

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7					R-1 ITEM NOMENCLATURE 0702207N Depot Maintenance (Non-IF)			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost	15.938	6.947	9.073					
E3030 F-18 SLAP	5.593	1.941						
H2451 P-3 SLAP	9.651	5.006	9.073					
W2454 AN/ARC-210-RT-1794(C)	0.694							

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The F/A-18 Service Life Assessment Program (SLAP) will assess 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) 2020. 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 the following structural 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 will also be assessed to determine the life limit on landings for all four models of types for aircraft lot 8 and above aircraft. Currently the aircraft structure is limited to 8300 landings. The goal of the SLAP program will be to identify critical structure to allow total landings to be increased to 14,500. This increase in total landings would allow the F/A-18 A/B/C/D to meet OPNAV Tactical Aircraft inventory requirements through fiscal year (FY) 2020. The Service Life Assessment Program (SLAP) on the P-3 to include all P-3 derivatives (H2451.) 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. The AN/ARC-210-RT-1794C (W2454) provided for the development of radio software modifications required for upgrades to the evolving standards.

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7		PROGRAM ELEMENT NUMBER AND NAME 0702207N Depot Maintenance (Non-IF)			PROJECT NUMBER AND NAME H2451 P-3 SLAP			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	9.651	5.006	9.073					
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Current P-3C aircraft fatigue life estimates (from 20,000 to 24,000 flight hours) are based on analysis alone. The P-3 Service Life Assessment Program (SLAP) will perform a full scale fatigue test on a P-3 test article in order to more accurately determine the aircraft fatigue life. After completion of the fatigue test, a destructive test will compare pre-test and post-test analyses. SLAP will identify specific components that require inspection, repair, or replacement during Specific Structural Inspections (SSI) in order to extend the aircraft model's service life beyond its original fatigue life. NRE for fatigue limiting structures will be performed under SLAP to redesign these identified components. This SLAP effort was previously budgeted under APN-5 (BLI 053800) funding within OSIP 02-99.

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COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	5.593	1.941						
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

F/A-18 Service Life Assessment Program (SLAP) will assess the structural condition of the F/A-18A/B/C/D airframe in order to determine required modifications to extend the aircraft designed service life. The Resource Sponsor (N78) has indicated an urgent need to assess the structural condition of the F/A-18 fleet to determine criteria for service life extensions to support OPNAV Tactical Aircraft inventory requirements through fiscal year (FY) 2020. There are three F/A-18A/B/C/D airframe life limits that need to be addressed to support N78's requirement. The first is to restore Wing Root Fatigue Life Expended (WRFLE) on Lot-17 and below aircraft restricted to 78% of their intended life. This has been answered with the Center Barrel Replacement Plus (CBR+) program which restores WRFLE to 1.0 on the affected aircraft. The CBR+ structural components are the baseline for addressing the other two issues needing SLAP: extending "Total Landings" from 8,300 to 14,500 and extending "Catapults and Arrestments" from 2,000 to 2,700. Results from this assessment will ascertain what actions must be taken to supplement the CBR+ baseline modification for safely operating each airframe at the targeted service life extension to allow the F/A-18A/B/C/D to meet OPNAV Tactical Aircraft inventory requirements through fiscal year (FY) 2020. Over 50 F/A-18C aircraft are currently projected to be carrier restricted by FY 2005 unless SLAP is completed and recommended changes are incorporated. A Service Life Extension Program (SLEP) under OSIP 11-99 has been budgeted to implement the recommended changes determined by SLAP.

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Exhibit R-2a, RDTE Project Justification
(Exhibit R-2a, page 3 of 13)

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7	PROGRAM ELEMENT NUMBER AND NAME 0702207N DEPOT MAINTENANCE	PROJECT NUMBER AND NAME E3030 F/A-18 Service Life Assessment Program (SLAP)																	
B. Accomplishments/Planned Program																			
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	FY 02	FY 03	FY 04	FY 05															
Critical Structures Analysis	5.593	1.941																	
RDT&E Articles Quantity																			
Continue to conduct analysis of aircraft structurers and complete Cat/Trap analysis and techincal support.																			
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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7	PROGRAM ELEMENT NUMBER AND NAME 0702207N DEPOT MAINTENANCE	PROJECT NUMBER AND NAME E3030 F/A-18 Service Life Assessment Program (SLAP)
C. PROGRAM CHANGE SUMMARY:		
Funding:	FY 2002	FY 2003
Previous President's Budget:	5.919	1.989
Current BES/President's Budget	5.593	1.941
Total Adjustments	-0.326	-0.048
Summary of Adjustments		
Congressional program reductions		
Congressional undistributed reductions		-0.012
Congressional rescissions	-0.013	
SBIR/STTR Transfer	-0.178	
Economic Assumptions	-0.016	-0.036
Reprogrammings	-0.119	
Congressional increases		
Subtotal	-0.326	-0.048
Schedule:		
Not applicable.		
Technical:		
Not applicable.		

