

# UNCLASSIFIED

**CLASSIFICATION:**

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: <b>May 2009</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY / BA-5</b>					R-1 ITEM NOMENCLATURE 0605212N, CH-53K RDTE			
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010					
Total PE Cost	<b>386.305</b>	<b>564.774</b>	<b>554.827</b>					
3059 CH-53K Development	<b>386.305</b>	<b>564.774</b>	<b>554.827</b>					
<p><b>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b></p> <p>The CH-53 is the only marinized heavy-lift helicopter in the world and is the Marine Corps only heavy-lift helicopter. The CH-53 mission is the conduct of expeditionary heavy-lift assault transport of armored vehicles, equipment and personnel to support distributed operations deep inland from a sea-based center of operations. The CH-53E "Super Stallion" was introduced into operations in 1980 as an upgrade version of the CH-53D. The CH-53E has developed performance degradation, fatigue life, interoperability, maintenance supportability, and other operational concerns. An improved CH-53 is needed to support Marine Air-Ground Task Force heavy-lift requirements in the 21st century joint environment. The CH-53K will provide improvements in range and payload, performance, cargo handling and turn-around times, reliability and maintainability, interoperability, and survivability. The CH-53K program is required to provide full system capability, including shipboard compatibilities, at Initial Operational Capability (IOC). The CH-53K will replace the CH-53E.</p> <p>Total aircraft quantities for the CH-53K program are 205 helicopters. This includes one Ground Test Vehicle (GTV) and four Engineering Development Models (EDMs) for SDD, to be purchased with RDT&amp;E funds. Of the remaining 200 Production-representative and Production aircraft, the first six will be procured as Low Rate Initial Production (LRIP) Lot 1 aircraft with RDT&amp;E and APN funds, with the four RDT&amp;E aircraft to be used for Initial Operational Test and Evaluation (IOT&amp;E) and the two APN aircraft establishing the IOC production base.</p>								

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**B. PROGRAM CHANGE SUMMARY:**

Funding:	FY08	FY09	FY10
FY09 President's Budget:	388.380	570.484	590.243
FY10 President's Budget:	386.305	564.774	554.827
Total Adjustments	-2.075	-5.710	-35.416

Summary of Adjustments

Congressional Rescissions			
Congressional Adjustments		-4.165	
SBIR/STTR/FTT Assessments	-2.075		
Program Adjustments			-26.305
Rate/Misc Adjustment		-1.545	-9.111
Subtotal	-2.075	-5.710	-35.416

Schedule:

Underexecution marks during SDD have affected early design efforts causing the planned design ramp to slow during critical design phases. Although schedule has been delayed, the program is within Acquisition Program Baseline (APB) parameters.

Technical:

Not Applicable

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<b>APPROPRIATION/BUDGET ACTIVITY</b> RDT&E, N / BA-5		<b>PROGRAM ELEMENT NUMBER AND NAME</b> 0605212N, CH-53K RDTE			<b>PROJECT NUMBER AND NAME</b> 3059, CH-53K Development			
COST (\$ in Millions)		FY 2008	FY 2009	FY 2010				
Project Cost		<b>386.305</b>	<b>564.774</b>	<b>554.827</b>				
3059 CH-53K Development		1	2	2				
<p><b>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b></p> <p>The CH-53 is the only marinized heavy-lift helicopter in the world and is the Marine Corps only heavy-lift helicopter. The CH-53 mission is the conduct of expeditionary heavy-lift assault transport of armored vehicles, equipment and personnel to support distributed operations deep inland from a sea-based center of operations. The CH-53E "Super Stallion" was introduced into operations in 1980 as an upgrade version of the CH-53D. The CH-53E has developed performance degradation, fatigue life, interoperability, maintenance supportability, and other operational concerns. An improved CH-53 is needed to support Marine Air-Ground Task Force heavy-lift requirements in the 21st century joint environment. The CH-53K will provide improvements in range and payload, performance, cargo handling and turn-around times, reliability and maintainability, interoperability, and survivability. The CH-53K program is required to provide full system capability, including shipboard compatibilities, at Initial Operational Capability (IOC). The CH-53K will replace the CH-53E.</p> <p>Total aircraft quantities for the CH-53K program are 205 helicopters. This includes one Ground Test Vehicle (GTV) and four Engineering Development Models (EDMs) for SDD, to be purchased with RDT&amp;E funds. Of the remaining 200 Production-representative and Production aircraft, the first six will be procured as Low Rate Initial Production (LRIP) Lot 1 aircraft with RDT&amp;E and APN funds, with the four RDT&amp;E aircraft to be used for Initial Operational Test and Evaluation (IOT&amp;E) and the two APN aircraft establishing the IOC production base</p>								

