

Exhibit P-40, BUDGET ITEM JUSTIFICATION										DATE: <b>February 2004</b>	
APPROPRIATION/BUDGET ACTIVITY <b>Aircraft Procurement, Navy/APN-5 Aircraft Modifications</b>					P-1 ITEM NOMENCLATURE <b>H-1 Series Modifications</b>						
Program Element for Code B Items:											
	Prior Years	ID Code	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total
QTY		A									
COST (In Millions)	<b>99.9</b>	A	<b>9.1</b>	<b>10.9</b>	<b>3.5</b>	<b>7.4</b>	<b>7.4</b>	<b>6.0</b>	<b>7.6</b>	<b>27.5</b>	<b>179.3</b>
<p>There are 89 H-1N's in the UH configuration (68 active/20 reserve/1 test) and 28 H-1Ns in the HH configuration (9 Marine/19 Navy) for a total of 117. The UH-1N provides command and control and combat assault support under day/night and adverse weather conditions. Additional UH-1N missions include special operations support, controls/coordination/guidance of supporting fire and aeromedical evacuation. The overall goal of the modifications budgeted in FY2005 is to eliminate safety hazards, remedy obsolescence and maintain significant mission capability until the planned retirement date. The HH configured aircraft provide local civilian and military search and rescue support, as well as augmenting Department of Homeland Security resources.</p>											
<b>OSIP No.</b>	<b>Description</b>	<b>Prior Years</b>	<b>FY 2003</b>	<b>FY 2004</b>	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>To Complete</b>	<b>Total</b>
31-92	UH-1 NTIS	78.4	5.0	8.2	3.3	7.2	7.2	5.8	7.4	27.5	149.9
18-98	H-1N Safety Upgrades	21.5	4.1	2.7	0.2	0.2	0.2	0.2	0.2		29.4
	Total	<b>99.9</b>	<b>9.1</b>	<b>10.9</b>	<b>3.5</b>	<b>7.4</b>	<b>7.4</b>	<b>6.0</b>	<b>7.6</b>	<b>27.5</b>	<b>179.3</b>
<b>RESERVE FUNDING INCLUDED IN TOTAL</b>		5.2									
<p>Asterisk indicates amounts less than \$50K Totals may not add due to rounding</p>											

Exhibit P-3a Individual Modification

MODIFICATION TITLE: UH-1N NAVIGATIONAL THERMAL IMAGING SYSTM (NTIS) (OSIP 31-92)

MODELS OF SYSTEMS AFFECTED: 89 UH-1Ns, 7 reclamation a/c, 4 trainers, 4 lab units TYPE MODIFICATION: SAFETY

DESCRIPTION/JUSTIFICATION: Operational Requirements Document (ORD) AAS-51 states that the UH-1N requires a Navigational Thermal Imaging System (NTIS) to provide the U.S. Marine Corps with a night/day warfighting capability in the NOE/smoke/dust/haze environment. This capability reduces the safety risk by allowing the aircrew to see and avoid flight obstructions and locate targets that might not be visible with the naked eye or night vision goggles. The AN/AAQ-22 is a low cost, stabilized system which provides the required capability in the form of high quality real time imagery displayed into the UH-1N aircraft cockpit. The NTIS System is comprised of 5 components; Turret FLIR Unit (TFU), Central Electronics Unit (CEU), Hand Control Unit (HCU), Thermal Image Recorder (TIR), and the Video Display Unit (VDU). The NTIS is installed only in the UH-1N aircraft by AFC 278. The system also includes a Laser Range Finder (LRF) to determine the range to landmarks, targets, and tactical points of interest. Beginning FY97, the NTIS was upgraded from 1st generation to 3rd generation Forward Looking Infrared (FLIR) technology. The COTS Star SAFIRE modification consisted of a 3-5 micron focal plane array detector, an eye safe LRF and new optics. Additionally, the NTIS will be upgraded with a new Thermal Imaging Recorder (TIR) with mount and a Flat Panel Display replacement for the VDU due to a fire hazard. Additional modifications to the NTIS are being incorporated in order to add a COTS Laser Designator/Laser Pointer capability (BRITE Star). Laser designator capability is a threshold ORD requirement. The Laser Pointer capability is an ORD objective requirement. A contract has been signed to provide a minimum of 1 and a maximum of 125 upgrades to the AN/AAQ-22 series systems.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The NTIS is a commercial off-the-shelf (COTS) item. MIL-STD-810C testing is complete. DT-III testing was completed in the fourth quarter 1994 and FOT&E was completed in the second quarter FY 1996. Additional testing occurred during fourth quarter 1998 for the NTIS upgrade. The completion of COTS post Milestone III testing of Laser Designator (BRITE Star) occurred in 3rd and 4th quarter of FY01 and has continued into FY02.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
AFC 278 ECP E/JH HO 30006	105	2.6																			
AFC-334 TIR ECP#H-1-CP9-97R-1	105	0.1																			
AFC-364 (BRITE Star)			7	*	12	*	5	*													
Installation Kits N/R		3.4																			
Installation Equipment																					
NTIS System (GFE)	84	29.7																			
TIR (GFE)	107	1.0																			
NTIS Upgrade	81	27.9	4	1.4																	
Flat Panel Display	90	0.8																			
BRITE STAR	3	2.0	5	3.3	12	7.6	5	2.9													
Installation Equipment N/R		0.6																			
Engineering Change Orders																					
Data		0.5																			
Training Equipment	2	0.6																			
Support Equipment		1.1					2	*													
ILS		0.3		0.1		0.1		0.1													
Other Support		4.8		0.2		0.5		0.3													
Interim Contractor Support																					
Installation Cost	107	3.1	7	*	12	*	5	*													
<b>Total Procurement</b>		<b>78.4</b>		<b>5.0</b>		<b>8.2</b>		<b>3.3</b>													

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$50K
3. FY04 NTIS Upgrade Procurement realigned to BRITE Star to continue FY03 BRITE Star Congressional Add.



