Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*				R-1 ITEM NOMENCLATURE PE 0603725N: *Facilities Improvement*							
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	18.034	10.039	3.746	0.000	3.746	3.820	3.877	3.970	4.052	Continuing	Continuing
0995: *Naval Facilities System*	1.777	1.823	1.784	0.000	1.784	1.806	1.834	1.879	1.918	Continuing	Continuing
3155: *Force Protection Ashore*	2.295	2.162	1.962	0.000	1.962	2.014	2.043	2.091	2.134	Continuing	Continuing
9999: *Congressional Adds*	13.962	6.054	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30.324

A. Mission Description and Budget Item Justification

This program provides for capabilities to a) overcome performance limitations and reduce the life cycle cost of shore facilities, and b) provide protection against terrorist attacks for shore installations and their operations. The program focuses on technical and operational issues of specific Navy interest, where there are no unbiased test validated Commercial Off the Shelf (COTS) solutions available, and where timely capabilities may not materialize without specific demonstration or validation by the Navy. Additionally, the program completes the development of technologies originating from Navy, DOD and other sources of Science and Technology programs, including the National Science Foundation (NSF), the National Institute of Standards and Technology (NIST) and Department of Energy (DOE). Validated technologies are implemented in the Navy's Military Construction (MILCON) and Facilities, Sustainment Restoration and Modernization (FSRM) program, and Antiterrorism and Force Protection (ATFP) Other Procurement, Navy (OP,N) program. Project 0995 addresses the following Navy facilities requirements during FY 2009 through FY 2015: Advance Technology for Waterfront Facilities Repair and Upgrade, Facilities Technologies to Reduce the Cost of Facilities Sustainment, Restoration and Modernization, and Modular Hybrid Pier for reducing the total ownership cost of future facilities and enable new planning options through relocatable waterfront facilities. This project is consistent with recommendation of two National Academy of Sciences Reports: "The Role of Federal Agencies in Fostering New Technology and Innovation in Building" and "Federal Policies to Foster Innovation and Improvement in Constructed Facilities." Starting in FY2006 the Force Protection Ashore Project 3155, addresses selective topics in modeling; and material technologies to reduce the vulnerability of installations; and reduce the acquisition and operating costs of protective technologies. The demonstrations and validations provide the independent, technical and operational test.

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy	DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603725N: *Facilities Improvement*

B. Program Change Summary ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	18.832	4.002	0.000	0.000	0.000
Current President's Budget	18.034	10.039	3.746	0.000	3.746
Total Adjustments	-0.798	6.037	3.746	0.000	3.746
• Congressional General Reductions		-0.043			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		6.080			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-0.798	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Program Adjustments	0.000	0.000	3.746	0.000	3.746

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2009	FY 2010
Project: 9999: *Congressional Adds*		
Congressional Add: *Photovoltaic Rooftop Systems for Military Housing*	0.000	1.195
Congressional Add: *Permanent Magnet Linear Generator Power Buoy Syste*	1.995	1.912
Congressional Add: *KINETIC HYDROPOWER SYSTEM (KHPS) TURBINE*	2.393	0.000
Congressional Add: *SWIMMER DETECTION SONAR NETWORK*	3.190	0.000
Congressional Add: *Hydrokinetic Power Generator*	1.596	1.593
Congressional Add: *Regenerative Fule Cell Back-up Power*	1.197	1.354
Congressional Add: *Testing of Critical Comonents for Ocean Alternativ*	1.995	0.000
Congressional Add: *Wave Energy PowerBuoy Generating Systems for the D*	1.596	0.000
Congressional Add Subtotals for Project: 9999	13.962	6.054
Congressional Add Totals for all Projects	13.962	6.054

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy	DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603725N: *Facilities Improvement*

Change Summary Explanation

Technical: Not applicable.

Schedule: Not applicable.

FY11 from previous President's Budget is shown as zero because no FY11-15 data was presented in President's Budget 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603725N: *Facilities Improvement*	PROJECT 0995: *Naval Facilities System*	

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
0995: *Naval Facilities System*	1.777	1.823	1.784	0.000	1.784	1.806	1.834	1.879	1.918	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This program provides the Navy with new engineering capabilities that are required to overcome specific performance limitations of Naval shore facilities while reducing the cost of sustaining the Naval shore infrastructure. The program focuses available RDT&E resources on satisfying facility requirements where the Navy is a major stakeholder or where there are no test validated Commercial Off the Shelf (COTS) solutions available, and a timely solution will not emerge without a Navy sponsored demonstration and validation. The program completes the development and validation of facility technologies originating in Navy Science and Technology programs, plus a variety of other sources which includes the National Science Foundation (NSF) and the National Institute of Standards and Technology (NIST). Validated technologies are implemented in the Navy's Military Construction (MILCON) and Facilities, Sustainment Restoration and Modernization Programs (FSRP). Project 0995 is addressing three Navy facilities requirements during the fiscal years FY 2009 through FY 2011: Waterfront Facilities Repair and Upgrade, Facilities Technologies to Reduce the Cost of Facilities, Sustainment, Restoration and Modernization and the Modular Hybrid Pier (MHP). The execution of this program is consistent with the findings and recommendation of two National Academy of Sciences Reports: "The Role of Federal Agencies in Fostering New Technology and Innovation in Building" and "Federal Policies to Foster Innovation and Improvement in Constructed Facilities."

Waterfront Facilities Repair and Enhancement: About 75% of the Navy's waterfront facilities are over 45 years old. They were designed for a service life of 25 years and to satisfy the mission requirements existing at that time. The over aged reinforced concrete requires costly and repetitive repairs. In addition, to accomplish more pier side ship maintenance and thus reduce drydock costs, these piers must be strengthened to support concentrated crane loads up to 140 tons, when piers were originally designed for no concentrated loads. At that time piers were designed to service one, possibly two particular ship classes, berthing felexibility is now limited by mooring configuratoions and varied hotel service requirements. This sub-project addresses new materials design methods, and retrofit methods to extend the service life of existing waterfront facilities by an additional 15 or more years The project also adresses updating the mission based service, environmental and protection loading requirements imposed by changes in platforms, operations and threats. Other initiatives include: enhanced facilties management processes, using facilites information modeling (FIM) technogy and waterfront utility service enhancements using modules to achieve flexible berthing arranagements consistant with current and future platform mooring configurations and hotel service requirements. Using this new technology at a cost of $1-2M for repairs and upgrades per pier will result in $50M in cost avoidance for demolition and replacement.