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<b>APPROPRIATION/BUDGET ACTIVITY</b> RDT&E, N / BA-5	<b>PROGRAM ELEMENT NUMBER AND NAME</b> 0605212N, CH-53K RDTE	<b>PROJECT NUMBER AND NAME</b> 3059, CH-53K Development

**B. Accomplishments/Planned Program**

Air Vehicle Development	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	337.849	511.309	483.491	
RDT&E Articles Quantity	1	2	2	

System Development and Demonstration (SDD) activities for the CH-53K air vehicle and its associated subsystems and components, and CH-53K ancillary systems.

Integrated Logistics Support	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	10.320	11.400	25.110	
RDT&E Articles Quantity				

In-house, field activities, and contractors support of Integrated Logistic support and Test & Evaluation activities, including but not limited to planning, preparations, and management of data, support equipment, Government Furnished Equipment (GFE), Studies & Analysis, training elements of CH-53K development, and program Test & Evaluation efforts.

Systems Engineering & Project Management	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	38.136	42.065	46.226	
RDT&E Articles Quantity				

In-house, field activities, and contractors support of Integrated Product Teams (IPTs) to allow for the preparation of acquisition strategy, examination of equipment and avionics for the CH-53K, and development of acquisition documentation. Efforts include, but are not limited to, government development support, engineering support, program management support, systems engineering support, and travel for the CH-53K program.

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APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA--5</b>	PROGRAM ELEMENT NUMBER AND NAME 0605212N, CH-53K RDTE	PROJECT NUMBER AND NAME 3059, CH-53K Development									
<p><b>C. OTHER PROGRAM FUNDING SUMMARY:</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;"><u>Line Item No. &amp; Name</u></th> <th style="text-align: center; border-bottom: 1px solid black;"><u>FY 2008</u></th> <th style="text-align: center; border-bottom: 1px solid black;"><u>FY 2009</u></th> <th style="text-align: center; border-bottom: 1px solid black;"><u>FY 2010</u></th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Not Applicable</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p style="margin-top: 20px;"><b>D. ACQUISITION STRATEGY:</b></p> <p style="margin-left: 20px;">On 31 October 2005, the Defense Acquisition Board reviewed the CH-53K program for a Milestone (MS) B decision on entry to System Development and Demonstration (SDD). The Under Secretary of the Defense (Acquisition, Technology and Logistics) (USD(AT&amp;L)) signed the Acquisition Decision Memorandum (ADM) allowing the program to proceed with SDD on 22 December 2005. The CH-53K program was initiated as an Acquisition Category (ACAT) ID program, based on total estimated costs for Research, Development, Test and Evaluation (RDT&amp;E), and Aircraft Procurement, Navy (APN). The CH-53K program will use a</p>				<u>Line Item No. &amp; Name</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	Not Applicable			
<u>Line Item No. &amp; Name</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>								
Not Applicable											

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Exhibit R-3 Cost Analysis (page 1)							DATE: <b>May 2009</b>					
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
<b>RDT&amp;E, N / BA-5</b>			0605212N, CH-53K RDTE			3059, CH-53K Development						
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					
Primary Hardware Development	CPAF	SIKORSKY Stratford, CT	864.176	478.206	12/08	447.727	12/09					
Ancillary Hardware Development												
Aircraft Integration												
Ship Integration												
Ship Suitability												
Systems Engineering												
Training Development												
Licenses												
Tooling												
GFE	VARIOUS	VARIOUS	22.449	6.382	VARIOUS	5.740	VARIOUS					
Award Fees	CPAF	SIKORSKY Stratford, CT	29.507	26.721	12/09	30.024	12/10					
Subtotal Product Development			916.132	511.309		483.491						
<p>Remarks: Award Fee earned in FY 2006 by Sikorsky Aircraft Corporation equaled sixty-three percent of available award fee pool.                      Award Fee earned in FY 2007 by Sikorsky Aircraft Corporation equaled thirty-five percent of available award fee pool.                      Award Fee earned in FY 2008 by Sikorsky Aircraft Corporation equaled fifty-six percent of available award fee pool.</p> <p>Amounts may not add due to rounding.</p>												
Development Support	WX	TBD				5.800	12/09					
Software Development												
Integrated Logistics Support	WX	VARIOUS	19.948	6.100	12/08	6.710	12/09					
Configuration Management												
Technical Data												
Studies & Analyses	VARIOUS	VARIOUS	16.347	0.700	VARIOUS	0.400	VARIOUS					
GFE												
Award Fees												
Subtotal Support			36.295	6.800		12.910						
<p>Remarks: Amounts may not add due to rounding.</p>												

