

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

May 2009

BUDGET ACTIVITY

PE NUMBER AND TITLE

4 - Advanced Component Development and Prototypes

0603801A - Aviation - Adv Dev

COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	8876	9822	8537	Continuing	Continuing
B32 ADV MAINT CONCEPTS/EQ	5010	9822	8537	Continuing	Continuing
B47 VECTORED THRUST DUCTED PROPELLER (VTDP)	3866				3866

A. Mission Description and Budget Item Justification: This PE provides advanced development aviation support of tactical programs associated with air mobility, advanced maintenance concepts and equipment, and Aircrew Integrated Systems (ACIS). This program demonstrates the feasibility and maturity of new technology and gains understanding in order to evaluate utility of this technology to expedite delivery of new capabilities for Army Aviation rotary wing assets. Additionally, the Aviation Ground Support Equipment (AGSE) assets enhance the functionality of current and future aircraft by improving the effectiveness of maintenance and servicing operations through validating new maintenance concepts to improve man and machine interfaces, improve aircraft maintenance processes, reduce Operation and Support (O&S) cost and insert diagnostics technologies to replace obsolete and unsupportable equipment.

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<u>B. Program Change Summary</u>	FY 2008	FY 2009	FY 2010
Previous President's Budget (FY 2009)	6440	7455	8676
Current BES/President's Budget (FY 2010)	8876	9822	8537
Total Adjustments	2436	2367	-139
Congressional Program Reductions		-33	
Congressional Rescissions			
Congressional Increases		2400	
Reprogrammings	2616		
SBIR/STTR Transfer	-180		
Adjustments to Budget Years			-139

Change Summary Explanation: Funding - FY 2009: \$2.400 million is for New High Temperature Domestic Sourced PES Foam Fabrication/Certification for DoD Aerospace Applications and will be moved to RDECOM's Program Element Number 0603003A, Title is Advanced Aviation Technology for proper execution.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

May 2009

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes		PE NUMBER AND TITLE 0603801A - Aviation - Adv Dev			PROJECT B32	
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost	
B32 ADV MAINT CONCEPTS/EQ	5010	9822	8537	Continuing	Continuing	

A. Mission Description and Budget Item Justification: FY 2010 budget request funds Aviation Advanced Development. This program element demonstrates the feasibility and maturity of new technology and gains understanding in order to evaluate utility of this technology to expedite delivery of new capabilities for Army Aviation rotary wing assets. Additionally, the Aviation Ground Support Equipment (AGSE) assets enhance the functionality of current and future aircraft by improving the effectiveness of maintenance and servicing operations through validating new maintenance concepts to improve man and machine interfaces, improve aircraft maintenance processes, reduce Operation and Support (O&S) cost and insert diagnostics technologies to replace obsolete and unsupportable equipment. This program provides for development of rapid battle repair procedures, tools development to speed the return of aircraft to a full mission status and development of new equipment for aerial recovery of damaged aircraft. Included in this program are projects such as: diagnostics/prognostic monitoring systems, Battle Damage Assessment and Repair (BDAR) Block II procedures and tools, Flexible Engine Diagnostic System (FEDS), Unit Maintenance Aerial Recovery Kit (UMARK), Aviation Light Utility Mobile Maintenance Cart (ALUMMC), Shop Equipment Contact Maintenance (SECM), Aviation - Sets, Kits, Outfits and Tools (A-SKOT) redesign, development of the modular Aviation Ground Power Unit (AGPU), Hand Held Fire Extinguisher (HHFE), and development support for tools needed to provide maintenance support to modernized/future force aircraft.

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
Hand Held Fire Extinguisher (HHFE)	800	1040	1270
Battle Damage Assessment and Repair System (BDAR) Block II	30	300	800
Standard Aircraft Towing System (SATS)	917	500	
Flexible Engine Diagnostics (FEDS)	1655	1542	3079
Shop Equipment Contact Maintenance (SECM) Modernization	418	729	594
Aviation Ground Power Unit (AGPU)		513	467
Aviation Light Utility Mobile Maintenance Cart (ALUMMC)			224
Unit Maintenance Aerial Recovery Kit (UMARK)	290	921	604
Aviation - Sets, Kits, Outfits and Tools (A-SKOT)		1026	668
New High Temperature Domestic Sources Foam Fabrication/Certification for DOD Aerospace Applications		2325	
Management Support Services	355	303	475
Technical Engineering Services	368	112	72
RDTE Project Test Support	177	236	284
Small Business Innovative Research (SBIR)/ Small Business Technology Transfer Programs (STTR)		275	

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BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes	PE NUMBER AND TITLE 0603801A - Aviation - Adv Dev	PROJECT B32
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Total	5010	9822	8537
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<u>B. Other Program Funding Summary</u>	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
Aircraft Procurement, Army(APA) SSN AZ3100	85041	108576	111386	Continuing	Continuing

Comment:

C. Acquisition Strategy This project is an aggregate of advanced maintenance concepts-related projects. While the detailed acquisition strategy varies from project to project, the general strategy for each individual project is to complete the development effort through Government test (developmental and operational). Program documentation for milestone decision is prepared, as appropriate, concurrently with the development effort.

