EXHIBIT R-2, RDT&E Budget Item Justification							DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7**					R-1 ITEM NOMENCLATURE 0305205N, Endurance Unmanned Aerial Vehicles			
COST ($ in Millions)	FY 2008	FY 2009	FY 2010					
Total PE Cost	**111.283**	**431.801**	**					
4020 BAMS UAS	**105.915***	**430.205**	**					
9999 CONGRESSIONAL ADDS	**5.368**	**1.596**						

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This program element provides for the development of endurance-type Unmanned Aircraft Systems (UAS) that will provide warfighters with persistent maritime Intelligence, Surveillance and Reconnaissance (ISR) capability.

Broad Area Maritime Surveillance (BAMS) Unmanned Aircraft System (UAS)

BAMS is a High Altitude-Long Endurance Unmanned Aircraft System designed to provide Fleet and Combatant Commanders with persistent maritime Intelligence, Surveillance and Reconnaissance (ISR) of nearly all the world's high-density sea-lanes, littorals, and areas of national interest. Envisioned as an unmanned adjunct to the P-8A Multi-Mission Maritime Aircraft (MMA), and crucial to the recapitalization of Navy's airborne maritime ISR capability, the system will seek to leverage Maritime Patrol and Reconnaissance Force (MPRF) manpower, training and maintenance efficiencies.

The BAMS UAS air vehicle is based on Northrup Grumman's Block 20 Global Hawk and features sensors designed to provide near worldwide coverage through a network of five CONUS and OCONUS orbits, with sufficient air vehicles to remain airborne for 24 hours a day, 7 days a week, out to ranges of 2000 nautical miles. Onboard sensors will provide detection, classification, tracking and identification of maritime targets and include maritime radar, electro-optical/infrared (EO/IR), and Electronic Support Measures (ESM) systems. Additionally, BAMS will have a communications relay capability designed to link dispersed forces in the theater of operations and serve as a node in the Navy's FORCEnet strategy. Tactical-level data analysis will occur in real-time at shore-based Mission Control sites connected to the air vehicle via satellite communications. Further intelligence exploitation can be conducted at Fleet shore-based sites or aboard Aircraft Carriers and other ships in the sea base.

BAMS UAS will play a significant role in the Sea Shield and FORCEnet pillars of Sea Power 21. In its Sea Shield role, the system will rely on its key attribute of persistence to provide the supported COCOM or Fleet Commander with unparalleled situational awareness of the maritime battle space as it develops and sustains the Common Operational Tactical Picture (COTP). The system will also serve as a Fleet Response Plan enabler, while acting as a trip wire for Intelligence Preparation of the Environment (IPE). Additionally, BAMS UAS will be a FORCEnet enabler and relay platform, directly connected to both the Global Information Grid (GiG) and the DCGS-N Information Backbone (DIB).

*$22.8M FY08 funding was moved from PE 0305205N 4020 BAMS UAS to PE 0305204N 2768 MQ-8B per Above Threshold Reprogramming (ATR) DoD Serial Number FY08-41-RPA.

**Note: Starting In FY10, BAMS is budgeted for in PE 0305220N.

Congressional Adds

Advanced Airship Flying Laboratory

The Advanced Airship Flying Laboratory provides an airship-based capability to develop, test and demonstrate airborne mission systems equipment (Command, Control, Communications, Computers and Intelligence (C4I) and Infrared Search and Track (IRST)). Allows studies for development of a modernized naval airship featuring digital flight controls, vectored thrust and remote piloted capabilities.

Coastal Airship Surveillance Demonstrator

The Coastal Airship Surveillance Demonstrator funding will be used to operate, demonstrate and assess the capabilities of an airship to perform the coastal surveillance and intelligence-gathering mission.

Skybus 80k and 130k LTA-UAS Multirole Technologies

Development, test, design and build of the Skybus 80K will provide a platform to evaluate airship capability in performing multirole, persistent ISR and long-dwell missions in both hostile and non-threatening environments.

