARROW)	6.560	28.528	12.270				

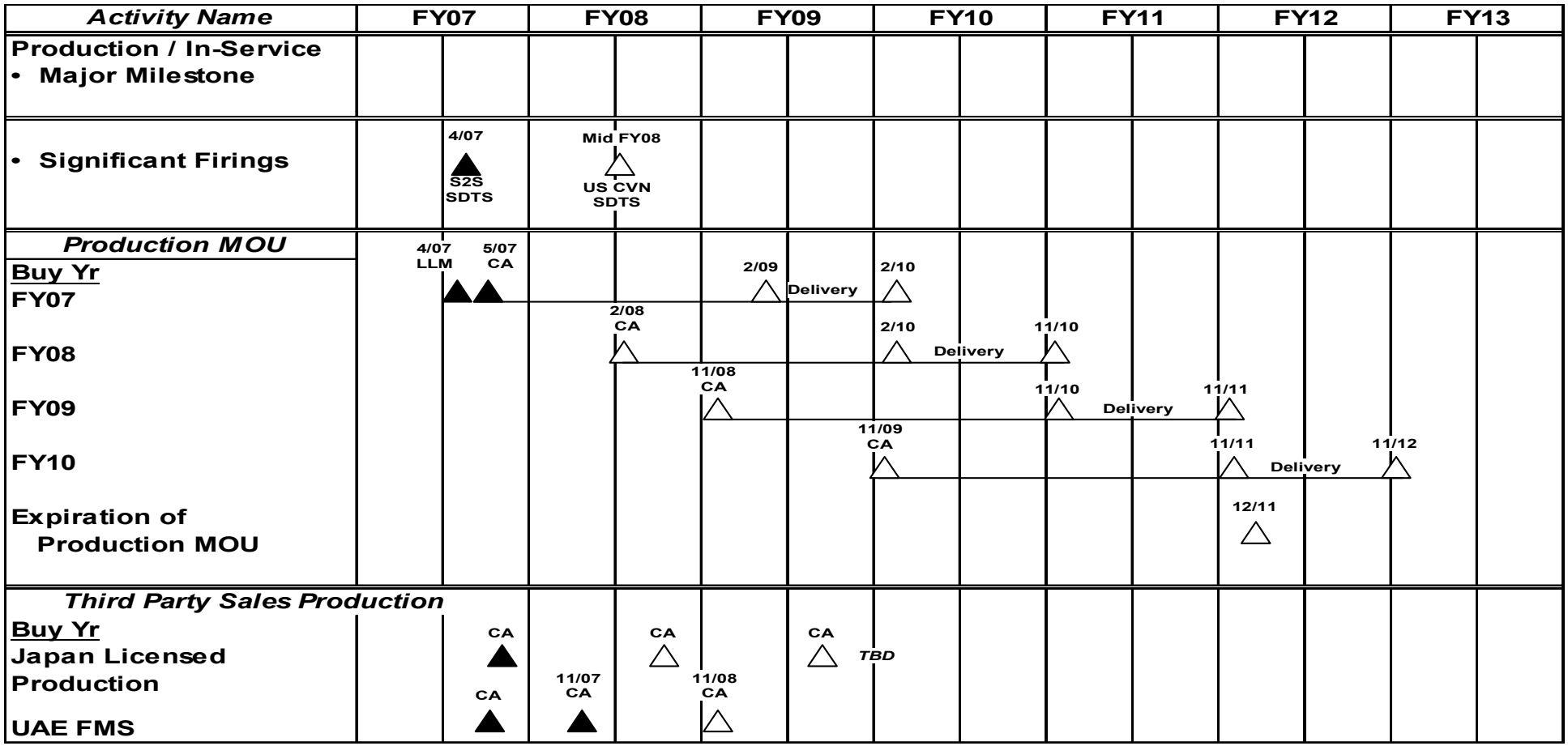
D. ACQUISITION STRATEGY:

ESSM is a directed sole source contract to Raytheon Missile Systems Company. The MK 29 ESSM Launcher Upgrade and REARC/SSDS Intergration effort was a directed sole source contract to Raytheon Company (IDS).