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Exhibit R-3 Cost Analysis (page 2)								DATE: <b>May 2009</b>					
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>			PROGRAM ELEMENT 0605212N, CH-53K RDTE			PROJECT NUMBER AND NAME 3059, CH-53K Development							
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						
Developmental Test & Evaluation	WX	VARIOUS	4.197	3.600	12/08	11.000	12/09						
Operational Test & Evaluation	WX	TBD											
Live Fire Test & Evaluation	WX	NAWCWD, CHINA LAKE CA	1.020	1.000	01/09	1.200	01/10						
Test Assets													
Tooling													
GFE													
Award Fees													
Subtotal T&E			5.217	4.600		12.200							
Remarks: Amounts may not add due to rounding.													
Contractor Engineering Support	VARIOUS	VARIOUS	6.527	1.303	12/08	1.350	12/09						
Government Engineering Support	WX	VARIOUS	86.036	28.673	12/08	32.073	12/09						
Program Management Support	VARIOUS	VARIOUS	32.871	11.479	12/08	12.132	12/09						
Travel	WX	NAWCAD , PAX RIVER, MD	1.673	0.610	VARIOUS	0.671	VARIOUS						
Transportation													
SBIR Assessment													
Subtotal Management			127.107	42.065		46.226							
Remarks: Amounts may not add due to rounding.													
Total Cost			1,084.751	564.774		554.827							
Remarks:													

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EXHIBIT R4, Schedule Profile																	DATE		
APPROPRIATION/BUDGET ACTIVITY										PROGRAM ELEMENT NUMBER AND NAME							PROJECT NUMBER AND NAME		
<b>RDT&amp;E, N / BA-5</b>										0605212N, CH-53K RDTE							3059, CH-53K Development		
Fiscal Year	2008				2009				2010										
	1	2	3	4	1	2	3	4	1	2	3	4							
Acquisition Milestones											DRR ◇								
	System Integration										System	Demonstration							
RDT&E Contract Awards																			
Engineering Milestones				PDR ▽						CDR ▽									
Logistics Milestones										ILA ▽									
Test & Evaluation Milestones																			
Production Milestones																			
Deliveries																			

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Exhibit R-4a, Schedule Detail				DATE: <b>May 2009</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA 5</b>	PROGRAM ELEMENT 0605212N, CH-53K RDTE			PROJECT NUMBER AND NAME 3059, CH-53K Development			
Schedule Profile	FY 2008	FY 2009	FY 2010				
System Integration phase	1Q-4Q	1Q-4Q	1Q-3Q				
Preliminary Design Review (PDR)	4Q						
Critical Design Review (CDR)			2Q				
Independent Logistics Assessment (ILA)			2Q				
USD(AT&L) Design Readiness Review (DRR)			3Q				
System Demonstration phase			3Q-4Q				
Alternative Live Fire T&E (ALT&E) (Comp.)							
Ground Test Vehicle (GTV) delivery							
Flight Readiness Review (FRR)							
Engineering Dev't Model (EDM) #1 delivery							
Integrated Test & Eval (IT) B1 (IT-B1)							
EDM #2 delivery							
EDM #3 delivery							
First Flight							
EDM #4 delivery							
Production Readiness Review (PRR)							
Independent Logistics Assessment (ILA)							
Operational Test & Eval (OT) B1 (OT-B1)							
ALFT&E (System)							
IT-B2							
MS C							
Low-Rate Initial Production (LRIP) phase							
LRIP 1 Kt Award							
LRIP 1 production							
IT-C1							
IT-C2							
OT-C1							
LRIP Lot 1 Aircraft 1 & 2							
Tech Eval							
IT-C3							
LRIP Lot 1 Aircraft 3							
LRIP Lot 1 Aircraft 4							
IOT&E / OT-2 / OPEVAL							
IOC							

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