

EXHIBIT R-2, RDT&E Budget Item Justification						DATE: February 2008	
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY /				R-1 ITEM NOMENCLATURE 0604218N Air/Ocean Equipment Engineering			
		BA-5					
COST (\$ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	5.431	5.054	5.750	6.167	6.789	7.110	6.728
2345 Fleet METOC Equipment	3.853	3.438	4.078	4.478	5.066	5.351	4.935
2346 METOC Sensor Engineering	1.578	1.616	1.672	1.689	1.723	1.759	1.793
Quantity of RDT&E Articles							
<p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Air/Ocean Equipment Engineering (AOEE) Program Element provides future mission capabilities to support naval combat forces. This program engineers and developmentally tests organic and remote sensors, communication interfaces, and processing and display devices. These equipments are engineered to measure, ingest, store, process, distribute and display conditions of the physical environment that are essential to the optimum employment and performance of naval warfare systems. AOEE also engineers capabilities for shipboard and shore-based tactical systems. A major thrust area for the AOEE program is to provide the engineering development of specialized equipment and measurement capabilities that are intended to monitor specific conditions of the physical environment in hostile and remote areas. With such capabilities, the war fighters' situational awareness of the operational effects of the physical environment are made more certain.</p> <p>This budget reflects a reorganization by program/project to better support the acquisition process.</p>							

EXHIBIT R-2, RDT&E Budget Item Justification		DATE: February 2008	
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA 5		R-1 ITEM NOMENCLATURE 0604218N Air/Ocean Equipment Engineering	
(U) C. PROGRAM CHANGE SUMMARY:			
(U) Funding:	FY 2007	FY 2008	FY 2009
FY08/09 President's Budget	5.557	5.162	5.784
FY09 President's Submit	5.431	5.054	5.750
Total Adjustments	(0.126)	0.108	(0.034)
Summary of Adjustments			
Small Business Innovative Research (SBIR) Tax	(0.126)	(0.075)	0.000
Misc. Congressional Adjustments	0.000	(0.033)	0.000
Misc. Adjustments	0.000	0.000	(0.034)
Subtotal	(0.126)	(0.108)	(0.034)
 (U) Schedule: This budget reflects a reorganization by program/project to better support the acquisition process. Schedules are now presented separately for each program/project.			
 (U) Technical: Not Applicable			

EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604218N Air/Ocean Equipment Engineering			PROJECT NUMBER AND NAME 2345 Fleet METOC Equipment			
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost		3.853	3.438	4.078	4.478	5.066	5.351	4.935
RDT&E Articles Qty								
<p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides for the engineering and manufacturing development of sensors, communication interfaces, and processing and display equipment. This equipment is designed to provide future mission capabilities for warfighters to measure, ingest, store, process, distribute and display meteorological and oceanographic (METOC) parameters and derived products. Major emphasis areas include the Tactical Environmental Support System (TESS), and the associated Navy Integrated Tactical Environmental Subsystem (NITES), NITES Next Generation (Next), the Marine Corps Meteorological Mobile Facility Replacement (METMF(R)), METMF(R) Next Generation (NEXGEN), the Environmental Satellite Receiver Processor (ESRP) (comprised of AN/SMQ-11 (sea and shore configuration) and AN/FMQ-17 (shore configuration)) satellite data receiver/recorder. This project also exploits new government off-the-shelf (GOTS)/commercial off-the-shelf (COTS) technologies, tactical sensors and web enablement for the Navy's computer-based tactical shipboard and shore capability used to predict and assess the operational effects of the physical environment on the performance of platforms, weapons and sensor systems. This project includes development of warfare specific mission planning modules to support unmanned systems with integration of data from environmental and tactical sensor systems, model forecast information and Geospatial Information & Services Databases. This project also supports development of autonomous environmental sensing systems for situational awareness and tactical decision aid/mission planner support, as well as iridium and advanced satellite communication integration in meteorological and oceanographic (METOC) sensor, vehicle control and mission planning systems that will be required to achieve full reach back capability.</p> <p>This budget reflects a reorganization by program/project to better support the acquisition process.</p>								

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2008
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604218N Air Ocean Equipment Engineering	PROJECT NUMBER AND NAME 2345 Fleet METOC Equipment

(U) B. Accomplishments/Planned Program

Meteorological and Oceanographic (METOC) Future Mission Capabilities (FMC)	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost		0.445	1.079
RDT&E Articles Quantity			

FY08 - Begin technical evaluation and selection of autonomous ocean and atmospheric sensor packages; perform sensor package capability demonstration testing. Efforts formerly located in "Fleet System Engineering/TDA/Mission Planning." Develop Hazardous Weather Detection and Display Capability (HWDDC), and Tactical Environmental Processor (TEP) data collection and fusion systems.

FY09 - Continuation of FY08 efforts. Conduct system development and demonstration for environmental equipment to include associated engineering and support efforts. Continue development advanced tools and techniques for METOC asset allocation, METOC decision support applications and interfaces to tactical and strategic decision aids. Develop the Hazardous Weather Detection and Display Capability (HWDDC), Tactical Environmental Processor (TEP), and Littoral Battlespace Sensors - Unmanned Undersea Vehicle (LBS-UUV) data collection and fusion systems.