Exhibit P-3a Individual Modification

MODIFICATION TITLE: H-1N SAFETY UPGRADES (18-98)

MODELS OF SYSTEMS AFFECTED: HH-1N/UH-1N TYPE MODIFICATION: SAFETY

DESCRIPTION/JUSTIFICATION: Operational Requirements Document (ORD) AAS-51 requires that the following safety shortfalls be corrected. The HH/UH-1N helicopter fleet was designed in the 1960s, introduced in the 1970s and are projected to remain in the Department of Navy inventory until FY-2020. This program is designed to address safety issues, such as mishap casual factors associated with maintaining an older type model series aircraft. This safety upgrade program replaced the Tail Drive System (TDS). A COTS/NDI Improved Torque Indicator System will be added to provide a digital torque display to the aircrew to improve low power margin situational awareness. Tailboom Strake technology will be investigated to improve performance and reduce tailboom fatigue. Tailboom Strakes have been proven to increase aircraft and aircrew safety by reducing tailboom fatigue and pilot workload while improving tail rotor authority and single engine performance. Additionally, the overspeed Aural Alert Unit (AAU) will be modified. A modification to the CH-8500 Vibration Analysis Support Equipment (VASE) will also be needed. A COTS replacement Rotor Brake Quill (RBQ) assembly, component failures due to an obsolete design pose a significant risk to all aircrew, and Low Maintenance Battery (LMB) will be incorporated into all HH/UH-1N aircraft. Included in this OSIP is the requirement to correct the safety deficiencies of the Defensive Armament System (DAS): machine guns, carriages, mounts, and associated equipment. Improvements and enhancements to airframe Night Vision Goggle (NVG) compatibility along with communications equipment for external agency interaction during the Global War on Terrorism. A/C fatigue life issues and mitigating technology will be investigated to improve performance and mitigate aircraft fatigue. Incorporation of Crash Attenuating Seat Cushions, to reduce reduce the likelihood of back injuries to pilots during hard landings or crashes, will be also investigated for modification.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: These upgrades are proprietary, non-developmental items used in other BHTI produced military and FAA certified commercial helicopters.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
ECP # BHTI-1710 (TDS)	131	6.3																			
ECP# HI-CP-24-99 Rotor Brake Quill	136	1.6																			
ECP# HI-CP-19-98 Aural Alert Unit	103	Note #3																			
Smart Torque Indicator	68	1.0			200	2.3															
ECP# NAWCWD 97GG023R2 M240	210	0.1																			
ECP# 98-002 GAU-17 Gun Ctrl Unit	79	0.3																			
ECP#98-0014 IDAS Mounts	110	0.7																			
Tailboom Strakes			119	4.0																	
Installation Kits N/R		1.3																			
Aural Alert Unit Install. Equipment	103	0.6																			
Engineering Change Orders		0.0																			
Data		0.7																			
Training Equipment	4	1.3																			
Support Equipment	100	0.4																			
ILS		1.0																			
Other Support		5.4		0.1		0.4		0.2													
Interim Contractor Support																					
Installation Cost	229	0.8																			
<b>Total Procurement</b>		<b>21.5</b>		<b>4.1</b>		<b>2.7</b>		<b>0.2</b>													

- Notes:
1. Totals may not add due to rounding
  2. Asterisk indicates amount less than \$50K
  3. Aural Alert Unit Installation Kit Cost included in Aural Alert Unit Installation Equipment cost.

**Exhibit P-3a**

MODELS OF SYSTEMS AFFECTED: HH-1N/UH-1N MODIFICATION TITLE: H-1N SAFETY UPGRADES (OSIP 18-98)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD TEAM AND ORGANIC MOD TEAM

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2003: \_\_\_\_\_ FY 2004: \_\_\_\_\_ FY 2005: \_\_\_\_\_

DELIVERY DATE: FY 2003: \_\_\_\_\_ FY 2004: \_\_\_\_\_ FY 2005: \_\_\_\_\_

(\$ in Millions)

Cost:	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		TOTAL	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2002 & PY (229) kits	229	0.8																	229	0.8
FY 2003 ( ) kits																				
FY 2004 ( ) kits																				
FY 2005 ( ) kits																				
FY 2006 ( ) kits																				
FY 2007 ( ) kits																				
FY 2008 ( ) kits																				
FY 2009 ( ) kits																				
<b>TOTAL</b>	<b>229</b>	<b>0.8</b>																	<b>229</b>	<b>0.8</b>

Installation Schedule reflects 103 AAUs and 126 TDS.

FY 2002 & Prior	FY 2002				FY 2003				FY 2004				FY 2005				FY 2006			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	213	16																		
Out	213	16																		

	FY 2007				FY 2008				FY 2009				To Complete	TOTAL
	1	2	3	4	1	2	3	4	1	2	3	4		
In														229
Out														229