CLASSIFICATION:		UNCLASSIFIED										
EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS									DATE February 2008			
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**		PROGRAM ELEMENT NUMBER AND NAME **0604756N/SHIP SELF DEFENSE (ENGAGE: HARD KILL)**					PROJECT NUMBER AND NAME **0173/NATO Sea Sparrow**					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY Cost ($000)	FY 2007 Cost ($000)	FY 2007 Award Date	FY 2008 Cost ($000)	FY 2008 Award Date	FY 2009 Cost ($000)	FY 2009 Award Date	Cost to Complete ($000)	Total Cost ($000)	Target Value of Contract
ESSM-Primary Hardware Development	LC/CPAF	Raytheon	143.356	0.000		0.000		0.000			143.356	0.000
	Allot	TDW	3.746	0.000		0.000		0.000		0.000	3.746	3.746
Amphin Self-defense PRA Imp		Various	0.000	0.000		10.767	JAN-08	0.000		0.000	10.767	11.200
Ancillary Hardware Development	CPAF	Lockheed/UDLP	46.706	0.000		0.000		0.000		0.000	46.706	46.706
Systems Engineering	Various	Various	22.622	0.000		0.000		0.000		0.000	22.622	22.622
MK 29/ESSM Launcher upgrade	LC/CPAF	Raytheon SYS	8.521	0.000		0.000		0.000		0.000	8.521	8.521
NATO-Primary Hdwe Dev	CPFF	Raytheon SYS	30.627	0.000		0.000		0.000		0.000	30.627	30.627
Software development/Test	CPFF	Raytheon SYS	6.270	1.421	JAN-07	1.418	JAN-08	1.439	OCT-09	CONT	CONT	0.000
Systems Engineering/Firing Spt		Various	5.306	0.000		0.000		0.000		0.000	5.306	0.000
SSDS Integrtion	CPFF	Raytheon SYS	12.985	0.000		0.000		0.000		0.000	12.985	12.985
Subtotal Product Development			**280.139**	**1.421**		**12.185**		**1.439**		**CONT**	**CONT**	**136.407**
Remarks:												
Integrated Logistics Support	WR	NSWC PHD	3.568	0.000		0.000		0.000		0.000	3.568	0.000
Engr Support	WR	Various	4.207	0.000		0.000		0.000		0.000	4.207	0.000
MK 29/ESSM Launcher Support	WR	Dahlgren/PHD	0.375	0.000		0.000		0.000		0.000	0.375	0.000
Engr Support	WR	Various	0.195	0.000		0.000		0.000		0.000	0.195	0.195
NATO-MK 91/SSDS Integ	WR	Dahlgren/PHD	0.834	0.000		0.000		0.000		0.000	0.834	0.000
Engr Support	WR	Various	6.364	0.000		0.000		0.000		0.000	6.364	0.000
Engr Support	WR	NSWC PHD	0.380	0.185	OCT-06	0.285	OCT-07	0.285	OCT-08	CONT	CONT	0.000
Subtotal Support Costs			**15.923**	**0.185**		**0.285**		**0.285**		**CONT**	**CONT**	**0.195**
Remarks:												
Developmental Test & Evaluation	WR	NAWC CL	13.653	0.000		0.000		0.000		0.000	13.653	0.000
OPEVAL/TECHEVAL/Test Firings	WR	Various (Corona, IHD, Dalhgren, NSWC, PHD)	10.271	1.607	JAN-07	1.728	JAN-08	1.718	JAN-09	CONT	CONT	0.000
Developmental Test & Evaluation	CPFF	APL	1.743	0.261	DEC-06	0.000		0.000		0.000	2.004	2.010
ESSM Carrier T&E	Various	Various	0.000	0.000		4.179	JAN-08	4.722	DEC-08	CONT	CONT	0.000
Developmentall Test & Evaluation	WR	Dalhgren	0.418	0.000		0.000		0.000		0.418	0.836	0.836
Subtotal Test and Evaluation			**26.085**	**1.868**		**5.907**		**6.440**		**CONT**	**CONT**	**2.846**

CLASSIFICATION:	UNCLASSIFIED											
EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS									DATE February 2008			
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**		PROGRAM ELEMENT NUMBER AND NAME **0604756N/SHIP SELF DEFENSE (ENGAGE: HARD KILL)**					PROJECT NUMBER AND NAME **0173/NATO Sea Sparrow**					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY Cost ($000)	FY 2007 Cost ($000)	FY 2007 Award Date	FY 2008 Cost ($000)	FY 2008 Award Date	FY 2009 Cost ($000)	FY 2009 Award Date	Cost to Complete ($000)	Total Cost ($000)	Target Value of Contract
Remarks:												
ESSM-ENGR SPT	WR	Various	4.913	0.000		0.000		0.000		0.000	4.913	0.000
ESSM-PM SPT	WR	Various	0.498	0.000		0.000		0.000		0.000	0.498	0.498
ESSM-Labor	Allot/WR		8.442	0.870	OCT-06	1.100	NOV-07	1.119	OCT-08	CONT	CONT	0.000
ESSM-Travel	Allot/WR		2.022	0.160	OCT-06	0.200	NOV-07	0.200	OCT-08	CONT	CONT	0.000
ESSM-Misc	Various	Various	2.065	0.000		0.000		0.000		0.000	2.065	2.065
NATO Travel/Misc	0	Various	1.761	0.070	OCT-06	0.170	NOV-07	0.170	OCT-08	CONT	CONT	0.000
Subtotal Management Services			**19.701**	**1.100**		**1.470**		**1.489**		**CONT**	**CONT**	**2.563**
Remarks:												
Total Cost			**341.848**	**4.574**		**19.847**		**9.653**		**CONT**	**CONT**	**142.011**