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2008
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604218N Air Ocean Equipment Engineering	PROJECT NUMBER AND NAME 2345 Fleet METOC Equipment

(U) B. Accomplishments/Planned Program

Littoral Battlespace Sensing, Fusion and Integration (LBSF&I)	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost		0.117	0.100
RDT&E Articles Quantity			

FY08 - Develop unmanned system mission modules for forward deployed oceanographers and system operators to improve deployment effectiveness. Begin technical evaluation and selection of autonomous ocean and atmospheric sensor packages; perform sensor package capability demonstration testing. Efforts formerly located in "Fleet System Engineering/TDA/Mission Planning." Develop Littoral Battlespace Sensors - Unmanned Undersea Vehicle (LBS-UUV) data collection and fusion systems.

FY09 - Complete sensor based atmospheric sensing Analysis of Alternatives (AoA) for both stationary and expeditionary applications (including application of UAV's (Unmanned Airborne Vehicle's) and airborne sensors). Complete selection of potential solutions. Complete related testing. Begin PLCCE (Program Life Cycle Cost Estimate). Develop system integration requirements, system performance specifications, and begin CDD (Capabilities Development Document) development. Begin interoperability and system security studies and identify related requirements. Complete UUV prototype development, including the launch and recovery system, the mission planning and tracking and telemetry system, the sensor system, and the shipping/storage system. Begin definition of the LBSF&I UUV Spiral 2 system. Begin development of the Increment 2 system. Conduct studies as required.

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2008
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604218N Air Ocean Equipment Engineering	PROJECT NUMBER AND NAME 2345 Fleet METOC Equipment

(U) B. Accomplishments/Planned Program

USMC Meteorological Mobile Facility (Replacement) Next Generation (METMF(R) NEXGEN)	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	3.554	2.374	0.600
RDT&E Articles Quantity			

FY07 - Conducted System Development (Integration) phase activities of METMF(R) NEXGEN (formerly METMF(R) NG) prototypes to include: Systems Requirement Review (SRR), Systems Functional Review (SFR), Preliminary Design Review (PDR), Critical Design Review, Design Readiness Review (DRR). Began System Development (Demonstration) phase activities. Funds realigned from the Future Meteorological and Oceanographic (METOC) Capabilities program in execution.

FY08 - Conduct verification & validation testing of METMF(R) NEXGEN (formerly METMF(R) NG) prototypes and prepare for delivery. Funds realigned from the Future Meteorological and Oceanographic (METOC) Capabilities program. Efforts formerly located in "USMC Acquisition."

FY09 - Conduct Engineering Change Proposals (ECPs) to the METMF(R) NEXGEN (formerly METMF(R) NG) prototype systems.

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2008
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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604218N Air Ocean Equipment Engineering	PROJECT NUMBER AND NAME 2345 Fleet METOC Equipment
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(U) B. Accomplishments/Planned Program

Naval Integrated Tactical Environmental System Next Generation (NITES-Next)	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost		0.197	1.982
RDT&E Articles Quantity			

FY08 - Engineering for Naval Integrated Tactical Environmental System Next Generation (NITES-Next) (formerly NITES NG). Efforts formerly located in "Fleet System Engineering/TDA/Mission Planning."

FY09 - Software test and integration (developed in PE 0603207N, project 2343 Tactical METOC Applications) related to equipment and infrastructure in support of system engineering activities for Naval Integrated Tactical Environmental System Next Generation (NITES-Next). Efforts include extensive integration and test efforts on infrastructure for developmental test and evaluation (DT&E) required in preparation for Milestone decision for NITES-Next. Efforts formerly located in "Fleet System Engineering/TDA/Mission Planning."

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2008
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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604218N Air Ocean Equipment Engineering	PROJECT NUMBER AND NAME 2345 Fleet METOC Equipment
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(U) B. Accomplishments/Planned Program

Environmental Satellite Receiver Processor (ESRP)	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	0.299	0.305	0.317
RDT&E Articles Quantity			

FY07 - Formerly "Off-the-shelf Technology/METOC in IT Enterprise Environment".

* Continued and completed software integration of new satellite sensors for Geostationary Operational Environmental Satellites (GOES) Low Rate Information Transmission (LRIT) and Alternative Study for the Next Generation mobile Met Sensors.

* Continued software integration of new Satellite Sensors for Polar Orbiting Environmental Satellite (POES) and completed technical support and analysis to determine impacts of future satellite telemetries on the ESRP systems.

FY08 - Continue software integration of new Satellite Sensors and Polar Orbiting Environmental Satellite (POES).

* Commence and complete development and integration to provide new functionality and capability to the ESRP System and provided technical support and analysis to determine impacts of future satellite telemetries on the ESRP systems.

FY09 - Continue and complete software integration of new Satellite Sensors for Polar Orbiting Environmental Satellite (POES).

* Commence Software development in support of Polar Orbiting Environmental Satellite (POES) National Preparatory Project (NPP) for Environmental Satellite Receiver Processors (ESRP).

* Commence and complete engineering research to determine prospective candidate technologies and/or products to augment the capabilities of ESRP and provided technical support and analysis to determine impacts of future satellite telemetries on the ESRP systems.