Technologies To Reduce The Cost of Facilities, Sustainment, Restoration and Modernization (FSRM): FSRM issues of high operational significance are addressed on a priority basis .The costs to correct these critical facility deficiencies are over $3.1B as reported in the FY 2000 Annual Inspection Summary (AIS). Current Navy

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603725N: *Facilities Improvement*	PROJECT 0995: *Naval Facilities System*

FSRM funding levels are insufficient to prevent the continued growth of the backlog of mission and safety critical maintenance and repairs. This effort will demonstrate and validate the cost and reliability of advanced technologies in order to assure their acceptance and implementation in traditionally conservative public works and construction industries. The effort will accelerate the validation, commercialization, and wide-spread implementation of the facility technologies urgently required to reduce the cost of correcting the deficiencies in the Navy's FSRM backlog. Estimated returns on these investments are better than 60 to 1.

MODULAR HYBRID PIER (MHP): Modular Hybrid Pier started in FY02 to achieve completions required by construction acquisition schedules. The Navy is faced with the necessity of recapitalizing a large portion of its waterfront infrastructure over the next several decades. The Modular Hybrid Pier initiative develops and validates innovative material and design technologies for a mission-flexible waterfront infrastructure characterized by significantly reduced total ownership cost and increased mission flexibility. The proceeding sub-project Waterfront Facilities Repair and Upgrade will enable the Navy to economically extend the useful service life of existing piers and wharves. While reducing the need for immediate replacement, eventual replacement will be required. This MHP sub-project provides improved technology for new piers. Emerging innovative structural and materials technologies, particularly those that will transition from the Navy's applied research and advanced development program, will provide enhanced-capability. Structures may have a comparable initial cost yet have far less maintenance and repair costs. Use of advanced materials and high performance lightweight concrete will produce structures that have twice the economic service life of the conventional piers. Modular design will enable off-site fabrication in pre-cast plants that will shorten the duration of construction and lower the cost relative to conventional on-site demolition followed by on site/on base construction. Plant fabrication will vastly improve quality and result in repair-free durability because of superior performance concrete with post-tensioning technologies. The modular concept will facilitate change-out of components for modifications to increase capacity to adapt to future ship designs. Mobility due to barge configuration will enable relocatability of structural platform modules through flotation is a significant new capability option which will save money and provides new military worth/ planning and deployment options. An economic analysis has shown that a modular hybrid (deployable) pier will have a Net Present Value (NPV) cost that is $15M less over its service life than that for a conventional pier constructed of ordinary reinforced concrete. The MHP, partly because of following the sea levels will have superior operational benefits to ship/port operations. The knowledge from this pier project will enable other concrete facility options that are fabricated offsite and relocatable for adjustment to basing changes. The technology of concrete and reinforcement and corrosion proofing will have wide spread applicability to all concrete construction.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Naval Facilities System	1.777	1.823	1.784	0.000	1.784
FY 2009 Accomplishments: FY09: Completed simulation and modeling of MHP hydrodynamic response. Completed design of full scale prototype MHP.					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603725N: *Facilities Improvement*	PROJECT 0995: *Naval Facilities System*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY10: Develop plans for operational test of 1st MHP prototype. Apply MHP technology lessons to other-than-pier floating/relocatable facility options. *FY 2011 Base Plans:* FY11: Summarize measurements of corrosion on test bed. Test and evaluate enhanced MHP mooring for performance across desired wide range of seismic & cyclonic loads. Address technical issues as posed in the test and evaluation plan (TEMP) and in TEMP adendum. Transition of MHP 35% technology design to MCON P-440. Develop cost factors for update of MCON planning process.					
Accomplishments/Planned Programs Subtotals	1.777	1.823	1.784	0.000	1.784

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

Quarterly Program Reviews

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603725N: *Facilities Improvement*	PROJECT 0995: *Naval Facilities System*	

Product Development ($ 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
Waterfron Facilities Repair & Upgrade	Various/ Various	NFESC Pt Hueneme, CA	1.760	0.290	Feb 2010	0.203	Feb 2011	0.000		0.203	Continuing	Continuing	Continuing
Facilities, Sustainment, Restoration and Modernization Tech	Various/ Various	NFESC Pt Hueneme, CA	3.853	1.036	Feb 2010	1.084	Feb 2011	0.000		1.084	Continuing	Continuing	Continuing
Modular Hybrid Pier (CA)	Various/ Various	NFESC Pt Hueneme, CA	3.393	0.497	Feb 2010	0.350	Feb 2011	0.000		0.350	Continuing	Continuing	Continuing
Modular Hybrid Pier (WA)	Various/ Various	BergerAbam Seattle, WA	1.463	0.000		0.147	May 2011	0.000		0.147	0.000	1.610	Continuing
		Subtotal	10.469	1.823		1.784		0.000		1.784			

Remarks

Total Prior Years Cost summation does not include performing activities from projects completed in prior years.

*** All funding vehicle are WX document type....****

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	10.469	1.823		1.784		0.000		1.784			

Remarks

Exhibit R-4, **RDT&E Schedule Profile:** PB 2011 Navy		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603725N: *Facilities Improvement*	**PROJECT** 0995: *Naval Facilities System*

