

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: February 2005	
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7					R-1 ITEM NOMENCLATURE 0702207N Depot Maintenance (Non-IF)			
COST (\$ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	8.524	7.000	10.012	3.200				
3030 F-18 SLAP	1.000	7.000	10.012	3.200				
2451 P-3 SLAP	7.524							

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The F/A-18 Service Life Assessment Program (SLAP) is assessing the structural condition of the F/A-18 fleet in order to determine what structural modifications are necessary to extend the aircraft designed service life and allow it to achieve inventory requirements. The Resource Sponsor (N78) has indicated an urgent need to assess the structural condition of the F/A-18 fleet to determine whether the structural condition supports OPNAV Tactical Aircraft inventory requirements through fiscal year FY 2023. It is known that F/A-18 aircraft built prior to Lot 18 are limited to 78% of their design fatigue life due to structural cracking in the section of the fuselage known as the "Center Barrel". The Center Barrel Replacement Plus (CBR+) program eliminates structural life limitations caused by cracking in the Center Barrel. The airframe structure also has landing and flight hours limitations, both of which must be addressed to extend the designed service life of the aircraft. The F/A-18 A/B/C/D aircraft structure is being assessed to determine the life limit on landings and flight hours for all four models (Lot 8 aircraft and above). Currently the aircraft structure is limited to 8,300 landings and 6,000 flight hours. The goal of the SLAP program will be to identify critical structure to allow total landings to be increased to 14,500 and flight hours to 12,000. This increase in total landings and flight hours would allow the F/A-18 A/B/C/D to meet OPNAV Tactical Aircraft inventory requirements through fiscal year FY 2023, to include planning for the announced one year JSF slide. These efforts are required to be conducted for these airframes to ascertain what actions must be taken to safely operate each system until the targeted end of service life.

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Exhibit R-2, RDTEN Budget Item Justification
(Exhibit R-2, page 1 of 10)

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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2005	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7	PROGRAM ELEMENT NUMBER AND NAME 0702207N Depot Maintenance				PROJECT NUMBER AND NAME 3030 F/A-18 Service Life Assessment Program (SLAP)			
COST (\$ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Cost	1.000	7.000	10.012	3.200				
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The F/A-18 Service Life Assessment Program (SLAP) is assessing the structural condition of the F/A-18 fleet in order to determine what structural modifications are necessary to extend the aircraft designed service life and allow it to achieve inventory requirements. The Resource Sponsor (N78) has indicated an urgent need to assess the structural condition of the F/A-18 fleet to determine whether the structural condition supports OPNAV Tactical Aircraft inventory requirements through fiscal year FY 2023. It is known that F/A-18 aircraft built prior to Lot 18 are limited to 78% of their design fatigue life due to structural cracking in the section of the fuselage known as the "Center Barrel". The Center Barrel Replacement Plus (CBR+) program eliminates structural life limitations caused by cracking in the Center Barrel. The airframe structure also has landing and flight hours limitations, both of which must be addressed to extend the designed service life of the aircraft. The F/A-18 A/B/C/D aircraft structure is being assessed to determine the life limit on landings and flight hours for all four models (Lot 8 aircraft and above). Currently the aircraft structure is limited to 8,300 landings and 6,000 flight hours. The goal of the SLAP program will be to identify critical structure to allow total landings to be increased to 14,500 and flight hours to 12,000. This increase in total landings and flight hours would allow the F/A-18 A/B/C/D to meet OPNAV Tactical Aircraft inventory requirements through fiscal year FY 2023, to include planning for the announced one year JSF slide. These efforts are required to be conducted for these airframes to ascertain what actions must be taken to safely operate each system until the targeted end of service life.

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7	PROGRAM ELEMENT NUMBER AND NAME 0702207N DEPOT MAINTENANCE	PROJECT NUMBER AND NAME 3030 F/A Service Life Assessment Program (SLAP)																	
B. Accomplishments/Planned Program																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 25%;"></th><th style="width: 12.5%;">FY 04</th><th style="width: 12.5%;">FY 05</th><th style="width: 12.5%;">FY 06</th><th style="width: 12.5%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">1.000</td><td style="text-align: center;">7.000</td><td style="text-align: center;">10.012</td><td style="text-align: center;">3.200</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>						FY 04	FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost	1.000	7.000	10.012	3.200	RDT&E Articles Quantity				
	FY 04	FY 05	FY 06	FY 07															
Accomplishments/Effort/Subtotal Cost	1.000	7.000	10.012	3.200															
RDT&E Articles Quantity																			
Continue to conduct analysis of aircraft structures and complete Cat/Trap/Flight Hour analysis and technical support.																			
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EXHIBIT R-2a, RDT&E Project Justification		DATE:
		February 2005
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0702207N DEPOT MAINTENANCE	3030 F/A Service Life Assessment Program (SLAP)

C. PROGRAM CHANGE SUMMARY:

Funding:	FY 04	FY 05	FY 06	FY 07
Previous President's Budget:	0.000	0.000	0.000	0.000
Current BES/President's Budget	1.000	7.000	10.012	3.200
Total Adjustments	1.000	7.000	10.012	3.200