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2008	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5			PROGRAM ELEMENT NUMBER AND NAME 0604218N Air Ocean Equipment Engineering			PROJECT NUMBER AND NAME 2345 Fleet METOC Equipment		
(U) C. OTHER PROGRAM FUNDING SUMMARY:								
<u>Line Item No. & Name</u>		<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>
OPN 4226 METEOROLOGICAL EQUIPMENT		21.387	11.903	24.742	37.674	38.259	41.591	38.879
Related RDT&E: PE 0603207N, Air/Ocean Tactical Applications								
(U) D. ACQUISITION STRATEGY:								
Acquisition, management and contracting strategies are to support engineering and manufacturing development by providing funds to Naval Research Laboratories (NRL) and miscellaneous contractors, with management oversight by the Program Executive Officer for Command, Control, Communications, Computers and Intelligence (PEO C4I).								
(U) E. MAJOR PERFORMERS:								
N/A								
(U) F. METRICS:								
Earned Value Management (EVM) is used for metrics reporting and risk management.								

Exhibit R-3 Cost Analysis (page 2)										DATE: February 2008		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604218N Air Ocean Equipment Engineering			2345 Fleet METOC Equipment						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 07 Cost	FY 07 Award Date	FY 08 Cost	FY 08 Award Date	FY 09 Cost	FY 09 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	PD	OPTEVFOR	0.394		N/A		N/A		N/A	CONT	CONT	
Subtotal Developmental T & E			0.394	0.000	N/A	0.000	N/A	0.000	N/A	CONT	CONT	
Remarks:												
Management												
Subtotal Management			0.000	0.000		0.000		0.000				
Remarks:												
Total Cost			30.605	3.853	N/A	3.438	N/A	4.078	N/A	CONT	CONT	

EXHIBIT R4, Schedule Profile																							DATE: February 2008													
APPROPRIATION/BUDGET ACTIVITY					PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME																			
RDT&E, N / BA-5					0604218N Air Ocean Equipment Engineering												2345 Fleet METOC Equipment - Program: Meteorological and Oceanographic (METOC) Future Mission Capabilities (FMC)																			
Fiscal Year	2007				2008				2009				2010				2011				2012				2013				2014							
	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				
Ocean Sensors																																				
Ocean Sensors TTS																																				
Atmospheric Sensors																																				

EXHIBIT R4, Schedule Profile																DATE: February 2008																
APPROPRIATION/BUDGET ACTIVITY				PROGRAM ELEMENT NUMBER AND NAME								PROJECT NUMBER AND NAME																				
RDT&E, N / BA-5				0604218N Air Ocean Equipment Engineering								2345 Fleet METOC Equipment - Program: USMC Meteorological Mobile Facility (Replacement) Next Generation (METMF(R) NEXGEN)																				
Fiscal Year	2007				2008				2009				2010				2011				2012				2013				2014			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Contract Award or Events	Smith's Detection																															
	Base 2Yr																															
					Opt 1																											
					Opt 2																											
					Contract Mod																											
Development																																

EXHIBIT R4, Schedule Profile																	DATE: February 2008															
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5				PROGRAM ELEMENT NUMBER AND NAME 0604218N Air Ocean Equipment Engineering								PROJECT NUMBER AND NAME 2345 Fleet METOC Equipment - Program: Naval Integrated Tactical Environmental System Next																				
Fiscal Year	2007				2008				2009				2010				2011				2012				2013				2014			
	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
Infrastructure Engineering & Development									Arch/Design Engineering																							
Development and Test (DT&E) of Netcentric Enterprise Hardware Solutions in NITES-Next									DT&E								Net-centric METOC integration								NITES-next SOA infrastructure							