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification	DATE: **May 2009**
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7**	R-1 ITEM NOMENCLATURE 0305205N, Endurance Unmanned Aerial Vehicles

B. PROGRAM CHANGE SUMMARY:

Funding:	FY08	FY09	FY10
Previous President's Budget:	121.315	480.098	557.037
Current President's Budget:	111.283	431.801	0.000
Total Adjustments	-10.032	-48.297	-557.037
Summary of Adjustments			
Congressional Rescissions			
Congressional Adjustments	-0.032	-47.127	
SBIR/STTR/FTT Assessments			
Program Adjustments	-10.000		-557.004
Rate/Misc Adjustments		-1.170	-0.033
Subtotal	-10.032	-48.297	-557.037

Schedule:

Not applicable

Technical:

Not applicable

Notes:
Starting in FY10, BAMS is budgeted for in PE 0305220N.
$22.8M FY08 funding was moved from PE 0305205N 4020 BAMS UAS to PE 0305204N 2768 MQ-8B per Above Threshold Reprogramming (ATR) DOD Serial Number FY08-41-RPA.

EXHIBIT R-2a, RDT&E Project Justification							DATE: **May 2009**	
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**	PROGRAM ELEMENT NUMBER AND NAME 0305205N, ENDURANCE UNMANNED AERIAL VEHICLES				PROJECT NUMBER AND NAME 4020, BAMS UAS			
COST ($ in Millions)	FY 2008	FY 2009	FY 2010					
Project Cost	**83.115***	**430.205**						
RDT&E Articles Qty		**2**						

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

BAMS is a High Altitude-Long Endurance Unmanned Aircraft System designed to provide Fleet and Combatant Commanders with persistent maritime Intelligence, Surveillance and Reconnaissance (ISR) of nearly all the world's high-density sea-lanes, littorals, and areas of national interest. Envisioned as an unmanned adjunct to the P-8A Multi-Mission Maritime Aircraft (MMA), and crucial to the recapitalization of Navy's airborne maritime ISR capability, the system will seek to leverage Maritime Patrol and Reconnaissance Force (MPRF) manpower, training and maintenance efficiencies.

The BAMS UAS air vehicle is based on Northrup Grumman's Block 20 Global Hawk and features sensors designed to provide near worldwide coverage through a network of five CONUS and OCONUS orbits, with sufficient air vehicles to remain airborne for 24 hours a day, 7 days a week, out to ranges of 2000 nautical miles. Onboard sensors will provide detection, classification, tracking and identification of maritime targets and include maritime radar, electro-optical/infrared (EO/IR), and Electronic Support Measures (ESM) systems. Additionally, BAMS will have a communications relay capability designed to link dispersed forces in the theater of operations and serve as a node in the Navy's FORCEnet strategy. Tactical-level data analysis will occur in real-time at shore-based Mission Control sites connected to the air vehicle via satellite communications. Further intelligence exploitation can be conducted at Fleet shore-based sites or aboard Aircraft Carriers and other ships in the sea base.

BAMS UAS will play a significant role in the Sea Shield and FORCEnet pillars of Sea Power 21. In its Sea Shield role, the system will rely on its key attribute of persistence to provide the supported COCOM or Fleet Commander with unparalleled situational awareness of the maritime battle space as it develops and sustains the Common Operational Tactical Picture (COTP). The system will also serve as a Fleet Response Plan enabler, while acting as a trip wire for Intelligence Preparation of the Environment (IPE). Additionally, BAMS UAS will be a FORCEnet enabler and relay platform, directly connected to both the Global Information Grid (GiG) and the DCGS-N Information Backbone (DIB).

The BAMS UAS will be an evolutionary based acquisition, using an incremental development approach. Two Mission Need Statements (MNSs) support the requirement; 1) BAMS and Littoral Armed ISR MNS, and 2) Long Endurance, Reconnaissance, Surveillance and Target Acquisition (RSTA) Capability MNS. The BAMS UAS Capabilities Development Document (CDD) was approved May 2007 by the Joint Requirements Oversight Council (JROC).

Note: Starting in FY10, BAMS is budgeted for in PE 0305220N.

*This exhibit reflects that $22.8M FY08 funding was moved from PE 0305205N 4020 BAMS UAS to PE 0305204N 2768 MQ-8B per Above Threshold Reprogramming (ATR) DOD Serial Number FY08-41-RPA.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **May 2009**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305205N, ENDURANCE UNMANNED AERIAL VEHICLES	4020, BAMS UAS

B. Accomplishments/Planned Program

PRODUCT DEVELOPMENT	FY 08	FY 09	FY 10
Accomplishments/Effort/Subtotal Cost	65.700	406.818	
RDT&E Articles Quantity		2	

Awarded contract in FY08 to initiate the Engineering and Manufacturing Development (EMD) phase effort. Continue EMD in FY09-10, including Government engineering support related to EMD. Initiate two test articles in FY09. The Prime Contractor will be responsible for overall system development and performance, as well as associated management, engineering and logistics activities.

