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EXHIBIT R-2, RDT&E Budget Item Justification

DATE:

February 2006

APPROPRIATION/BUDGET ACTIVITY

RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY /

BA 5

R-1 ITEM NOMENCLATURE

0604245N, H-1 UPGRADES

COST (\$ in Millions)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
Total PE Cost	168.171	41.382	7.844	3.656	3.832	3.970	3.767	
H2279 USMC H-1 UPGRADES	168.171	41.382	7.844	3.656	3.832	3.970	3.767	

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

The mission of the AH-1W attack helicopter is to provide rotary wing close air support, anti-armor, armed escort, armed/visual reconnaissance and fire support coordination capabilities under day/night and adverse weather conditions. The mission of the UH-1N utility helicopter is to provide command and control and combat assault support under day/night and adverse weather conditions and special operations support; supporting arms coordination and aeromedical evacuation. Major modifications for both aircraft that remanufacture AH-1W/UH-1N's into AH-1Z/UH-1Y's include: a new 4-bladed, composite rotor system w semi-automatic blade fold, new performance matched transmissions, T700 Engine Digital Electronic Control Units (DECUs), new 4-bladed tail rotors and drive systems, more effective stabilizers, upgraded landing gear, tail pylon structural modifications, and common, fully integrated cockpits and avionics systems. This remanufacture will add 10,000 flight hours to AH-1Z/UH-1Y airframes. The fully integrated cockpits will reduce operator workload and improve situational awareness, thus increasing safety and reducing the rate of aircraft attrition. They will provide considerable growth potential for future weapon systems and avionics, which will significantly increase mission effectiveness and survivability. The cockpits will also include integration of onboard mission planning, communications, digital fire control, self-navigation, night navigation/targeting and weapon systems management in nearly identical crew stations, which significantly reduces training requirements. This remanufacture maximizes commonality between the two aircraft and provides needed improvements in crew and passenger survivability, payload, power available, endurance, range, airspeed, maneuverability and supportability.

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EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2006																								
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA 5			PROGRAM ELEMENT NUMBER AND NAME 0604245N, H-1 UPGRADES				PROJECT NUMBER AND NAME H2279, USMC H-1 UPGRADES																									
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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2006
APPROPRIATION/BUDGET ACTIVITY RDT&E, N /	BA 5	PROGRAM ELEMENT NUMBER AND NAME 0604245N, H-1 UPGRADES	PROJECT NUMBER AND NAME H2279, USMC H-1 UPGRADES

	FY 2005	FY 2006	FY 2007
Accomplishments / Effort / Sub-total Cost	125.915	28.370	1.077
RDT&E Articles Qty			

Conduct pre-flight ground test and first flight of UH-1Y. Continue tooling validation and assembly of remaining EMD aircraft including structural test. Conduct envelope expansion and complete electrical demonstration. Continue development of integrated software. Conduct Software development efforts to support development testing and address operational requirements.

C. PROGRAM CHANGE SUMMARY

Funding:	FY 2005	FY 2006	FY 2007
Previous President's Budget:	173.046	42.012	7.700
Current BES / President's Budget:	168.171	41.382	7.844
Total Adjustments	-4.875	-0.630	0.144

Summary of Adjustments

Congressional Reductions			
Congressional Rescissions			
Congressional Undistributed Reductions	-4.681	-0.439	
Congressional Increases			
Economic Assumptions		-0.191	0.215
Miscellaneous Adjustments	-0.194		-0.071

Subtotal	-4.875	-0.630	0.144
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Schedule: The commencement of OPEVAL was delayed due to technical issues with the Helmet Mounted Sight Display (HMSD) system. Additionally, the MSIII decision was moved to 1Q FY07. These technical issues also caused a One-quarter delay in the LRIP I and LRIP II production delivery schedule.

Technical: Not Applicable

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EXHIBIT R-2a, RDT&E Project Justification								DATE:	
								February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N /		BA 5		PROGRAM ELEMENT NUMBER AND NAME 0604245N, H-1 UPGRADES			PROJECT NUMBER AND NAME H2279, USMC H-1 UPGRADES		
D. OTHER PROGRAM FUNDING SUMMARY:		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Complete Total Cost
P-1 LI #9, UH-1Y/AH-1Z (4BN/4BW)		213.061	314.457	446.718	440.817	484.852	503.940	504.865	3,234.058 6,461.878
Quantity		7	10	18	19	23	23	23	148 280
<p>E. ACQUISITION STRATEGY: The USMC H-1 Upgrades is an ACAT 1D program which encompasses Engineering and Manufacturing Development of new end-items prior to a production approval decision.</p> <p>The prime contract is a sole source to Bell Helicopter Textron, Inc.</p>									