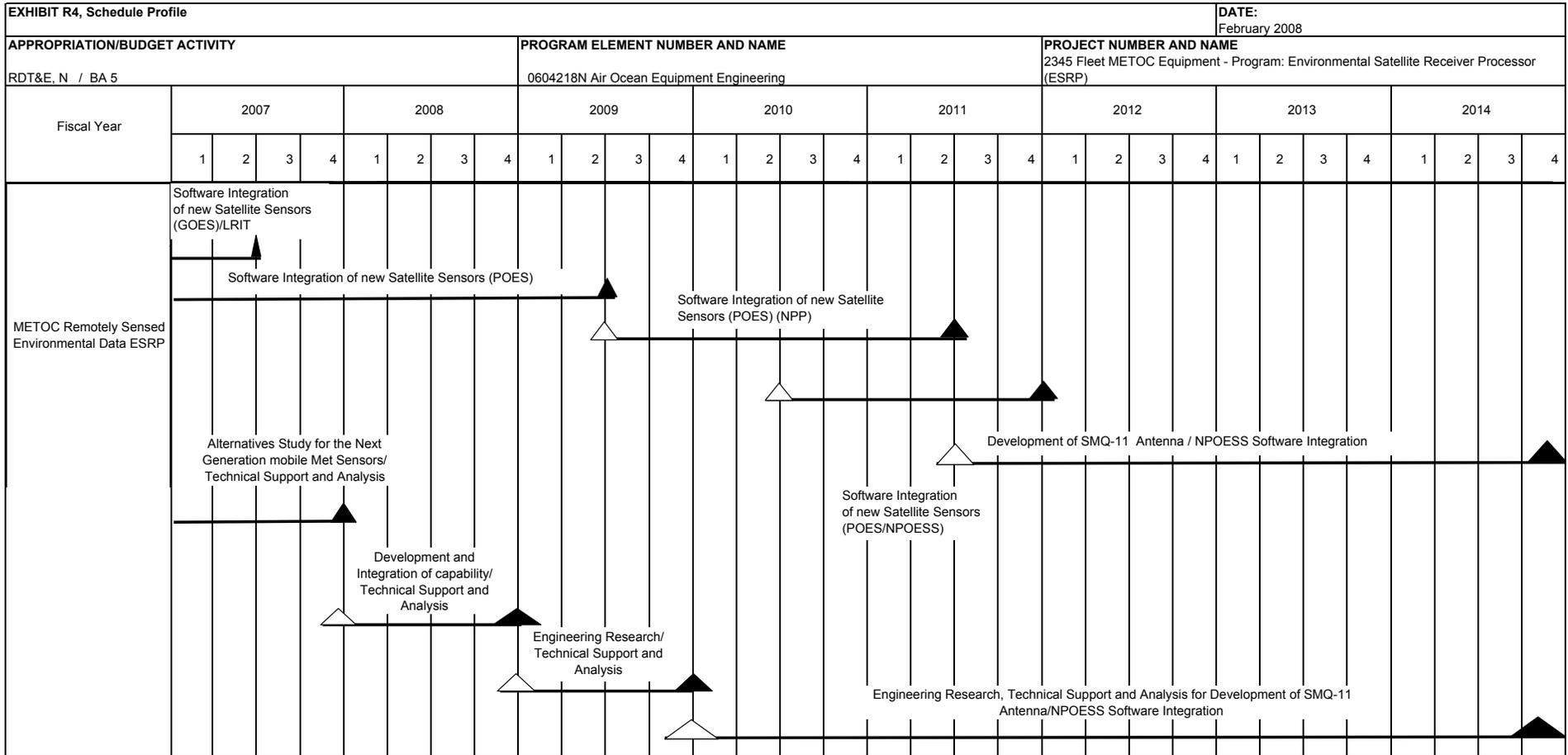


EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604218N Air/Ocean Equipment Engineering			PROJECT NUMBER AND NAME 2346 METOC Sensor Engineering			
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost		1.578	1.616	1.672	1.689	1.723	1.759	1.793
RDT&E Articles Qty								

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides for the engineering and manufacturing development of specialized, high resolution instrumentation systems and measurement capabilities for obtaining near real-time, in-situ meteorological and oceanographic (METOC) data in hostile, remote, and denied areas. The project's objectives are to engineer near-term future mission sensing capabilities that are intended to survive the harsh littoral and deep-strike environments and also to meet demanding requirements for timeliness and accuracy. Engineering is performed within this project to ensure that air and safety certification for deployment from fleet aircraft or ships is met and that the proper data formats are engineered for electronic communications transmissions, human interface displays, and inputs to predictive models.

This budget reflects a reorganization by program/project to better support the acquisition process.

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2008
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604218N Air Ocean Equipment Engineering	PROJECT NUMBER AND NAME 2346 METOC Sensor Engineering

(U) B. Accomplishments/Planned Program

Meteorological and Oceanographic (METOC) Future Mission Capabilities (FMC)	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	1.480	1.427	1.436
RDT&E Articles Quantity			

FY07 - Developed and demonstrated sensor integration and compatibility with Network. Developed follow-on UAV Meteorological sensors using evolving technologies. Delivered initial engineering plan including Total Ownership Cost (TOC) estimates. Developed of Unmanned Underwater Vehicle (UUV) Sensor engineering plans. Flight tested air-deployed micro-sensors and delivered Final Report. Began investigating Network integration. Efforts formerly located in "Unmanned Aerial Vehicle METOC Sensors/Sensors/Observing Systems."

FY08 - Develop Architecture and document UAV Meteorological and Oceanographic sensors using evolving technologies. Proceed with verification and validation tests of air-deployed micro-sensors and deliver Test Report. Extend strategy definition on network integration studies for insitu environmental sensor systems. Upgrade Navy buoys and expand capabilities to acquired hydrodynamic characteristics in the littoral for production center use. Develop follow-on tactical through-the-sensor oceanographic and acoustic data collection system engineering plans. Efforts formerly located in "Unmanned Aerial Vehicle METOC Sensors/Sensors/Observing Systems."

FY09 - Continue system development and demonstration of METOC manned, unmanned and automated sensors (to include integration of environmental sensors into a larger environmental sensing strategy) Continue the development of advanced sensor system support technologies and techniques for sensor deployment, data processing and performance metrics to optimize sensor performance. Efforts formerly located in "Unmanned Aerial Vehicle METOC Sensors/Sensors/Observing Systems."

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2008
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604218N Air Ocean Equipment Engineering	PROJECT NUMBER AND NAME 2346 METOC Sensor Engineering

(U) B. Accomplishments/Planned Program

Tactical Oceanographic Capabilities / UnderSea Warfare (TOC/USW)	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	0.098	0.189	0.236
RDT&E Articles Quantity			

FY07 - Delivered Technical Reports on Buoy. Efforts formerly located in "Unmanned Aerial Vehicle METOC Sensors/Sensors/Observing Systems."