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
4 - Advanced Component Development and Prototypes			0603801A - Aviation - Adv Dev							B32		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
HHFE	MIPR	AFRL, Tyndall AFB, FL/AEC, Aberdeen Proving Ground, MD	345	800	3-4Q	1040	1Q	1270	2-3Q	Cont.	Cont.	Cont.
BDAR BLOCK II	MIPR	AATD, AMRDEC, Redstone Arsenal, AL		30	1-2Q	300	3Q	800	2-3Q		1130	
SATS	MIPR	AMCOM, Redstone Arsenal, AL/AATD, Ft. Eustis, VA	1279	917	4Q	500	2Q				2696	
FEDS	Various	AMRDEC, Redstone Arsenal AL/RTTC, Redstone Arsenal, AL	182	1655	3-4Q	1542	2-3Q	3079	2-3Q	Cont.	Cont.	Cont.
SECM	Various	TACOM, Detroit, MI/A TEC, Alexandria, VA/ARDEC, Picatinney NJ	3235	418	4Q	729	2-3Q	594	2-3Q		4976	
ALUMMC	Various	Various						224	2-4Q	Cont.	Cont.	Cont.
AGPU	Various	UAH, Huntsville, AL/TBD	10236			513	3Q	467	2-3Q	Cont.	Cont.	Cont.
UMARK	MIPR	AMRDEC, Redstone Arsenal, AL/UAH, Huntsville, AL	873	290	2-4Q	921	1-2Q	604	2-3Q	Cont.	Cont.	Cont.
A-SKOT	Various	RDECOM, Ft. Monmouth NJ/AMRDEC, Redstone Arsenal, AL/BELZON, Huntsville, AL/AATD, Ft. Eustis, VA/	1040			1026	2-3Q	668	2-3Q	Cont.	Cont.	Cont.
New High Temperature Domestic Sources Foam Fabrication/Certification for DOD Aerospace Applications	TBD	TBD				2325	3-4Q				2325	
Subtotal:			17190	4110		8896		7706		Cont.	Cont.	Cont.

ARMY RDT&E COST ANALYSIS (R3)

May 2009

BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes	PE NUMBER AND TITLE 0603801A - Aviation - Adv Dev	PROJECT B32
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II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Technical Engineering Services	MIPR	AATD, Ft. Eustis, VA	5608	368	2Q	112	1-3Q	72	1-3Q	Cont.	Cont.	Cont.
Subtotal:			5608	368		112		72		Cont.	Cont.	Cont.

Remarks: None

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
RDT&E Project Test Support	MIPR	AEC, Aberdeen Proving Ground, MD	335	177	2Q	236	1Q	284	2Q	Cont.	Cont.	Cont.
Subtotal:			335	177		236		284		Cont.	Cont.	Cont.

Remarks: None

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Management Support Services	C/FP/ Level of Effort and InHouse	AGSE, Redstone Arsenal, AL/Science Applications Intl Corp, San Diego, CA	2194	355	1Q	303	1-4Q	475	1-4Q	Cont.	Cont.	Cont.
SBIR/STTR reductions						275					275	
Subtotal:			2194	355		578		475		Cont.	Cont.	Cont.

Remarks: None

Project Total Cost:	25327	5010		9822		8537				Cont.	Cont.	Cont.
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Schedule Detail (R4a Exhibit)

May 2009

BUDGET ACTIVITY		PE NUMBER AND TITLE						PROJECT	
4 - Advanced Component Development and Prototypes		0603801A - Aviation - Adv Dev						B32	
<u>Schedule Detail</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>	<u>FY 2014</u>	<u>FY 2015</u>	
Hand Held Fire Extinguisher	1Q - 4Q	1Q - 4Q	1Q - 4Q						
Battle Damage Assessment & Repair Block II	4Q	1Q - 4Q	1Q - 4Q						
Standard Aircraft Towing System	1Q - 4Q	1Q - 4Q	1Q - 4Q						
Flexible Engine Diagnostic System	1Q - 4Q	1Q - 4Q	1Q - 4Q						
Shop Equipment Contact Maintenance	1Q - 4Q	1Q - 4Q	1Q - 4Q						
Aviation Ground Power Unit	1Q - 4Q	1Q - 4Q	1Q - 4Q						
Aviation Light Utility Mobile Maintenance Cart (ALUMMC)			2Q - 4Q						
Unit Maintenance Aerial Recovery Kit	1Q - 4Q	1Q - 4Q	1Q - 4Q						
Aviation - Sets, Kits, Outfits and Tools		3Q - 4Q	1Q - 4Q						