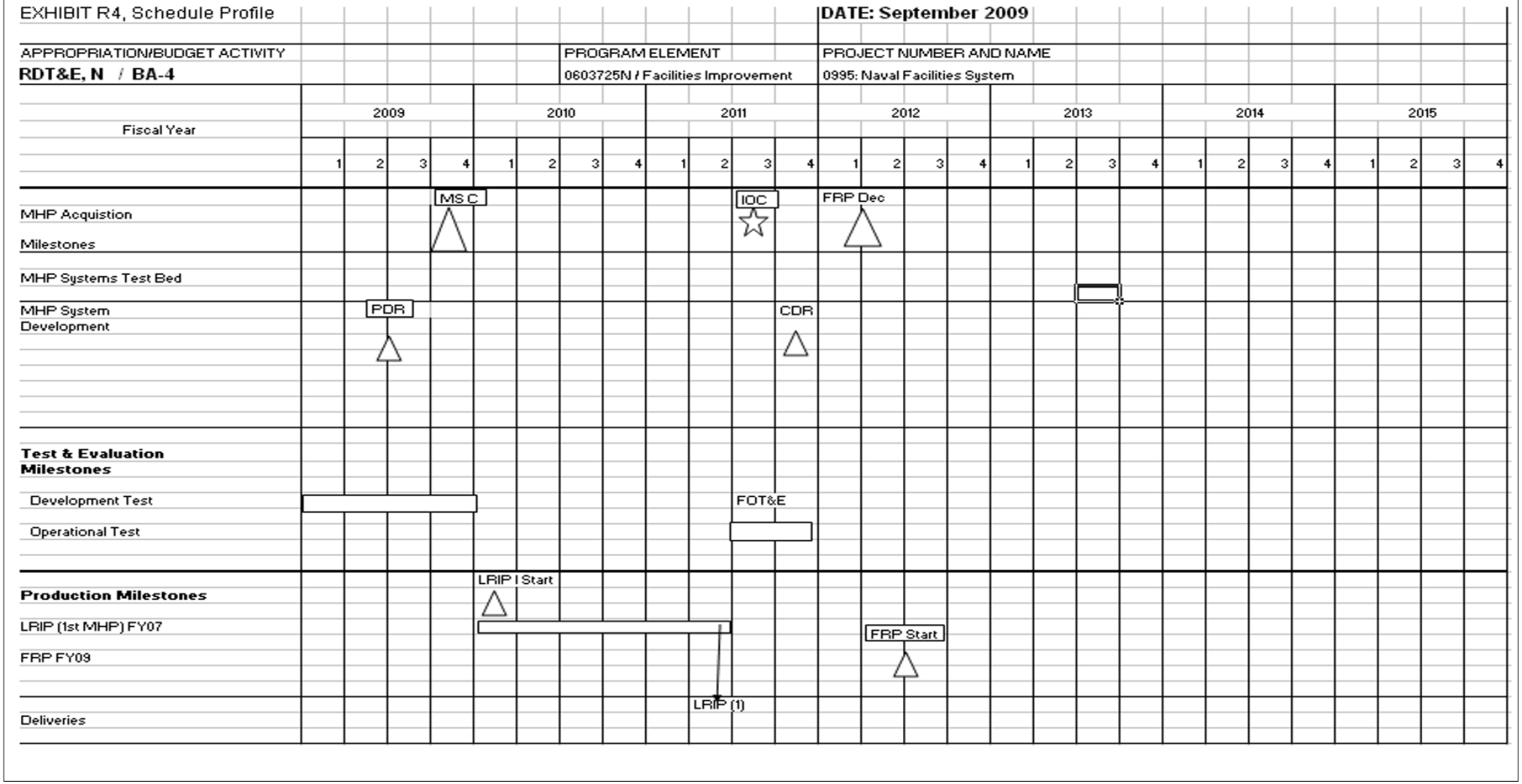


Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603725N: *Facilities Improvement*	**PROJECT** 0995: *Naval Facilities System*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
Combined Developmental/Operational Testing (DT/OT)	1	2009	1	2009
Preliminary Design Review (PDR)	2	2009	2	2009
Milestone C (MS C)	4	2009	4	2009
Start Low-Rate Initial Production I (LRIP) A	1	2010	4	2010
Start Low-Rate Initial Production I (LRIP) B	1	2011	4	2011
Low-Rate Initial Production Delivery	2	2011	2	2011
Follow-On Operational Test & Evaluation (FOT&E)	3	2011	4	2011
IOC	3	2011	3	2011
Critical Design Review (CDR)	4	2011	4	2011
Full Rate Production (FRP) Decision	1	2012	2	2012
Full Rate Produciton Start	2	2012	3	2012

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603725N: *Facilities Improvement*	PROJECT 3155: *Force Protection Ashore*	

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
3155: *Force Protection Ashore*	2.295	2.162	1.962	0.000	1.962	2.014	2.043	2.091	2.134	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Protection of the Navy Installations against terrorist activities requires development and deployment of advanced technology for force protection capabilities that are cost effective. Manpower costs of protection systems with today's technology are very high . Performance is not adequate to reduce vulnerability cost-effectively. This Antiterrorism and Force Protection Ashore Project will develop, demonstrate and validate technologies for the following: access control and perimeter denial; waterside protection against craft and swimmer intrusion; secure and efficient operations centers and emergency centers (including human and information support systems); construction integrated surveillance sensors and robotic systems for intruder detection; material systems to improve utilities security and recovery; and material concepts to reduce injury and death. Through demonstration and validation of risk modeling and simulation models, the potential of emerging technologies will be evaluated and installation security strategies that reduce manpower and other costs will be formulated. Installation protection concepts against attacks from the air will be identified and jointly demonstrated. These demonstrations and validations derive from advanced technology from science and technology programs of government academia and industry. The technology produces data for performance specifications for competitive procurement. All work will be coordinated with other programs and through industry forums as appropriate.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Force Protection Ashore	2.295	2.162	1.962	0.000	1.962
FY 2009 Accomplishments: FY 09: Provided and initiated advanced prototype development and demonstrations for ATFP applications at Naval Installations as follows. - Completed and demonstrated (full scale) a multi-perimeter (both outer and inner) rapid estimating method/model for perimeter security to installations. - Develop and demonstrated advanced prototypes of inclement weather sensors for detecting intruders; transitioned from ONR Future Navy Capabilities (FNC) program.					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603725N: *Facilities Improvement*	PROJECT 3155: *Force Protection Ashore*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
- Develop advanced prototypes and tested Intelligent Video technology for waterfront and on-land security applications --- transitioned from ONR Future Navy Capabilities (FNC) program. - Develop advanced prototypes of low frequency continuous wave system to warn and stop (i.e. neutralize) intruding diver/swimmers approaching Navy piers and ships (transitioned from ONR S&T) *FY 2010 Plans:* FY10: Continue, complete and initiate advanced prototype development and demonstration for ATFP applications at Naval installations as follows: - Continue the development of inclement weather mid range IR sensors for detecting intruders at installation perimeter. - Continue development, demonstration and integration of intelligent video in security systems. - Initiate demonstration of low frequency continuous wave sensors to warn and stop intruding malevolent divers and swimmers approaching Navy piers and ships. - Develop prototype floating barrier to protect ships against swarms of attacking boats. *FY 2011 Base Plans:* FY 11: Continue, complete and initiate advanced prototypes developments as follows: - Complete, integrate and demonstrate mid range infrared sensor for detecting in inclement weather and low visibility conditions at perimeter security applications. - Initiate advanced prototype development of millimeter wave length sensors (lower cost) for surveillance applications at installations -- transition from ONR S&T FNC program. - Complete development and demonstrate full scale prototypes of floating barriers against swarm attack boats. - Complete and demonstrate low frequency continuous wave system to interdict intruding swimmers/ divers.					
Accomplishments/Planned Programs Subtotals	2.295	2.162	1.962	0.000	1.962