FY08 - Upgrade Navy buoys and expand capabilities to acquired hydrodynamic characteristics in the littoral for production center use. Modify existing Naval Oceanographic Office acoustic and oceanographic data collection buoys to allow them to collect geo-acoustic and seabed properties via covert, passive methods and geo-acoustic inversion techniques. Develop follow-on tactical through-the-sensor oceanographic and acoustic data collection system engineering plans. Efforts formerly located in "Unmanned Aerial Vehicle METOC Sensors/Sensors/Observing Systems."

FY09 - Conduct Verification and Validation tests on insitu oceanographic and acoustic buoys. Deliver sensor upgrade for prototype acoustic and oceanographic data collection buoy to expand geoacoustic data collection to active methods. Continue design of an end-to-end ASW Reconstruction and Analysis (R&A) System Architecture. Test buoy at sea and deliver report. Continue modification of existing Naval Oceanographic Office acoustic and oceanographic data collection buoys to allow them to collect geo-acoustic seabed properties via covert, passive methods and geoacoustic inversion techniques to include SESSS and SRFLOS modules. Efforts formerly located in "Unmanned Aerial Vehicle METOC Sensors/Sensors/Observing Systems."

EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2008																									
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604218N Air Ocean Equipment Engineering			PROJECT NUMBER AND NAME 2346 METOC Sensor Engineering																										
<p>(U) C. OTHER PROGRAM FUNDING SUMMARY:</p> <table style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black; padding: 2px;"><u>Line Item No. & Name</u></th> <th style="text-align: center; border-bottom: 1px solid black; padding: 2px;"><u>FY 2007</u></th> <th style="text-align: center; border-bottom: 1px solid black; padding: 2px;"><u>FY 2008</u></th> <th style="text-align: center; border-bottom: 1px solid black; padding: 2px;"><u>FY 2009</u></th> <th style="text-align: center; border-bottom: 1px solid black; padding: 2px;"><u>FY 2010</u></th> <th style="text-align: center; border-bottom: 1px solid black; padding: 2px;"><u>FY 2011</u></th> <th style="text-align: center; border-bottom: 1px solid black; padding: 2px;"><u>FY 2012</u></th> <th style="text-align: center; border-bottom: 1px solid black; padding: 2px;"><u>FY 2013</u></th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Not applicable</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="8" style="padding: 5px;">Related RDT&E: PE 0603207N, Air/Ocean Tactical Applications</td> </tr> </tbody> </table> <p style="margin-top: 20px;">(U) D. ACQUISITION STRATEGY:</p> <p style="padding-left: 20px;">Acquisition and contracting strategies are to support engineering and manufacturing development of specialized, high resolution instrumentation systems and measurement techniques for obtaining near real-time in-situ meteorological and oceanographic (METOC) data in denied or remote areas by providing funds to NAVAIR and miscellaneous contractors, with management oversight by the Program Executive Officer for Command, Control, Communications, Computers and Intelligence (PEO C4I).</p> <p style="margin-top: 20px;">(U) E. MAJOR PERFORMERS:</p> <p style="padding-left: 20px;">N/A</p> <p style="margin-top: 20px;">(U) F. METRICS:</p> <p style="padding-left: 20px;">Earned Value Management (EVM) is used for metrics reporting and risk management.</p>								<u>Line Item No. & Name</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	Not applicable								Related RDT&E: PE 0603207N, Air/Ocean Tactical Applications							
<u>Line Item No. & Name</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>																								
Not applicable																															
Related RDT&E: PE 0603207N, Air/Ocean Tactical Applications																															

Exhibit R-3 Cost Analysis (page 1)										DATE: February 2008		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NUMBER AND NAME					
RDT&E, N / BA-5			0604218N Air Ocean Equipment Engineering				2346 METOC Sensor Engineering					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 07 Cost	FY 07 Award Date	FY 08 Cost	FY 08 Award Date	FY 09 Cost	FY 09 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Software/Product Development	WX	NRL	1.423	0.766	N/A	1.116	N/A	0.915	N/A	CONT	CONT	
	NA	MISC	8.863	0.812	N/A		N/A		N/A	CONT	CONT	
	CP	MISC			N/A	0.500	N/A	0.757	N/A	CONT	CONT	
Subtotal Software/Product Development			10.286	1.578	N/A	1.616	N/A	1.672	N/A	CONT	CONT	
Remarks:												
Systems Engineering												
Subtotal Systems Engineering			0.000	0.000		0.000		0.000				
Remarks:												

Exhibit R-3 Cost Analysis (page 2)										DATE: February 2008		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604218N Air Ocean Equipment Engineering			2346 METOC Sensor Engineering						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 07 Cost	FY 07 Award Date	FY 08 Cost	FY 08 Award Date	FY 09 Cost	FY 09 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation												
Subtotal Developmental T & E			0.000	0.000		0.000		0.000				
Remarks:												
Management												
Subtotal Management			0.000	0.000		0.000		0.000				
Remarks:												
Total Cost			10.286	1.578	N/A	1.616	N/A	1.672	N/A	CONT	CONT	

