Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

1319: Research, Development, Test & Evaluation, Navy

PE 0204413N: Amphibious Tactical Supt Units

BA 7: Operational Systems Development

1											
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	2.271	2.314	4.357	0.000	4.357	4.802	5.128	5.356	5.100	Continuing	Continuing
2231: LCU Replacement and DMFD	2.271	2.314	4.357	0.000	4.357	4.802	5.128	5.356	5.100	Continuing	Continuing

#### A. Mission Description and Budget Item Justification

TECHNOLOGY TRANSITION: Provides for research efforts on LCAC Future Naval Capabilities to transfer technologies to functional uses on current LCACs. Current S&T initiatives include the following: sustainability/readiness/performance analysis; enhanced LCAC cost model; friction stir welding equipment evaluation; LCAC communications improvements; analysis of electrical systems during cold weather operations; LCAC model hydrodynamic testing; LCAC structural loads analysis; development and qualification of full authority digital engine controller for LCAC engines, vibration reduction/active balancing analysis and new torque meter design for ETF40B engines.

# **B. Program Change Summary (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	2.316	2.324	0.000	0.000	0.000
Current President's Budget	2.271	2.314	4.357	0.000	4.357
Total Adjustments	-0.045	-0.010	4.357	0.000	4.357
<ul> <li>Congressional General Reductions</li> </ul>		-0.010			
<ul> <li>Congressional Directed Reductions</li> </ul>		0.000			
<ul> <li>Congressional Rescissions</li> </ul>	0.000	0.000			
<ul> <li>Congressional Adds</li> </ul>		0.000			
<ul> <li>Congressional Directed Transfers</li> </ul>		0.000			
<ul> <li>Reprogrammings</li> </ul>	0.000	0.000			
<ul> <li>SBIR/STTR Transfer</li> </ul>	-0.045	0.000			
<ul> <li>Program Adjustments</li> </ul>	0.000	0.000	4.357	0.000	4.357

# **Change Summary Explanation**

Technical: Not applicable. Schedule: Not applicable.

**UNCLASSIFIED** 

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0204413N: Amphibious Tactical Supt Units	
FY11 from previous President's Budget is shown as zero becaus	se no FY11-15 data was presented in President's Budget 2010	).

DATE: February 2010

APPROPRIATION/BUDGET ACT 1319: Research, Development, To BA 7: Operational Systems Development			<b>IOMENCLA</b> 3N: <i>Amphibi</i>	TURE ous Tactical	Supt Units	PROJECT 2231: LCU Replacement and DMFD					
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2231: LCU Replacement and DMFD	2.271	2.314	4.357	0.000	4.357	4.802	5.128	5.356	5.100	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

## A. Mission Description and Budget Item Justification

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

Current S&T initiatives include the following: sustainability/readiness/performance analysis; enhanced LCAC cost model; friction stir welding equipment evaluation; LCAC communications improvements; analysis of electrical systems during cold weather operations; LCAC model hydrodynamic testing; LCAC structural loads analysis; development and qualification of full authority digital engine controller for LCAC engines, and vibration reduction/active balancing analysis and new torque meter design for ETF40B engines.

#### B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
LCU Replacement and DMFD	2.271	2.314	4.357	0.000	4.357
FY 2009 Accomplishments:  Began vibration reduction/active balancing analysis; development of enhanced LCAC cost model; completed LCAC structural loads analysis; performed analysis of electrical systems during cold weather ops					
FY 2010 Plans: Award contract for development PC tablet; begin redevelopment of full authority digital engine controller for LCAC engines;					
FY 2011 Base Plans:  Complete development and achieve qualification of full authority digital engine controller; Begin design of new torque meters for ETF40B engines					

#### **UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

**DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0204413N: Amphibious Tactical Supt Units

**PROJECT** 

2231: LCU Replacement and DMFD

#### B. Accomplishments/Planned Program (\$ in Millions)

			FY 2011	FY 2011	FY 2011
	FY 2009	FY 2010	Base	осо	Total
Accomplishments/Planned Programs Subtotals	2.271	2.314	4.357	0.000	4.357

## C. Other Program Funding Summary (\$ in Millions)

			FY 2011	FY 2011	FY 2011					<b>Cost To</b>	
<u>Line Item</u>	FY 2009	FY 2010	<u>Base</u>	000	<u>Total</u>	FY 2012	FY 2013	FY 2014	FY 2015	<b>Complete</b>	Total Cost
OPN 0970: Amphibious Tactical	0.172	6.622	9.142	0.000	9.142	0.029	25.273	16.807	10.028	0.000	68.073
Support Units											
• OPN 0981/1: <i>HM&amp;E</i> <5,000	6.413	5.085	6.333	0.000	6.333	9.435	9.579	7.849	6.258	0.000	50.952
(Material)											
• OPN 0981/2: <i>HM&amp;E</i> < 5,000	13.821	14.355	13.002	0.000	13.002	13.371	13.480	13.312	13.290	0.000	94.631
(Install)											
• SCN 5139: <i>LCAC SLEP</i>	110.587	63.660	83.035	0.000	83.035	82.134	86.964	87.581	88.761	365.800	968.522

# **D. Acquisition Strategy**

TECHNOLOGY TRANSFER - RDT&E efforts commenced in FY06. Multiple contracts and Field Activities are involved through FY15 to complete the various projects.

