CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification						DATE: **February 2006**	
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-4**				R-1 ITEM NOMENCLATURE 0603573N/ADVANCED SURFACE MACHINERY			
COST ($ in Millions)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	**3.306**	**5.100**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
9043/Material Advanced Metalic Material Adv Dev	**3.306**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
9999/Congressional Adds	**0.000**	**5.100**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

(U) Project 9043 - Congressional Add. This project funds the Metallic Material Advanced Development and Certification Program.

(U) Project 9999 - See the R2a for descriptions.

R-1 SHOPPING LIST - Item No. 51

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA 4	0603573N/ADVANCED SURFACE MACHINERY SYS	9043 ADVANCED SURFACE MACHINERY PROGRAMS

B. Accomplishments/Planned Program

	FY 05	FY 06	FY 07	
Accomplishments/Effort/Subtotal Cost	2.180			
RDT&E Articles Quantity				

The objective of this task is to establish and maintain a Navy material property database (NMATDB) for metals applicable to ship and submarine construction and repair. Funds were sent to Concurrent Technologies Corporation.

	FY 05	FY 06	FY 07	
Accomplishments/Effort/Subtotal Cost	1.126			
RDT&E Articles Quantity				

The objective of this task is to establish and maintain a Navy material property database (NMATDB) for metals applicable to ship and submarine construction and repair. Funds were sent to NSWC Carderock.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-4	0603573N/ADVANCED SURFACE MACHINERY SYSTEMS	9043/ADVANCED SURFACE MACHINERY PROGRAMS

C. PROGRAM CHANGE SUMMARY:

Funding:	FY 2005	FY 2006	FY 2007
FY 2006 President's Budget	3.367	0.000	0.000
FY 2007 President's Budget	3.306	0.000	0.000
Total Adjustments	-0.061	0.000	0.000
Summary of Adjustments			
Small Business Innovation Reserve	-0.059	0.000	0.000
Other Adjustments	-0.002	0.000	0.000
Subtotal	-0.061	0.000	0.000

Schedule:

Not Applicable

Technical:

Not Applicable

R-1 SHOPPING LIST - Item No. 51

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-4	0603573N/ADVANCED SURFACE MACHINERY SYS	9043/ADVANCED SURFACE MACHINERY PROGRAMS

D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Complete	Total Cost
None									

E. ACQUISITION STRATEGY:

F. MAJOR PERFORMERS:

R-1 SHOPPING LIST - Item No. 51

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-4**	PROGRAM ELEMENT NUMBER AND NAME 0603573N/Advanced Surface Machinery Systems	PROJECT NUMBER AND NAME Project Unit (PU) No. and Name: Congressional Plus-Ups : VARIOUS

CONGRESSIONAL PLUS-UPS:

	FY 06			
9043C				
Advanced Combatant Materials Research	3.4			

Due to changing operational requirements, ships will require improved stealth, speed, and payload flexibility, which can place additional burdens on ship weight. The Advanced Combatant Materials funding will investigate high strength, damage tolerant, lightweight materials and associated advanced fabrication technologies that can achieve significant weight reduction or improved performance. These include improved marine aluminum alloys, solid state welding processes, novel titanium alloy processing, advanced steels for improved blast and ballistic protection, and a breakthrough in composite - metal joining invented in the UK.

	FY 06			
9819N				
LCS Advanced Lightweight Materials Technology	1.7			

To meet mission requirements in the littoral environment, the LCS will require superior speed, maneuverability, and payload modularity that will be achieved through the use of lightweight aluminum and titanium alloys. The LCS Advanced Lightweight Materials Technology will investigate structural design concepts and manufacturing technologies that optimize ship properties, advanced welding processes such as friction stir welding and pulsed gas metal arc welding for higher productivity, and methods to modify the local and/or surface properties for improved fatigue performance.

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