EXHIBIT R4, Schedule Profile																				DATE: February 2008																
APPROPRIATION/BUDGET ACTIVITY					PROGRAM ELEMENT NUMBER AND NAME															PROJECT NUMBER AND NAME																
RDT&E, N / BA-5					0604218N Air Ocean Equipment Engineering															2346 METOC Sensor Engineering - Program: Tactical Oceanographic Capabilities / UnderSea Warfare (TOC/USW)																
Fiscal Year	2007				2008				2009				2010				2011				2012				2013				2014							
	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				
Acoustic and Oceanographic Data Collection Buoys																																				

EXHIBIT R-2, RDT&E Budget Item Justification						DATE:	
APPROPRIATION/BUDGET ACTIVITY						February 2008	
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5						R-1 ITEM NOMENCLATURE	
						0604221N, P-3 MODERNIZATION PROGRAM	
COST (\$ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	19.601	4.461	3.589	3.705	3.826	3.896	3.971
1152 P-3 SENSOR INTEGRATION	16.653	3.078	1.460	1.522	1.574	1.603	1.634
3016 FATIGUE LIFE MANAGEMENT PROGRAM	1.972	1.383	2.129	2.183	2.252	2.293	2.337
9999 CONGRESSIONAL ADDS	.976						

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

This program provides for P-3C aircraft systems development in subsurface and surface surveillance, search, detection, localization, classification, attack and communications in support of Sea Shield/Sea Power 21. The P-3C Sensor Integration project integrates advanced and future AntiSubmarine Warfare (ASW) and AntiSurface Warfare (ASuW) sensors, weapons systems, and supporting technology into legacy P-3C systems and phased capabilities upgrades. Also, P-3 Sensor Integration will expand software and hardware technology of P-3 systems to integrate additional sensor and processing capabilities, environmental prediction tools, tactical decision aides, color capabilities and communications to improve aircrew tactical proficiency and battlespace awareness. Sensor Integration is a continuous effort to integrate and test newly evolving ASW and ASuW technologies such as Analyzer Sub-Unit and System Controller Technology Insertions, "Extended Echo Ranging" (EER) family of Multi-Static active systems, Acoustic Rapid COTs Insertion (ARCI), Non-acoustic ASW sensors and systems, and future Technical Refresh insertions for obsolescence and processing improvements. Develop interface control for ASW weapon improvement solutions. The Over the Horizon (OTH) Wideband system will provide the P-3C AIP aircraft the capability to conduct OTH Satellite communications which will allow the on-station aircraft to transmit real time sensitive acoustic intelligence data which will maximize enemy detections, tracking, and engagement opportunities.

Fatigue Life Management Program is required to manage P-3/EP-3 inventory fatigue life and includes ongoing structural analysis, analyzing emergent structural issues, conducting engineering studies, assessing Fleet impact, and applying new technologies such as Non-Destructive Inspection (NDI) techniques.

Congressional Add for Personal Digital Assistant Maintenance Application.

B. PROGRAM CHANGE SUMMARY

Funding:	FY 2007	FY 2008	FY 2009
FY2008 President's Budget:	17.072	8.621	3.630
FY2009 President's Budget:	19.601	4.461	3.589
Total Adjustments	2.529	-4.160	-0.041

Summary of Adjustments

Congressional Reductions		-4.000	
Congressional Rescissions			
Congressional Undistributed Reductions		-0.031	
Congressional Increases			
Economic Assumptions			-0.013
Miscellaneous Adjustments	2.529	-0.129	-0.028
Subtotal	2.529	-4.160	-0.041

Schedule: Not Applicable

Technical: Not Applicable

EXHIBIT R-2a, RDT&E Project Justification							DATE:	
APPROPRIATION/BUDGET ACTIVITY							February 2008	
RDT&E,N / BA-5		PROGRAM ELEMENT NUMBER AND NAME			PROJECT NUMBER AND NAME			
		0604221N, P-3 MODERNIZATION PROGRAM			1152, P-3 SENSOR INTEGRATION			
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
1152 P-3 SENSOR INTEGRATION		16.653	3.078	1.460	1.522	1.574	1.603	1.634
RDT&E Articles Qty		3	3					

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This program provides for P-3C aircraft systems development in subsurface and surface surveillance, search, detection, localization, classification, attack and communications in support of Sea Shield/Sea Power 21. The P-3C Sensor Integration project integrates advanced and future ASW and ASuW sensors, weapons systems, and supporting technology into legacy P-3C systems and phased capabilities upgrades. The program also advances Air Acoustic Rapid COTs Insertion (ARCI) efforts by replacing legacy ML-SPEC UYS-1 with increasingly open, COTS-based architecture. Also, P-3 Sensor Integration will expand software and hardware technology of P-3 systems to integrate additional sensor and processing capabilities, environmental prediction tools, tactical decision aides, color capabilities and communications to improve aircrew tactical proficiency and battlespace awareness. Sensor Integration is a continuous effort to integrate and test newly evolving ASW and ASuW technologies such as Analyzer Sub-Unit (ASU) and System Controller (SC) Technology Insertions, "Extended Echo Ranging" (EER) family of Multi-Static active systems, Acoustic Rapid Cots Insertion (ARCI), Non-acoustic ASW sensors and systems, and future Technical Refresh insertions for obsolescence and processing improvements. Develop interface control for ASW weapon improvement solutions. The Over the Horizon (OTH) Wideband system will provide the P-3C AIP aircraft the capability to conduct OTH Satellite communications which will allow the on-station aircraft to transmit real time sensitive acoustic intelligence data which will maximize enemy detections, tracking and engagement opportunities.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