#### E. Performance Metrics

FY10 - Award FY10 contract for development of PC tablet software and accomplish successful testing of software Deliver an approved plan for the redevelopment of the full authority digital engine controller and begin redesign

FY11 - Complete development and achieve qualification of full authority digital engine controller

Deliver approved plan for redesign of ETF40B engine torque meters and begin redesign

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy

**DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

**PROJECT** 

1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development

PE 0204413N: Amphibious Tactical Supt Units

2231: LCU Replacement and DMFD

**Product Development (\$ in Millions)** 

•	• •	,											
				FY 2010		FY 2011 Base		FY 2011 OCO		1 FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Component Development	C/TBD	Various Various	1.962	1.500	May 2010	2.254	Jan 2011	0.000		2.254	11.306	17.022	Continuing
Systems Engineering	C/TBD	Various Various	1.201	0.147	May 2010	0.860	Jan 2011	0.000		0.860	4.858	7.066	Continuing
		Subtotal	3.163	1.647		3.114		0.000		3.114	16.164	24.088	

#### Remarks

## **Support (\$ in Millions)**

	•			FY 2	010	FY 2 Ba	-	FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	WR	Various Various	0.960	0.041		0.357		0.000		0.357	1.487	2.845	Continuing
		Subtotal	0.960	0.041		0.357		0.000		0.357	1.487	2.845	

#### **Remarks**

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy

**DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

**PROJECT** 

1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development

PE 0204413N: Amphibious Tactical Supt Units

2231: LCU Replacement and DMFD

**Test and Evaluation (\$ in Millions)** 

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental T & E	WR	Various Various	0.287	0.000		0.104		0.000		0.104	0.600	0.991	Continuing
Operational T & E	WR	Various Various	0.167	0.500		0.258		0.000		0.258	0.300	1.225	Continuing
Test Assets	WR	Various Various	0.308	0.050		0.100		0.000		0.100	0.800	1.258	Continuing
		Subtotal	0.762	0.550		0.462		0.000		0.462	1.700	3.474	

#### Remarks

## **Management Services (\$ in Millions)**

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Support	WR	Various Not Specified	0.708	0.050	Jan 2010	0.240	Jan 2011	0.000		0.240	1.200	2.198	Continuing
Program Management Support	WR	Various Not Specified	0.304	0.026	Jan 2010	0.184	Jan 2011	0.000		0.184	0.900	1.414	Continuing
Travel	WR	NAVSEA Not Specified	0.084	0.000		0.000		0.000		0.000	0.100	0.184	Continuing
DAWDF	C/TBD	OSD Not Specified	0.011	0.000		0.000		0.000		0.000	0.000	0.011	Continuing

# Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy

**DATE:** February 2010

## APPROPRIATION/BUDGET ACTIVITY

BA 7: Operational Systems Development

**R-1 ITEM NOMENCLATURE** 

**PROJECT** 

1319: Research, Development, Test & Evaluation, Navy

PE 0204413N: Amphibious Tactical Supt Units | 2231: LCU Replacement and DMFD

## **Management Services (\$ in Millions)**

				FY 20	010	FY 2 Ba		FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	1.107	0.076		0.424		0.000		0.424	2.200	3.807	

#### Remarks

	Total Prior Years Cost	FY 2	2010		2011 se	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	5.992	2.314		4.357		0.000	4.357	21.551	34.214	

#### Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

**PROJECT R-1 ITEM NOMENCLATURE** 1319: Research, Development, Test & Evaluation, Navy

BA 7: Operational Systems Development

PE 0204413N: Amphibious Tactical Supt Units | 2231: LCU Replacement and DMFD

Fiscal Year	2008			08 2009				2010				2011					2012				2013				2014				2015			
cq. Milestones	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	
LCAC S&T Initiatives		-		22	# 55 70	55 7)							2	2							- 10										7	
				361	900 900	600							500 500	605					- 1		36	-66 -92							360		- MC	
									_									_								-						

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy			<b>DATE:</b> February 2010
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
1319: Research, Development, Test & Evaluation, Navy	PE 0204413N: Amphibious Tactical Supt Units	2231: <i>LCU</i>	Replacement and DMFD
BA 7: Operational Systems Development			

# Schedule Details

	St	art	Er	nd
Event	Quarter	Year	Quarter	Year
LCAC S & T Initiatives	1	2009	4	2015