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603725N: *Facilities Improvement*	PROJECT 3155: *Force Protection Ashore*

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

Demonstration and validation is conducted for maximum transfer and interaction with industry such as to influence the industry COTS with the results of this demonstration and prototype validation. Acquisition is based on performance specifications enabled by this project.

E. Performance Metrics

Quarterly Program Reviews

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603725N: *Facilities Improvement*	PROJECT 3155: *Force Protection Ashore*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010 Cost	FY 2010 Award Date	FY 2011 Base Cost	FY 2011 Base Award Date	FY 2011 OCO Cost	FY 2011 OCO Award Date	FY 2011 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Force Protection Ashore (CA)	WR	NFESC Pt Hueneme, CA	0.729	0.881	Jan 2010	0.801	Jan 2011	0.000		0.801	Continuing	Continuing	Continuing
Force Protection Ashore (Crane)	WR	NSWC Dahlgren Panama City, Crane	1.600	0.981	Jan 2010	0.861	Jan 2011	0.000		0.861	Continuing	Continuing	Continuing
Force Protection Ashore (VA)	WR	ONR Arlington, VA	0.000	0.300	Jan 2010	0.300	Dec 2010	0.000		0.300	Continuing	Continuing	Continuing
		Subtotal	2.329	2.162		1.962		0.000		1.962			

Remarks

New start in FY06.

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2.329	2.162		1.962		0.000		1.962			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603725N: *Facilities Improvement*	**PROJECT** 3155: *Force Protection Ashore*

CLASSIFICATION:

EXHIBIT R4, Schedule Profile — **DATE: Jan 2010**

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT	PROJECT NUMBER AND NAME
RDT&E, N / BA-4	0603725N / Facilities Improvement	3155 / Force Protection Ashore/Subproj: Perimeter Estimating Model/Method

Fiscal Year	2009				2010				2011				2012				2013				2014				2015			
	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
Technology Assessment																												
Concept of Employment																												
System Development																												
Spiral 1 Development																												
Spiral 2 Development																												
Test & Evaluation Milestones																												
Development Test																												
Operational Test		△																										
Production Milestones																												
Procurement Specification																												
Deliveries																												

R-4 Schedule Profile

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603725N: *Facilities Improvement*	**PROJECT** 3155: *Force Protection Ashore*

CLASSIFICATION:

EXHIBIT R4, Schedule Profile — **DATE: Jan 2010**

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT	PROJECT NUMBER AND NAME
RDT&E, N / BA-4	0603725N / Facilities Improvement	3155 / Force Protection Ashore/Subproj: Inclement Weather Sensor System (mid range IR)

Fiscal Year	2009				2010				2011				2012				2013				2014				2015			
	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
Technology Assessment																												
Concept of Employment																												
System Development																												
Spiral 1 Development (LPR)	△																											
Spiral 2 Development (TF&I9)			△		△																							
Test & Evaluation Milestones																												
Development Test					△																							
Operational Test		△					△																					
Production Milestones																												
Procurement Specification								△																				
Deliveries																												

R-4 Schedule Profile

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603725N: *Facilities Improvement*	PROJECT 3155: *Force Protection Ashore*

CLASSIFICATION:

EXHIBIT R4, Schedule Profile — DATE: Jan 2010

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT	PROJECT NUMBER AND NAME
RDT&E, N / BA-4	0603725N / Facilities Improvement	3155 / Force Protection Ashore/Subproj: Intelligent Video