CLASSIFICATION:	UNCLASSIFIED	
EXHIBIT R-4, SCHEDULE PROFILE		DATE February 2008
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604756N/SHIP SELF DEFENSE (ENGAGE: HARD KILL)**	PROJECT NUMBER AND NAME **0173/NATO Sea Sparrow**



CLASSIFICATION:	UNCLASSIFIED						
EXHIBIT R-4a, SCHEDULE DETAIL					DATE February 2008		
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604756N/SHIP SELF DEFENSE (ENGAGE: HARD KILL)**			PROJECT NUMBER AND NAME **0173/NATO Sea Sparrow**			
Schedule Profile	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
MK 29/ESSM Launcher SDTS	1Q						
Essm S2S/HOH Firing	2Q						
Test Firing	2Q						
MK 29/ESSM Launcher CVN Test Event	2Q						
MK 29/ESSM Launcher SDTS		2Q					
AEGIS CG DT/OT		2Q	2Q				
SDTS Firings				2Q			
DDX Test Support					2Q		
FY 07 Procurement	1Q						
FY 08 Procurement		2Q					
FY 09 Procurement			1Q				
FY 03/04 Delivery							
FY 05 Delivery	1Q-4Q						
FY 06 Delivery		1Q-4Q					
FY 07 Delivery			1Q-4Q				
FY 08 Delivery				1Q-4Q			
FY 09 Delivery					1Q-4Q		

CLASSIFICATION:	UNCLASSIFIED						
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION					DATE February 2008		
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604756N/SHIP SELF DEFENSE (ENGAGE: HARD KILL)**				PROJECT NUMBER AND NAME **9081/Phalanx CIWS SEARAM**		
COST (In Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost	0.000	6.202	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Qty	0	0	0	0	0	0	0

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The purpose of this ECP effort is to combine the PHALANX CIWS radar with the Rolling Airframe Missile (RAM) Block 1/2 Missile System. The overall SeaRAM strategy is to field a low-risk-development cost system utilizing the proven capabilities and infrastructure of the RAM and PHALANX CIWS systems. This U.S. Navy SeaRAM development leverages the successful demonstration by the United Kingdom of an industry prototype system aboard the HMS York. The SeaRAM ORDALT ECP will provide improved detection and performance capabilities in a stand-alone self-defense system that will defeat the near-term, stressing Anti-Ship Cruise Missile (ASCM) threats. FY08 funding is for combat system integration and testing of the Block 1B Baseline 2 (radar upgrade) into the L-Class CS suite.

CLASSIFICATION:	UNCLASSIFIED	
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION		DATE February 2008
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604756N/SHIP SELF DEFENSE (ENGAGE: HARD KILL)**	PROJECT NUMBER AND NAME **9081/Phalanx CIWS SEARAM**

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 2007	FY 2008	FY 2009
SeaRAM Development/Phalanx Improvements	0.000	6.202	0.000
RDT&E Articles Quantity	0	0	0

FY08 funding is for combat system integration and testing of the Phalanx CIWS Block 1B Baseline 2 (radar upgrade) into the L-Class CS suite.

C. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. and Name	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
OPN LINE 5238 (RAM)	10.934	3.958	23.492				
WPN LINE 4205 (CIWS)	150.547	181.082	167.967				

D. ACQUISITION STRATEGY:

Phalanx CIWS programs use directed sole source contracts with Raytheon Systems Company, Tucson, AZ.

CLASSIFICATION:	UNCLASSIFIED		
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION			DATE February 2008
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604756N/SHIP SELF DEFENSE (ENGAGE: HARD KILL)**	PROJECT NUMBER AND NAME **9999/Congressional Add**	

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 2007	FY 2008	FY 2009
9853C/Future Phalanx Next Generation Improvements	4.369	6.757	0.000
RDT&E Articles Quantity	0	0	0

FY07/FY08 Congressional Adds provide funding for Future Phalanx Next Generation Improvements.