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Exhibit R-3 Cost Analysis (page 1)								DATE:		February 2006		
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NUMBER AND NAME						
RDT&E, N /		0604245N, H-1 UPGRADES				H2279, USMC H-1 UPGRADES						
BA 5												
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
PRODUCT DEVELOPMENT												
GFE	SS-WX/PX	BELL HELICOPTER TEXTRON INC, HURST, TX	21.050	1.846	11/1/2004						22.896	22.896
GFE	VARIOUS	VARIOUS		.802	VARIOUS						.802	
Primary Hdw Development	SS-CPFF	BELL HELICOPTER TEXTRON INC, HURST, TX	917.328	125.915	11/1/2004	28.370	11/1/2005				1,071.613	1,071.613
Systems Eng	SS-WX/PX	NAWCAD, PATUXENT RIVER MD		3.500	11/1/2004						3.500	
Systems Eng	VARIOUS	VARIOUS		1.045	VARIOUS						1.045	
Systems Eng	SS-WX/PX	TBD	72.222	.393	11/1/2004						72.615	
SUBTOTAL PRODUCT DEVELOPMEN			1,010.600	133.500		28.370					1,172.470	
Remarks: *Remarks: Effective 1 May 00, cost plus incentive fee (CPIF) applies. Original contract was as a SS CPAF contract. Total award fee pool \$47,496,152, and to date \$12,668,250 has been awarded. Period #1 was 90%, period #2 87%, period #3 90%, period #4 77%, period #5 76%, and period #6 was 0%. Award fee activity was terminated on 30 April 2000.												
SUPPORT												
Development Support	SS-WX/PX	BELL HELICOPTER TEXTRON INC, HURST, TX		4.247	11/1/2004						4.247	4.247
Development Support	SS-WX/PX	NAWCWD, CHINA LAKE CA	1.387	4.702	11/1/2004	3.754	11/1/2005				9.843	
Development Support	SS-WX/PX	TBD								7.870	7.870	
Integrated Logistics Sup	SS-WX/PX	TBD	24.340	2.807	11/1/2004	.515	11/1/2005				27.662	
Software Dev. Weapons Integration	SS-WX/PX	NAWCWD, CHINA LAKE CA	2.800	1.694	11/1/2004	5.100	11/1/2005	4.559	11/1/2006	6.112	20.265	
SUBTOTAL SUPPORT			28.527	13.450		9.369		4.559		13.982	69.887	
Remarks:												
TEST & EVALUATION												
Dev Test & Eval	SS-WX/PX	NAWCAD, PATUXENT RIVER MD	35.252	12.170	11/1/2004	2.500	11/1/2005	2.423	11/1/2006	.343	52.688	
Dev Test & Eval	VARIOUS	VARIOUS		.188	VARIOUS						.188	
Live Fire Test & Evaluation	SS-WX/PX	NAWCWD, CHINA LAKE CA		1.453	11/1/2004						1.453	
Live Fire Test & Evaluation	SS-WX/PX	BELL HELICOPTER TEXTRON INC, HURST, TX		.200	11/1/2004						.200	.200
Oper Test & Eval	SS-WX/PX	TBD	2.406	5.000	11/1/2004						7.406	
SUBTOTAL TEST & EVALUATION			37.658	19.011		2.500		2.423		.343	61.935	
Remarks:												
MANAGEMENT												
Contractor Eng Sup	C-FFP	TBD	4.670	.972	11/1/2004	.535	11/1/2005	.360	11/1/2006		6.537	
Program Mgmt Sup	C-FFP	TBD	5.767	.968	11/1/2004	.338	11/1/2005	.232	11/1/2006		7.305	
Travel	SS-WX/PX	NAWCAD, PATUXENT RIVER MD	2.117	.270	11/1/2004	.270	11/1/2005	.270	11/1/2006	.900	3.827	
SUBTOTAL MANAGEMENT			12.554	2.210		1.143		.862		.900	17.669	
Remarks:												
Total Cost			1,089.339	168.171		41.382		7.844		15.225	1,321.961	
Remarks:												

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EXHIBIT R4, Schedule Profile

DATE:

February 2006

APPROPRIATION/BUDGET ACTIVITY

PROGRAM ELEMENT NUMBER AND NAME

PROJECT NUMBER AND NAME

RDT&E, N /

BA-5

0604245N USMC H-1 Upgrades

2279 USMC H-1 Upgrades

Fiscal Year	2004				2005				2006				2007				2008				2009				2010				2011			
	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-II △				IOC UH-1Y ☆												IOC AH-1Z ☆			
Test & Evaluation Milestones																																
Development Test									CT/DT																							
Operational Test																																
Production Milestones																																
LRIP I FY 04	▲	LRIP I Start																														
LRIP II FY 05					▲	LRIP II Start																										
LRIP III FY 06																																
FRP FY 06																																
FRP FY 07																																
FRP FY 08																																
FRP FY 09																																
FRP FY 10																																
FRP FY 11																																
Deliveries																																

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R-1 Shopping List Item No 93

Exhibit R-4, Schedule Profile
(Exhibit R-4, page 7 of 8)

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Exhibit R-4a, Schedule Detail						DATE: February 2006		
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT				PROJECT NUMBER AND NAME			
RDT&E, N / BA-5	0604245N USMC H-1 Upgrades				2279 USMC H-1 Upgrades			
Schedule Profile	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Full Rate Production (FRP) Decision Milestone III				1Q				
IOC					2Q UH-1Y			2Q AH-1Z
Developmental Testing (DT-II)	1Q-4Q	1Q-4Q						
Operational Testing (OT-IIB)	3Q							
Operational Evaluation (OT-IIC) (OPEVAL)			2Q-4Q					
Start Low-Rate Initial Production I (LRIP I)	2Q							
Low-Rate Initial Production I Delivery			3Q - 4Q	1Q-2Q				
Start Low-Rate Initial Production II (LRIP II)		2Q						
Low-Rate Initial Production II Delivery				3Q-4Q	1Q			
Start Low-Rate Initial Production III (LRIP III)			2Q					
Low-Rate Initial Production III Delivery					2Q-4Q			
Full Rate Production Start				1Q	1Q	1Q	1Q	1Q
Full Rate Production (FRP) Delivery						1Q-4Q	1Q-4Q	1Q-4Q

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R-1 Shopping List Item No 93

Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 8 of 8)