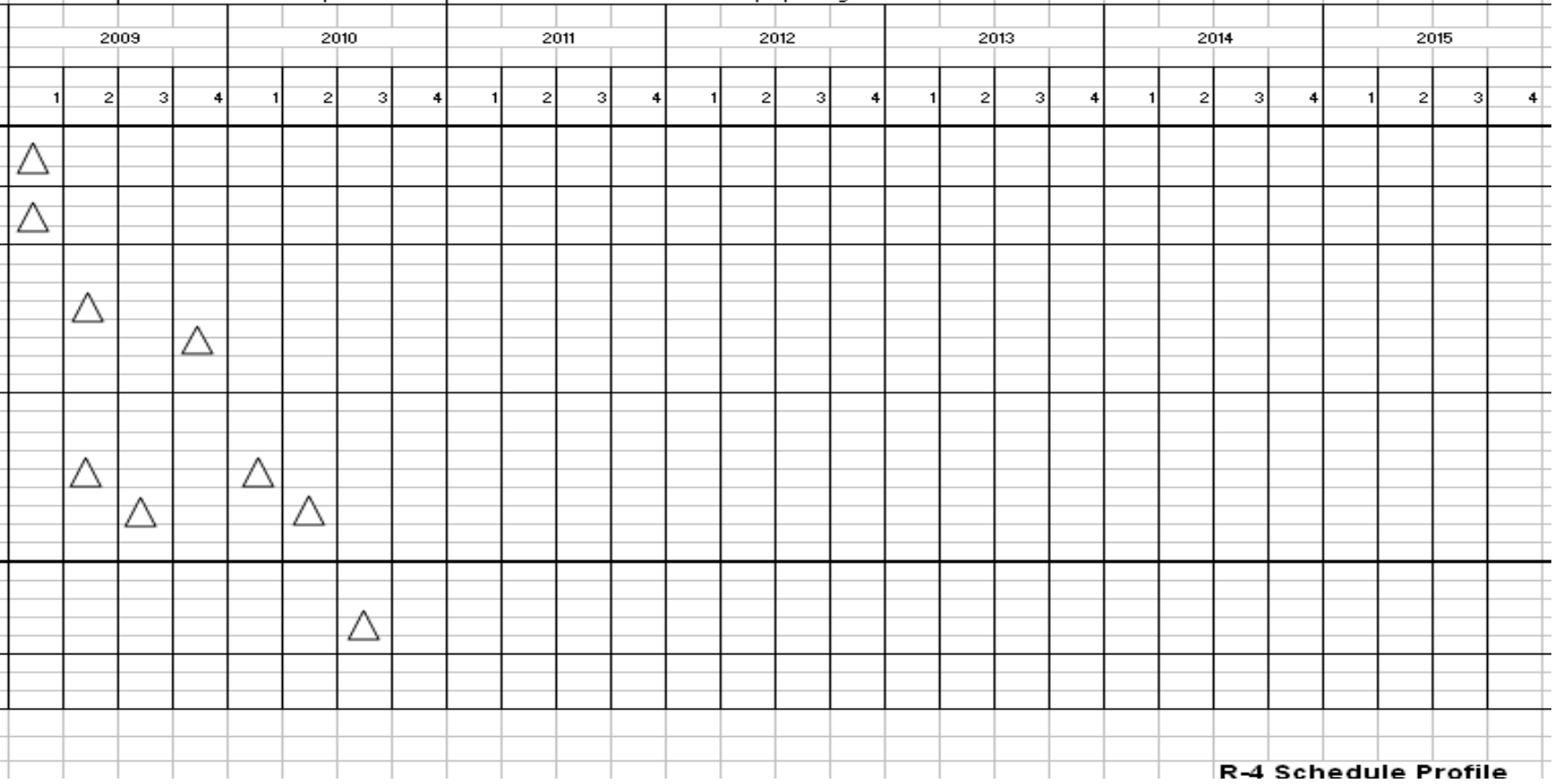


Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy			**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603725N: *Facilities Improvement*	**PROJECT** 3155: *Force Protection Ashore*	

CLASSIFICATION:

EXHIBIT R4, Schedule Profile — **DATE: Jan 2010**

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT	PROJECT NUMBER AND NAME
RDT&E, N / BA-4	0603725N / Facilities Improvement	3155 / Force Protection Ashore/Subproj: Low Frequency Continuous Wave

Fiscal Year	2009				2010				2011				2012				2013				2014				2015			
	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
Technology Assessment	△																											
Concept of Employment																												
System Development																												
Spiral 1 Development (LPR)		△																										
Spiral 2 Development (TF&I9)							△																					
Test & Evaluation Milestones																												
Development Test					△																							
Operational Test									△																			
Production Milestones																												
Procurement Specification											△																	
Deliveries																												

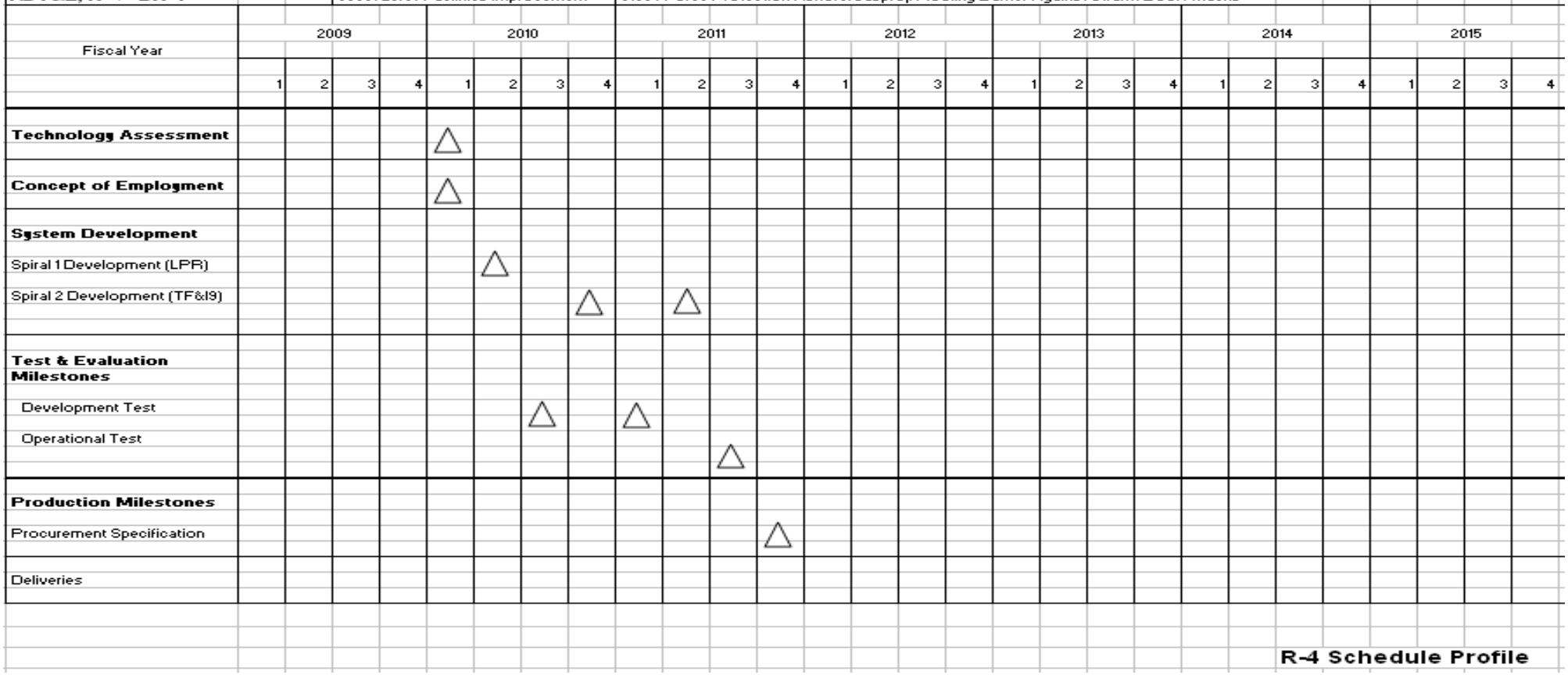
R-4 Schedule Profile

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603725N: *Facilities Improvement*	**PROJECT** 3155: *Force Protection Ashore*