Summary of Adjustments

Congressional program reductions				
Congressional undistributed reductions				
Congressional rescissions				
SBIR/STTR Transfer				
Other Adjustments		7.000	10.012	3.200
Economic Assumptions				
Reprogrammings	1.000			
Congressional increases				
Subtotal	1.000	7.000	10.012	3.200

Schedule:

The FY 2003 President's Budget identified a requirement for a Service Life Assessment Program (SLAP) to conduct a structural assessment for F/A-18 aircraft built prior to lot 18 aircraft to determine the life limit on landings and achieve structural capability to allow total landings to be increased to 14,500. A subset of this effort was to extend Cat/Trap's to 2,700. The FY 2003 President's Budget R-2a exhibit schedule shows the Cat/Trap extension effort through 31 December 2004. Towards this goal, it is evident that in order to achieve the 2,700 Cat/Trap extension, ground load affected structure analyses (e.g., crack growth analysis of selected locations and fatigue lives) are required. These efforts are within the scope and parameters set forth in the FY 2003 President's Budget and will continue through FY 2007.

Technical:

This SLAP continuation will also examine extending the flight hour life of the aircraft from 6,000 hours to 12,000 hours, which will equate with the growth in total landings from 8,300 to 14,500. The flight hour affected structure analysis, fleet usage based flight spectrum analysis and fatigue load development analysis will complete in FY 2007. As with the current Cat/Trap limitation, the current 6,000 flight hour restriction will also jeopardize grounding aircraft without these analyses.

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Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 4 of 10)

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EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2005		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7		PROGRAM ELEMENT NUMBER AND NAME 0702207N DEPOT MAINTENANCE			PROJECT NUMBER AND NAME 3030 F/A Service Life Assessment Program (SLAP)					
D. OTHER PROGRAM FUNDING SUMMARY:										
<u>Line Item No. & Name</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>To Complete</u>	<u>Total Cost</u>
APN-5 P.E. 0204136N F/A-18 Squadrons OSIP (11-99) Service Life Management Program	30.743	102.732	86.693	111.591	113.98	115.366	123.262	124.768	283.9	1186.7
E. ACQUISITION STRATEGY: *										
The SLAP program employs sole source contracts with Boeing, the aircraft prime manufacturer. SLAP consists of structural analyses of the main landing gear, arresting hook, catapult structures, vertical tails, wings and fuselage. These analyses will provide for the development of aircraft rework necessary to extend total aircraft landing from 8,300 to 14,000 catapults and arrestments from 2,000 to 2,700 flight hours from 6,000 to 12,000. Engineering Charge Proposals(ECPs) generated by the SLAP analysis will be incorporated into Service Life Management Program(SLMP) under OSIP (11-99).										

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2005				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-7			0702207N DEPOT MAINTENANCE			3030 F/A Service Life Assessment Program (SLAP)						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Systems Engineering	CPFF	BOEING. St. Louis	12.226	7.000	01/05	10.012	01/06	3.200	01/07		32.438	32.438
Systems Engineering	WX	NAWCAD, Pax River, MD	1.148								1.148	
Systems Engineering	WX	NADEP, North Island, CA	3.608								3.608	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Product Development			16.982	7.000		10.012		3.200		0.000	37.194	
Remarks:												
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												

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Exhibit R-3 Cost Analysis (page 2)									DATE: February 2005			
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-7			0702207N DEPOT MAINTENANCE			3030 F/A Service Life Assessment Program (SLAP)						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
											0.000	
											0.000	
Subtotal T&E			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
Contractor Support	WX	Various	1.747								1.747	
Travel	WX	NAVAIR, PAX RIVER, MD	0.065								0.065	
											0.000	
Subtotal Management			1.812	0.000		0.000		0.000		0.000	1.812	
Remarks:												
Total Cost			18.794	7.000		10.012		3.200		0.000	39.006	
Remarks:												









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Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 7 of 10)

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EXHIBIT R4, Schedule Profile																								DATE:											
APPROPRIATION/BUDGET ACTIVITY												PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME											
RDT&E, N / BA-7												0702207N DEPOT MAINTENANCE												3030 F/A SERVICE LIFE ASSESSMENT PROGRAM (SLAP)											
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			
Contract Award																																			
1.1 Flight Load Structure Crack Growth Analysis Using Design Loads																																			
1.2 Flight Load Structure Usage Flight Spectrum Development																																			
1.3 Flight Load Structure Fatigue Loads Development																																			
1.4 Flight Load Structure Crack Initiation Life for 90% Spectrum Assessment																																			
2.1 Ground Load Structure Crack Growth Analysis Using 90% Loads																																			
2.2 Ground Load Structure Fatigue Life Assessment for 90% Spectrum																																			
3.0 Fleet Aircraft Teardown																																			

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Exhibit R-4, Schedule Profile
(Exhibit R-4, page 8 of 10)

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CLASSIFICATION:

[illegible]

Termination Liability Funding
For Major Defense Acquisition Programs,
RDT&E Funding
(\$000)

Program	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
3030 F/A-18 SLAP	0	0	0	0	0	0	0	0

This program does not budget/fund termination liability separately. A Limitation of Funds (LoF) clause (FAR 52.232-22) is inserted in all incrementally funded R&D contracts. This clause is designed to limit the government's legal liability to the amount obligated.