P-3 integration of ASW and ASuW sensors/weapon systems	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	8.058		1.460
RDT&E Articles Qty			

This program provides for P-3C aircraft systems development in subsurface and surface surveillance, search, detection, localization, classification, attack and communications in support of Sea Shield/Sea Power 21. The P-3C Sensor Integration project integrates advanced and future ASW and ASuW sensors, weapons systems, and supporting technology into legacy P-3C systems and phased capabilities upgrades. The program also advances Air ARCI efforts by replacing legacy ML-SPEC UYS-1 with increasingly open, COTS-based architecture. Also, P-3 Sensor Integration will expand software and hardware technology of P-3 systems to integrate additional sensor and processing capabilities, environmental prediction tools, tactical decision aides, color capabilities and communications to improve aircrew tactical proficiency and battlespace awareness. Sensor Integration is a continuous effort to integrate and test newly evolving ASW and ASuW technologies such as Analyzer Sub-Unit (ASU) and System Controller (SC) Technology Insertions, "Extended Echo Ranging" (EER) family of Multi-Static active systems, Acoustic Rapid Cots Insertion (ARCI), Non-acoustic ASW sensors and systems, and future Technical Refresh insertions for obsolescence and processing improvements. Develop interface control for ASW weapon improvement solutions.

Conduct P-3C OTH Satellite communications	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	8.595	3.078	
RDT&E Articles Qty	3	3	

The OTH Wideband program will provide P-3C AIP aircraft the capability to conduct OTH Satellite communications. Specifically, this program will design, develop, integrate and evaluate this capability on the P-3C AIP aircraft.

C. OTHER PROGRAM FUNDING SUMMARY:

Not Applicable

D. ACQUISITION STRATEGY:

The Air Deployable Active Receiver/Improved Extended Echo Ranging (IEER) Operational Requirements Document (Ser# 297(1)-05-97)) for 1152 was approved on 29 December 1997. The P-3 ASuW Improvement Program (AIP) ORD (Ser#355-88-94) for 2417 was approved on 30 March 1994. The Acquisition Plan (AIR-93-08A Rev 2) was approved on 30 March 1998. The ASR (AIR-ASR-26A Rev 3) was approved 29 Nov 1999 which includes Over the Horizon (OTH) Wideband system.

UNCLASSIFIED

Exhibit R-3 Cost Analysis (page 1)										DATE: February 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-5		PROGRAM ELEMENT 0604221N, P-3 MODERNIZATION PROGRAM				PROJECT NUMBER AND NAME 1152, P-3 SENSOR INTEGRATION						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
PRODUCT DEVELOPMENT												
Primary Hdw Develop-LM St Paul	C-FP	LOCKHEED MARTIN CORP, ST PAUL, MN		6.678	8/07	2.000	10/07				8.678	8.678
Systems Eng - LOCKHEED-MARTIN	SS-CPFF	LOCKHEED MARTIN CORP, MANASSAS, VA	3.732	7.834	2/07			1.382	1/09	6.364	19.312	19.312
SUBTOTAL PRODUCT DEVELOPMENT			3.732	14.512		2.000		1.382		6.364	27.990	

Remarks:

SUPPORT												
Software Development-NAWC PAX	WX	NAWCAD, PATUXENT RIVER MD		.253	2/07						.253	
Software Development-NAWC PAX	WX	NAWCAD, PATUXENT RIVER MD	4.027								4.027	
Software Development-NAWC TSD ORLANDO	WX	NAWCTSD, ORLANDO				.060	01/08				.060	
SUBTOTAL SUPPORT			4.027	.253		.060					4.340	

Remarks:

TEST & EVALUATION												
Test Support	WX	NAWCAD, PATUXENT RIVER MD				.768	01/08				.768	
SUBTOTAL TEST & EVALUATION						.768					.768	

Remarks:

MANAGEMENT												
Contractor Eng Support	WX	SPAWARSYSCOM CHARLESTON SC		.133	5/07						.133	
Government Tech Support-SPAWAR	WX	SPAWARSYSCEN SAN DIEGO CA		.524	7/07						.524	
Government Eng Sup-NAWC PAX	WX	NAWCAD, PATUXENT RIVER MD				.100	01/08				.100	
Government Eng Sup-SPAWAR	WX	SPAWARSYSCEN SAN DIEGO CA		.750	7/07						.750	
Government Tech Support	WX	NAWCAD, PATUXENT RIVER MD			2/07	.100	01/08				.100	
Logistics Support	WX	NAWCAD, PATUXENT RIVER MD				.050	01/08				.050	
Program Management Support	WX	NAWCAD, PATUXENT RIVER MD										
Travel - NAWC PAX	WX	NAWCAD, PATUXENT RIVER MD	.200	.481	10/06			.078	10/08	Continuing	Continuing	
SUBTOTAL MANAGEMENT			.200	1.888		.250		.078		Continuing	Continuing	

Remarks:

Total Cost			7.959	16.653		3.078		1.460		Continuing	Continuing	
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Remarks:

CLASSIFICATION:

EXHIBIT R4, Schedule Profile																								DATE: February 2008				
APPROPRIATION/BUDGET ACTIVITY RDTE&E, N / 5					PROGRAM ELEMENT NUMBER AND NAME 0604221N, P-3 MODERNIZATION PROGRAM												PROJECT NUMBER AND NAME 1152, P-3 SENSOR INTEGRATION											
Fiscal Year	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	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
EER Multi-Static Active Sensor System Support	████████████████████																											
EER Fleet Technology Insertion	████████████████████																											
P-3 Critical Obsolescence Program Kits & Installation	████████████████████																											
P-3 ARCI program and Future Fleet Technology Insertion	████████████████████																											
OTH Wideband	████████████████████																											

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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-5			PROGRAM ELEMENT NUMBER AND NAME 0604221N, P-3 MODERNIZATION PROGRAM			PROJECT NUMBER AND NAME 3016, FATIGUE LIFE MANAGEMENT PROGRAM			
COST (\$ in Millions)			FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
3016 FATIGUE LIFE MANAGEMENT PROGRAM			1.972	1.383	2.129	2.183	2.252	2.293	2.337
RDT&E Articles Qty									

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Fatigue Life Management Program is required to manage P-3/EP-3 inventory fatigue life and includes ongoing structural analysis, analyzing emergent structural issues, conducting engineering studies, assessing Fleet impact, and applying new technologies such as Non-Destructive Inspection (NDI) techniques.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

P-3/EP-3 Fatigue Life Management	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	1.972	1.383	2.129
RDT&E Articles Qty - Not Applicable			

Fatigue Life Management Program : Manage P-3/EP-3 inventory fatigue life including conducting structural analysis, analyzing structural issues, conducting engineering studies, assessing Fleet impact. Research, test and apply new Fatigue Inspection techniques to the P-3/EP-3 Fleet.

C. OTHER PROGRAM FUNDING SUMMARY:

Not Applicable

D. ACQUISITION STRATEGY:

The Fatigue Life Management Program leverages off of prior work done under P-3 SLAP (2451). The ASUW Improvement Program (AIP) ORD 355-88-94 was approved 30 March 94. PMP #0526 Ser 902D1/6U324405 was approved on 6 Feb 1986. Navy Decision Coordination Paper W-0484-AS was signed 23 Jun 1984. Work will be performed by LMAS and other industry participants along with the NAVAIR Structural Engineering Dept, AIR-4.3. This program supports the 7 June 2003 CNO approved P-3/EP-3 Sustainment Bridge to MMA.

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Exhibit R-3 Cost Analysis (page 1)										DATE: February 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-5		PROGRAM ELEMENT 0604221N, P-3 MODERNIZATION PROGRAM				PROJECT NUMBER AND NAME 3016, FATIGUE LIFE MANAGEMENT PROGRAM						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total FY s Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
PRODUCT DEVELOPMENT												
SYSTEMS ENGINEERING LM	C-CPIF	LOCKHEED MARTIN CORPORATION, MARIETTA, GA	1.585	1.363	2/07	1.068	1/08	1.433	1/09	6.397	11.846	11.846
SUBTOTAL PRODUCT DEVELOPMENT			1.585	1.363		1.068		1.433		6.397	11.846	

Remarks:

SUPPORT												
SUBTOTAL SUPPORT												

Remarks:

TEST & EVALUATION												
SUBTOTAL TEST & EVALUATION												

Remarks:

MANAGEMENT												
Government Eng Sup	WX	VARIOUS	3.261	.609	10/06	.065	1/08	.596	12/08	2.622	7.153	
Travel	WX	NAWCAD, PATUXENT RIVER MD	.183			.250	1/08	.100	12/08	.100	.633	
SUBTOTAL MANAGEMENT			3.444	.609		.315		.696		2.722	7.786	

Remarks:

Total Cost			5.029	1.972		1.383		2.129		9.119	19.632	
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Remarks:

CLASSIFICATION:

EXHIBIT R4, Schedule Profile																							DATE: February 2008					
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5										PROGRAM ELEMENT NUMBER AND NAME 0604221N P-3 Modernization Program										PROJECT NUMBER AND NAME 3016, FATIGUE LIFE MANAGEMENT PROGRAM								
Fiscal Year	2007				2008				2009				2010				2011				2012				2013			
	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
Inventory Fatigue Life Management/Sustainment	██████████																											

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2008	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604221N, P-3 MODERNIZATION PROGRAM			PROJECT NUMBER AND NAME 9999, CONGRESSIONAL ADDS			
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost		0.976						
RDT&E Articles Qty - Not Applicable								
<p>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</p> <p>Congressional Adds</p>								

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2008	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA 5	PROGRAM ELEMENT NUMBER AND NAME 0604221N, P-3 MODERNIZATION PROGRAM	PROJECT NUMBER AND NAME 9999, CONGRESSIONAL ADDS	
B. Accomplishments/Planned Program			
9551C	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	0.976		
RDT&E Articles Quantity - Not Applicable			
PERSONAL DIGITAL ASSISTANT MAINTENANCE APPLICATION			
<p>The Personal Digital Assistant Maintenance Application Program (PDA MAP) will reduce paper data collection and manual data entry process associated with scheduled maintenance inspections. PDA MAP will improve efficiency, increase data collection accuracy, and reduce Naval Aviation Logistics Command Management Information System (NALCOMIS) data entry time.</p>			