CLASSIFICATION:

EXHIBIT R4, Schedule Profile — **DATE: Jan 2010**

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT	PROJECT NUMBER AND NAME
RDT&E, N / BA-4	0603725N / Facilities Improvement	3155 / Force Protection Ashore/Subproj: Floating Barrier Against Swarm Boat Attacks



R-4 Schedule Profile

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0603725N: *Facilities Improvement*	**PROJECT** 3155: *Force Protection Ashore*

CLASSIFICATION:

EXHIBIT R4, Schedule Profile — **DATE: Jan 2010**

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT	PROJECT NUMBER AND NAME
RDT&E, N / BA-4	0603725N / Facilities Improvement	3155 / Force Protection Ashore/Subproj: Millimeter Wave Detection System

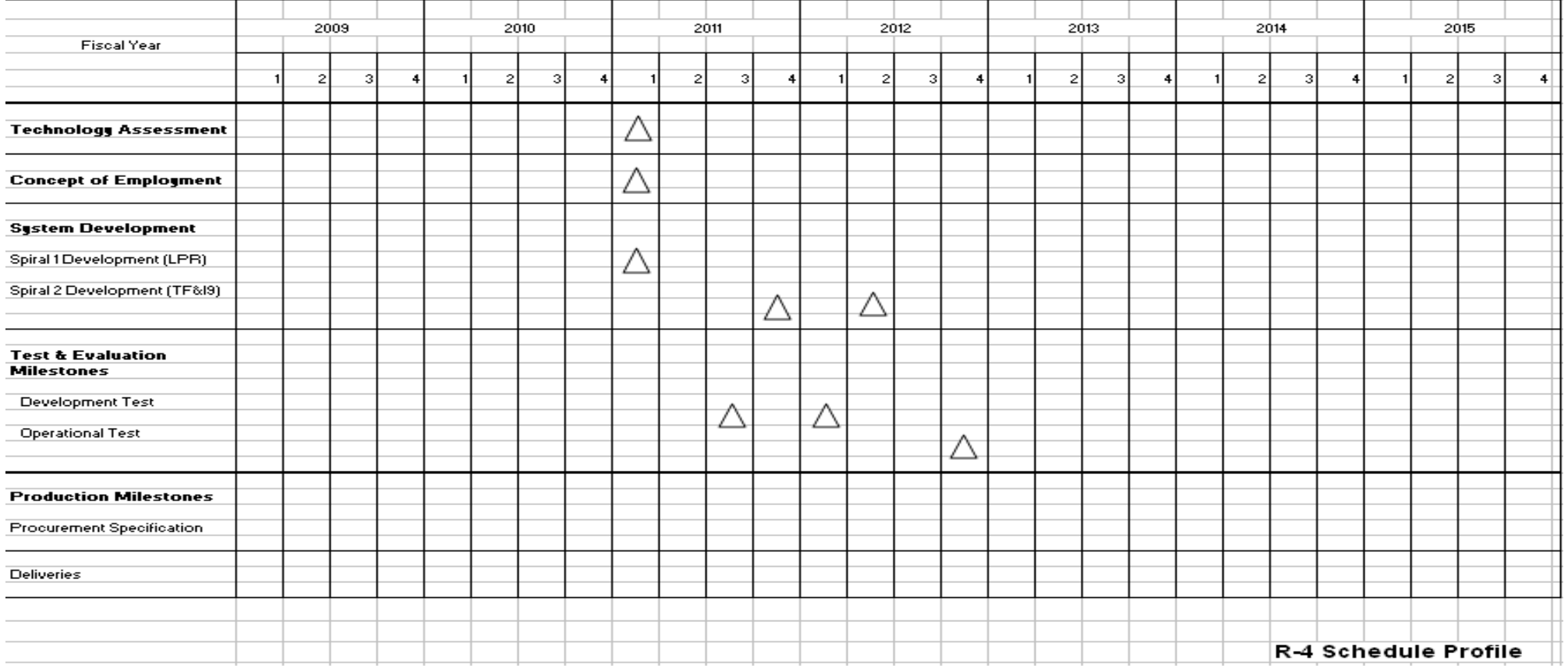


Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603725N: *Facilities Improvement*	PROJECT 3155: *Force Protection Ashore*

Schedule Details

	Start		End	
Event	Quarter	Year	Quarter	Year
Subproj: Perimeter Estmating Model/Method: Test & Eveluation (OT) -	2	2009	2	2010
Subproj: Inclement Weather Sensor System (mid range IR): Sprial Development (LPN)	1	2009	1	2009
Subproj: Inclement Weather Sensor System (mid range IR): Sprial Development (TF&I9)	2	2009	1	2010
Subproj: Inclement Weather Sensor System (mid range IR): Test & Evaluation (DT)	1	2010	1	2010
Subproj: Inclement Weather Sensor System (mid range IR): Test & Evaluation (TO)	2	2009	3	2010
Subproj: Inclement Weather Sensor System (mid range IR): Procurement Specification	4	2010	4	2010
Subproj: Intelligent Video:Technology Assessment	1	2009	1	2009
Subproj: Intelligent Video: Concept of Employment	1	2009	1	2009
Subproj: Intelligent Video: Sprial Development (LPR)	2	2009	2	2009
Subproj: Intelligent Video: Sprial Development (TF&I9)	4	2009	4	2009
Subproj: Intelligent Video: Test & Evaluation (DT)	2	2009	1	2010
Subproj: Intelligent Video: Test & Evaluation (OT)	3	2009	2	2010
Subproj: Intelligent Video: Procurement Specification	3	2010	3	2010
Subproj: Low Frequency Continuous Wave: Technology Assessment	1	2009	1	2009
Subproj: Low Frequency Continuous Wave: Sprial Development (LPR)	2	2009	2	2009
Subproj: Low Frequency Continuous Wave: Sprial Development (TF&I9)	2	2009	3	2010
Subproj: Low Frequency Continuous Wave: Test & Evaluation (DT)	1	2010	1	2010
Subproj: Low Frequency Continuous Wave: Test & Evaluation (OT)	1	2011	1	2011