ILS, SUPPORT, STUDIES & ANALYSES	FY 08	FY 09	FY 10
Accomplishments/Effort/Subtotal Cost	8.114	11.992	
RDT&E Articles Quantity			

Continue integrated logistics support, technical engineering services, sensor risk reduction, logistics supportability analyses and environmental planning, modeling and simulation, development of manpower and basing assessments, and development of technical data to support fielding of the BAMS UAS capabilities.

PROGRAM MANAGEMENT	FY 08	FY 09	FY 10
Accomplishments/Effort/Subtotal Cost	5.459	5.557	
RDT&E Articles Quantity			

Continue the following: Program Management Support and travel; development of milestone and acquisition-related documentation; budgeting and programming; capability refinement and open systems architecture development; resource justification; metric development and tracking; affordability assessments and cost analyses; risk reduction and risk management; system integration and interoperability planning; technology maturity reviews; program protection planning; corrosion prevention planning; anti-tamper provisioning planning; and Joint and International Cooperation efforts.

NOTE: This exhibit reflects that $22.8M FY08 funding was moved from PE 0305205N 4020 BAMS UAS to PE 0305204N 2768 MQ-8B per Above Threshold Reprogramming (ATR) DOD Serial Number FY08-41-RPA.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **May 2009**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305205N, ENDURANCE UNMANNED AERIAL VEHICLES	4020, BAMS UAS

B. Accomplishments/Planned Program (Cont.)

TEST & EVALUATION	FY 08	FY 09	FY 10
Accomplishments/Effort/Subtotal Cost	3.842	5.838	
RDT&E Articles Quantity			

Continue test and evaluation support activities to allow test and fielding of the BAMS UAS.

NOTE: This exhibit reflects that $22.8M FY08 funding was moved from PE 0305205N 4020 BAMS UAS to PE 0305204N 2768 VTUAV per ATR DOD Serial Number FY08-41-RPA.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305205N, ENDURANCE UNMANNED AERIAL VEHICLES	4020, BAMS UAS

C. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2008	FY 2009	FY 2010
RDTEN 0305220N BAMS UAS			465.839

D. ACQUISITION STRATEGY:

Note: Starting in FY10, BAMS is budgeted for in PE 0305220N.

$22.8M FY08 funding was moved from PE 0305205N 4020 BAMS UAS to PE 0305204N 2768 MQ-8B per Above Threshold Reprogramming (ATR) DOD Serial Number FY08-41-RPA.

R-1 SHOPPING LIST - Item No. 201

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)					DATE: **May 2009**							
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**			PROGRAM ELEMENT 0305205N, ENDURANCE UNMANNED AERIAL VEHICLE			PROJECT NUMBER AND NAME 4020, BAMS UAS						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 09 Cost	FY 09 Award Date	FY 10 Cost	FY 10 Award Date	FY 11 Cost	FY 11 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	C/CPAF	Northrop Grumman, NY	58.600	379.533	10/08							
Ancillary Hardware Development												
Aircraft Integration												
Ship Integration												
Ship Suitability												
Systems Engineering	WX	VARIOUS	33.401	21.991	11/08							
Training Development												
Licenses												
Tooling												
GFE												
Award Fees	C/CPAF	Northrop Grumman, NY		5.294	12/09							
Subtotal Product Development			92.001	406.818								
Remarks:												
Development Support	VARIOUS	VARIOUS	4.916	6.241	11/08							
Software Development												
Integrated Logistics Support	WX	VARIOUS	6.863	4.740	11/08							
Configuration Management												
Technical Data												
Studies & Analyses	VARIOUS	VARIOUS	22.648	1.011	11/08							
GFE												
Award Fees												
Subtotal Support			34.427	11.992								
Remarks: NOTE: This exhibit reflects that $22.8M FY08 funding was moved from PE 0305205N 4020 BAMS UAS to PE 0305204N 2768 MQ-8B per Above Threshold Reprogramming (ATR) DOD Serial Number FY08-41-RPA.												