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APPROPRIATION/BUDGET ACTIVITY RDTE, N / BA-7			PROGRAM ELEMENT NUMBER AND NAME 0702207N DEPOT MAINTENANCE			PROJECT NUMBER AND NAME E3030 F/A-18 Service Life Assessment Program (SLAP)				
D. OTHER PROGRAM FUNDING SUMMARY:										
<u>Line Item No. & Name</u>	<u>FY 2002</u>	<u>FY 2003</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>To Complete</u>	<u>Total Cost</u>
APN-5 P.E. 0204136N F/A-18 Squadrons OSIP (11-99) Service Life Management Program	14,130	55,447	30,979	103,480	80,822	81,878	69,923	61,050	526,458	1,024,167
E. ACQUISITION STRATEGY:										
<p>The SLAP program employs sole source contracts with Boeing, the aircraft prime manufacture and concurrent organic efforts conducted by both NADEP North Island and NAWCAD, Patuxent River. SLAP consists of structural analyses of the main landing gear, arresting hook, and catapult structures. These analyses will provide for the development of aircraft rework necessary to extend total aircraft landing from 8,300 to 14,000 and catapults and arrestments from 2,000 to 2,700. Engineering Charge Proposals(ECPs) generated by the SLAP analysis will be incorporated into Service Life Management Program(SLMP) under OSIP (11-99).</p>										

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7	PROGRAM ELEMENT NUMBER AND NAME 0702207N Depot Maintenance (Non-IF)	PROJECT NUMBER AND NAME H2451 P-3 SLAP		
(U) B. Accomplishments/Planned Program				
	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	9.651	5.006	9.073	
RDT&E Articles Quantity				
Fatigue testing, engineering, quality assurance, cost/schedule status reports, NAWC field support and contract support services. Test Rig Teardown, Test Article Teardown, Fatigue Life Expended Rebaselining and Structural Data Recording Set (SDRS) Tracking Algorithm.				

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(U) C. PROGRAM CHANGE SUMMARY:

(U) Funding:	FY 2002	FY 2003	FY 2004	FY 2005
Previous President's Budget:	6.794	5.130	2.896	0.000
Current BES/President's Budget	9.651	5.006	9.073	0.000
Total Adjustments	2.857	-0.124	6.177	0.000
Summary of Adjustments				
Congressional program reductions				
Congressional undistributed reductions		-0.030		
Congressional rescissions	-0.014			
SBIR/STTR Transfer	-0.204			
Economic Assumptions	-0.024	-0.094	-0.213	
Reprogrammings	3.099			
Other Navy/OSD Adjustments			6.390	
Congressional increases				
Subtotal	2.857	-0.124	6.177	0.000

(U) Schedule:

Schedule changed to add the following items: Landing gear test complete 2Q/02; Complete Full Scale Fatigue Test (FSFT) 1Q/03.

The following milestones were previously reported incorrectly: Test Article Teardown initiation 2Q/03; Commence Post Test Analysis 3Q/03; Initiate Fatigue Life Expended Rebaseline 3Q/03; complete SDRS Tracking Algorithm 1Q/04.

(U) Technical:

Not Applicable

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0702207N Depot Maintenance (Non-IF)			PROJECT NUMBER AND NAME H2451 P-3 SLAP					
(U) D. OTHER PROGRAM FUNDING SUMMARY:										
<u>Line Item No. & Name</u>	<u>FY 2002</u>	<u>FY 2003</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>	To <u>Complete</u>	Total <u>Cost</u>
Not Applicable										
(U) E. ACQUISITION STRATEGY:										
SLAP was a full and open competition for a fatigue article test. The contract is a cost plus incentive fee (CPIF), therefore providing an incentive to the contractor to effectively manage program cost and schedule. Contract award was March 1999. SLAP supports the Secretary of the Navy's Maritime Patrol Aircraft Ten Year Plan.										

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2003				
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7			PROGRAM ELEMENT 0702207N Depot Maintenance (Non-IF)			PROJECT NUMBER AND NAME H2451 P-3 SLAP						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Systems Engineering	C/CPIF	LMAS, GA	70.100	4.344	01/03	8.481	01/04				82.925	82.925
Subtotal Product Development			70.100	4.344		8.481		0.000			82.925	
Remarks:												
Subtotal Support			0.000	0.000		0.000		0.000			0.000	
Remarks:												

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Exhibit R-3 Cost Analysis (page 2)										DATE: February 2003		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7			PROGRAM ELEMENT 0702207N Depot Maintenance (Non-IF)			PROJECT NUMBER AND NAME H2451 P-3 SLAP						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Subtotal T&E			0.000	0.000		0.000		0.000			0.000	
Remarks:												
Program Management Support	C/CPIF	Various	2.147	0.192	12/02	0.292	12/03				2.631	2.631
Government Engineering Support	WX	NAWCAD, Pax River, MD	4.538	0.470	12/02	0.300	12/03				5.308	
Subtotal Management			6.685	0.662		0.592		0.000			7.939	
Remarks:												
Total Cost			76.785	5.006		9.073		0.000			90.864	
Remarks:												

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Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 11 of 13)

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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 (Non-IF)												H2451 P-3 SLAP											
Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009						
	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							
Test & Evaluation Milestones																																			
Full Scale Fatigue Test																																			
Landing Gear Test																																			
Fatigue Life Expended (FLE) Rebaseline																																			
SDRS Tracking Algorithm																																			
Test Article Teardown																																			
Post Test Analysis																																			

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* Not required for Budget Activities 1, 2, 3, and 6

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Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 13 of 13)