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603725N: *Facilities Improvement*	PROJECT 3155: *Force Protection Ashore*

	Start		End	
Event	Quarter	Year	Quarter	Year
Subproj: Low Frequency Continuous Wave: Procurement Specification	3	2011	3	2011
Subproj: Floating Barrier Against Swarm Boat Attacks: Technology Assessment	1	2010	1	2010
Subproj: Floating Barrier Against Swarm Boat Attacks: concept of Employment	1	2010	1	2010
Subproj: Floating Barrier Against Swarm Boat Attacks: Spiral Development (LPR)	2	2010	2	2010
Subproj: Floating Barrier Against Swarm Boat Attacks: Spiral Development (TF&I9)	4	2010	2	2011
Subproj: Floating Barrier Against Swarm Boat Attacks: Test & Eveluation (DT)	3	2010	1	2011
Subproj: Floating Barrier Against Swarm Boat Attacks: Test & Eveluation (OT)	3	2011	3	2011
Subproj: Floating Barrier Against Swarm Boat Attacks: Procurement Specification	4	2011	4	2011
Subproj: Millimeter Wave Detection System: Technology Assessment	1	2011	1	2011
Subproj: Millimeter Wave Detection System: Concept of Employment	1	2011	1	2011
Subproj: Millimeter Wave Detection System: Sprial Development (LPR)	1	2011	1	2011
Subproj: Millimeter Wave Detection System: Sprial Development (TF&I9)	4	2011	2	2012
Subproj: Millimeter Wave Detection System: Test & Evaluation (DT)	3	2011	4	2012

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603725N: *Facilities Improvement*	PROJECT 9999: *Congressional Adds*	

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
9999: *Congressional Adds*	13.962	6.054	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30.324
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Congressional interest items.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010
Congressional Add: Photovoltaic Rooftop Systems for Military Housing *FY 2010 Plans:* N/A	0.000	1.195
Congressional Add: Permanent Magnet Linear Generator Power Buoy Syste *FY 2009 Accomplishments:* The program involved numerical and physical modeling to facilitate scaling the Phase I PMLG buoy design from 5kW to full capacity, estimated at between 100 kW and 250 kW. This effort performed the remaining hydrodynamic modeling, identify the preferred direct drive rotary system, created a functional conceptual design, perform key experimental testing in Oregon State University wave and electric motor research laboratories, complete a preliminary design and design review, and establish the plan for a full scale design and build including cost and energy production estimates. These project and research steps are sequentially accomplished and are necessary to ensure a plan with flexibility and integrity toward identifying a cost effective and survivable wave energy conversion device. Through the sequential development of numerical modeling and experimental tests the most	1.995	1.912

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603725N: *Facilities Improvement*	PROJECT 9999: *Congressional Adds*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010
feasible direct drive rotary power take-off system design concept will be identified. This will then become the subject of a preliminary full-scale design. The preliminary design will be used for system evaluation, energy production estimates, cost estimates, and a preliminary design review. This project provided the information necessary for the determination of commercial feasibility before proceeding to a complete system design and full scale ocean testing *FY 2010 Plans:* The program will involve numerical and physical modeling to facilitate scaling the Phase I PMLG buoy design from 5kW to full capacity, estimated at between 100 kW and 250 kW. This effort will perform the remaining hydrodynamic modeling, identify the preferred direct drive rotary system, create a functional conceptual design, perform key experimental testing in Oregon State University wave and electric motor research laboratories, complete a preliminary design and design review, and establish the plan for a full scale design and build including cost and energy production estimates. These project and research steps are sequentially accomplished and are necessary to ensure a plan with flexibility and integrity toward identifying a cost effective and survivable wave energy conversion device. Through the sequential development of numerical modeling and experimental tests the most feasible direct drive rotary power take-off system design concept will be identified. This will then become the subject of a preliminary full-scale design. The preliminary design will be used for system evaluation, energy production estimates, cost estimates, and a preliminary design review. This project will provide the information necessary for the determination of commercial feasibility before proceeding to a complete system design and full scale ocean testing.		
Congressional Add: KINETIC HYDROPOWER SYSTEM (KHPS) TURBINE *FY 2009 Accomplishments:* Conduced a technical, operational, environmental and business study to determine the feasibility of generating power at a suitable location in Puget Sound using the Kinetic Hydropower Turbine System, from which power can be transmitted to a local commercial power grid or to a naval base(s) grid. The study, including the explorations for data will address:	2.393	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603725N: *Facilities Improvement*	PROJECT 9999: *Congressional Adds*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010
1) the presence of suitably strong tidal currents to generate electricity with the kinetic turbines; 2) Proximity of such sites to ports and other infrastructure to facilitate cost effective construction and operational sustainment; 3) Proximity to electrical power grids/interconnections for distribution; 4) Adequate avoidance considerations for navigational Channels; 5) Regulatory and permitting issues; and 6) Environmental compatibility with fish/fisheries, marine mammals, other water uses and other environmental and demographic considerations. The study will conclusively identify all issues to enable effective discussions for agreements among Navy and Industry parties for the project continuation with design, fabrication, installation and demonstration C power generation, transmission, and cost effective power generation-grid operations and business activities to serve the Navy needs. Initiate critical design and tests of long lead components concurrently with the feasibility engineering and business study.		
Congressional Add: SWIMMER DETECTION SONAR NETWORK *FY 2009 Accomplishments:* Developed, installed and demonstrated at the Portsmouth, NH Naval Shipyard water environment the Swimmer Detection Sonar Network, previously demonstrated successfully at Singapore and elsewhere. An advanced development prototype will be developed, installed, and tested to demonstrate performance in the temperature, salinity, currents, aqua-life, debris and industrial noise regime of the shipyard's waters. Consideration shall be given to installation designs to enable potential continuing development or operation if the fiscal year 2008 activities demonstrate adequate performance.	3.190	0.000
Congressional Add: Hydrokinetic Power Generator	1.596	1.593