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: **May 2009**				
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**			PROGRAM ELEMENT 0305205N, ENDURANCE UNMANNED AERIAL VEHICLE			PROJECT NUMBER AND NAME 4020, BAMS UAS						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 09 Cost	FY 09 Award Date	FY 10 Cost	FY 10 Award Date	FY 11 Cost	FY 11 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	VARIOUS	VARIOUS	4.137	5.838	11/08							
Operational Test & Evaluation												
Live Fire Test & Evaluation												
Test Assets												
Tooling												
GFE												
Award Fees												
Subtotal T&E			4.137	5.838								
Remarks:												
Contractor Engineering Support	C/CPFF	MITRE, McLean, VA		0.756	11/08							
Government Engineering Support												
Program Management Support	VARIOUS	VARIOUS	11.309	4.486	11/08							
Travel	TO	VARIOUS	0.392	0.315	10/08							
Transportation												
SBIR Assessment												
Subtotal Management			11.701	5.557								
Remarks:												
Total Cost			142.266	430.205								

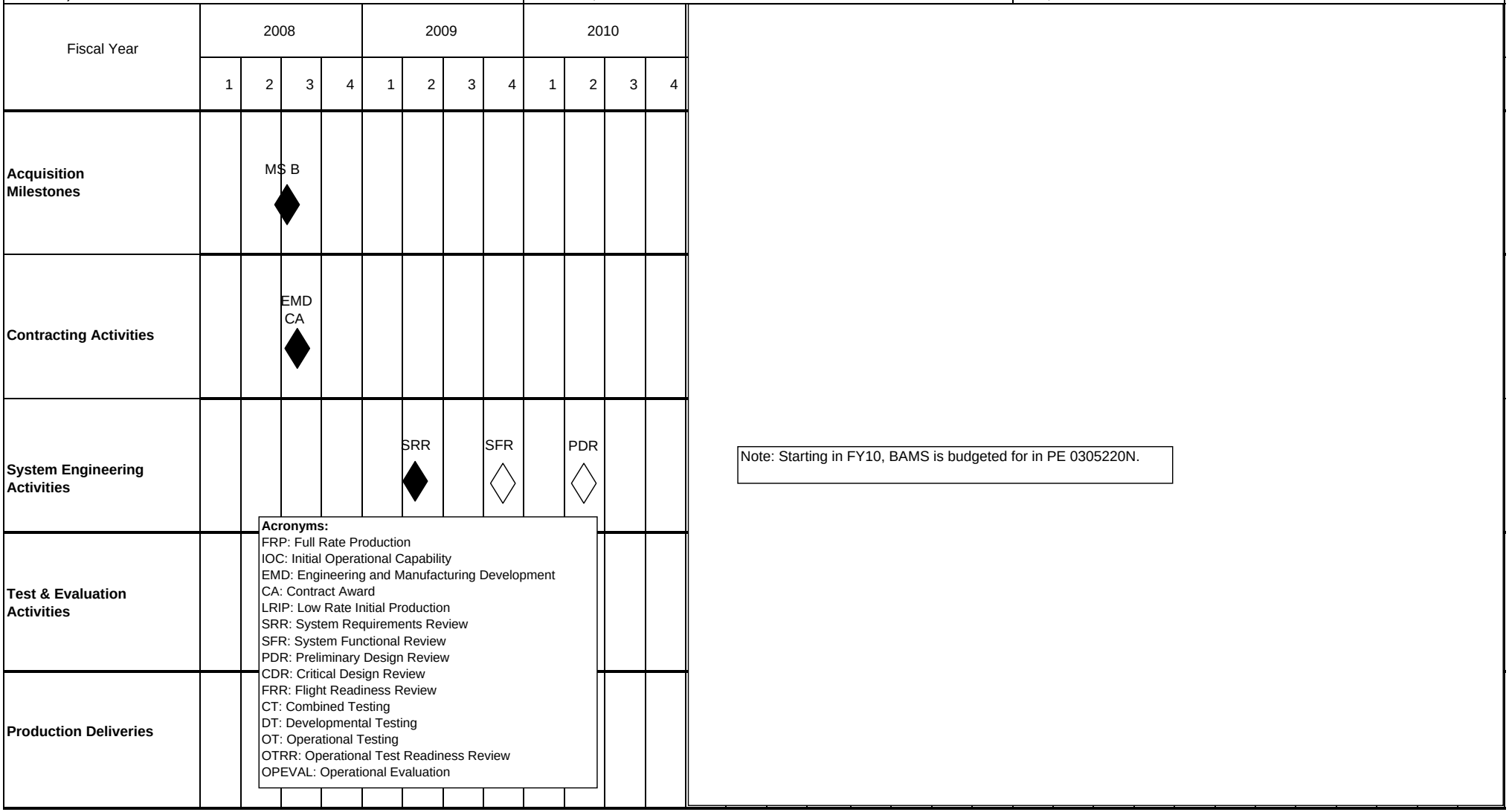
Remarks:

NOTE: This exhibit reflects that $22.8M FY08 funding was moved from PE 0305205N 4020 BAMS UAS to PE 0305204N 2768 MQ-8B per Above Threshold Reprogramming (ATR) DOD Serial Number FY08-41-RPA.

R-1 SHOPPING LIST - Item No. 201

CLASSIFICATION:

EXHIBIT R4, Schedule Profile			DATE: **May 2009**
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**	PROGRAM ELEMENT NUMBER AND NAME 0305205N, ENDURANCE UNMANNED AERIAL VEHICLES	PROJECT NUMBER AND NAME 4020, BAMS UAS	



CLASSIFICATION:

Exhibit R-4a, Schedule Detail					DATE: **May 2009**			
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**	PROGRAM ELEMENT 0305205N, ENDURANCE UNMANNED AERIAL VEHICLES				PROJECT NUMBER AND NAME 4020, BAMS UAS			
Schedule Profile	FY 2008	FY 2009	FY 2010					
Milestone B (MS-B)	3Q							
Engineering and Manufacturing Development (EMD/CA)	3Q							
System Readiness Review (SRR)		2Q						
System Functional Review (SFR)		4Q						
Preliminary Design Review (PDR)			2Q					

EXHIBIT R-2a, RDT&E Project Justification							DATE: **May 2009**	
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**	PROGRAM ELEMENT NUMBER AND NAME 0305205N, ENDURANCE UNMANNED AERIAL VEHICLES				PROJECT NUMBER AND NAME 9999, CONGRESSIONAL ADDS			
COST ($ in Millions)	FY 2008	FY 2009	FY 2010					
9999 CONGRESSIONAL ADDS	**5.368**	**1.596**						
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Congressional Adds
Advanced Airship Flying Laboratory
The Advanced Airship Flying Laboratory provides an airship-based capability to develop, test and demonstrate airborne mission systems equipment (Command, Control, Communications, Computers and Intelligence (C4I) and Infrared Search and Track (IRST)). Allows studies for development of a modernized naval airship featuring digital flight controls, vectored thrust and remote piloted capabilities.

Coastal Airship Surveillance Demonstrator
The Coastal Airship Surveillance Demonstrator funding will be used to operate, demonstrate and assess the capabilities of an airship to perform the coastal surveillance and intelligence-gathering mission.

Skybus 80k and 130k LTA-UAS Multirole Technologies
Development, test, design and build of the Skybus 80K will provide a platform to evaluate airship capability in performing multirole, persistent ISR and long-dwell missions in both hostile and non-threatening environments.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **May 2009**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0305205N, ENDURANCE UNMANNED AERIAL VEHICLES	9999, CONGRESSIONAL ADDS

B. Accomplishments/Planned Program

ADVANCED AIRSHIP FLYING LABORATORY 9650A	FY 08	FY 09	FY 10
Accomplishments/Effort/Subtotal Cost	1.989	1.596	
RDT&E Articles Quantity			

Advanced Airship Flying Laboratory. Continue the development of new technologies to advance modern airships, such as digital automated flight controls, bow thrusters, and heavy fuel engines. Government Engineering Support, contractor support services, and travel.

COASTAL AIRSHIP SURVEILLANCE DEMONSTRATOR 9C77A	FY 08	FY 09	FY 10
Accomplishments/Effort/Subtotal Cost	1.590		
RDT&E Articles Quantity			

Develop and conduct Coastal Airship Surveillance demonstrations. Government Engineering Support, contractor support services, and travel.

SKYBUS 80K AND 130K LTA-UAS MULTIROLE TECHNOLOGIES 9C78A	FY 08	FY 09	FY 10
Accomplishments/Effort/Subtotal Cost	1.789		
RDT&E Articles Quantity			

Development and testing of the Skybus 80K and 130K. Government Engineering Support, contractor support services, and travel.

R-1 SHOPPING LIST - Item No. 201