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603725N: *Facilities Improvement*	PROJECT 9999: *Congressional Adds*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010
FY 2009 Accomplishments: This project provided build and demonstrated a low-head hydrokinetic power generation system based on the phenomenon of vortex induced vibration. A fully developed system will be capable of supplying power to Navy facilities or instrumentation clusters. Vortex Hydrokinetic Power technology, (AKA Vortex Induced Vibration Aquatic Clean Energy or VIVACE), uses the phenomenon of vortex induced vibrations to extract useful kinetic energy from ocean and river currents. The technology is scalable and can produce energy over a wide range of current speeds, starting as low as 1 knot. VIVACE installations are submerged, non-obtrusive, environmentally compatible, modular, and have a high energy density. Once developed, this type of power generation can used for supporting Navy power needs in a number of areas including: power for coastal naval bases, instrumentation stations, autonomus underwater vehicle (AUV) battery recharge, off-shore stations, and idle ships. *FY 2010 Plans:* This project will build and demonstrate a low-head hydrokinetic power generation system based on the phenomenon of vortex induced vibration. A fully developed system will be capable of supplying power to Navy facilities or instrumentation clusters. Vortex Hydrokinetic Power technology, (AKA Vortex Induced Vibration Aquatic Clean Energy or VIVACE), uses the phenomenon of vortex induced vibrations to extract useful kinetic energy from ocean and river currents. The technology is scalable and can produce energy over a wide range of current speeds, starting as low as 1 knot. VIVACE installations are submerged, non-obtrusive, environmentally compatible, modular, and have a high energy density. Once developed, this type of power generation can used for supporting Navy power needs in a number of areas including: power for coastal naval bases, instrumentation stations, autonomus underwater vehicle (AUV) battery recharge, off-shore stations, and idle ships.		
Congressional Add: Regenerative Fule Cell Back-up Power	1.197	1.354

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603725N: *Facilities Improvement*	PROJECT 9999: *Congressional Adds*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010
FY 2009 Accomplishments: Investigated material issues, hydrogen storage issues, and improved fuel cells to allow and fabrication of a regenerative Proton Exchange Membrane (PEM) fuel power system suitable for tactical applications. *FY 2010 Plans:* Continued to investigate material issues, hydrogen storage issues, and improved fuel cells to allow and fabrication of a regenerative Proton Exchange Membrane (PEM) fuel power system suitable for tactical applications.		
Congressional Add: Testing of Critical Comonents for Ocean Alternativ *FY 2009 Accomplishments:* The contractor design, construct and operate a heat exchanger test facility at the Hawaii Natural Energy Laboratory of Hawaii Authority (NELHA). The goal of this project is to provide heat transfer performance, corrosion and biofouling testing of heat exchangers in order to develop heat exchangers for use in commercial size Ocean Thermal Energy Conversion (OTEC) Plants. Heat exchanger performance modeling and new design development is intended to proceed in parallel with testing and share data and results from the test program. Heat exchanger test goals include: Design, develop and fully test a practical set of heat exchangers for use in commercial size OTEC plant; Determine the long term and short term corrosion characteristics of heat exchanger designs currently being considered for use; Determine if any difference exists between corrosion characteristics of 2200 feet deep water from 40" intake pipe at NELHA and 3000 feet deep water on 55" intake pipe at NELHA; evaluate anti-fouling techniques and demonstrate their successful operation; Test the performance of evaporators and condensers with both seawater and ammonia flows at various seawater and ammonia flow rates; Evaluate heat exchangers in parallel and series flow arrangements on both the seawater and ammonia circuits; Identify and/or originate heat exchanger design software that can accurately predict the performance obtained from heat exchanger testing; Analyze, evaluate and put into prototype form	1.995	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603725N: *Facilities Improvement*	PROJECT 9999: *Congressional Adds*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010
new heat exchanger designs to investigate heat exchanger arrangements, candidate materials, anti-corrosion processes and fabrication alternatives that require testing and evaluation.		
Congressional Add: Wave Energy PowerBuoy Generating Systems for the D *FY 2009 Accomplishments:* In conjunction with the U.S. Navy, the contractor will continue development of wave power technology as an alternate electric power source on DoD Bases and ultimately deliver power to Hawaiian Electric's grid. An advanced and efficient PowerBuoy will be interconnected at the offshore test site and deliver power to the Marine Corps Base, Hawaii (MCBH) grid through the submarine power cable. Buoy ocean testing will generate an operating history for wave power electrical generating systems at Naval bases. Program Objectives: Demonstrate wave power as a reliable alternative electric power source for power systems for DoD Bases; Evaluate the feasibility of wave power unit as a scaled up capacity power station; Deliver power to Hawaiian Electric's electrical grid.	1.596	0.000
Congressional Adds Subtotals	13.962	6.054

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

Not required for congressional adds

E. Performance Metrics

Not required for congressional adds

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603725N: *Facilities Improvement*	PROJECT 9999: *Congressional Adds*

Product Development ($ 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
PERMANENT MAGNET LINEAR GENERATOR POWER BYOY SYSTEM	Various/ Various	NFESC PT HUENEME, CA	1.995	1.912	Aug 2010	0.000		0.000		0.000	0.000	3.907	Continuing
KINETIC HYDROPOWER SYSTEM (KHPS) TURBINE	Various/ Various	NFESC PT HUENEME, CA	2.393	0.000		0.000		0.000		0.000	0.000	2.393	Continuing
SWIMMER DETECTION SONAR NETWORK	Various/ Various	ONR ARLINGTON, VA	3.190	0.000		0.000		0.000		0.000	0.000	3.190	Continuing
HYDROKINETIC POWER GENERATOR	Various/ Various	NFESC PT HUENEME, CA	1.596	1.593	Aug 2010	0.000		0.000		0.000	0.000	3.189	Continuing
REGENERATIVE FULE CELL BACK-UP POWER	Various/ Various	NAWC CHINA LAKE, CA	1.197	1.354		0.000		0.000		0.000	0.000	2.551	Continuing
PHOTOVOLTAIC ROOFTOP SYSTEMS FOR MILITARY HOUSING	C/FP	Not Specified Not Specified	0.000	1.195		0.000		0.000		0.000	0.000	1.195	Continuing
TESTING OF CRITICAL COMONENTS FOR OCEAN ALTERNATIVE	Various/ Various	NFESC PT HUENEME, CA	1.995	0.000		0.000		0.000		0.000	0.000	1.995	Continuing
WAVE ENERGY POWERBUOY GENERTING SYSTEMS	C/FP	NFESC PT HUENEME, CA	1.596	0.000		0.000		0.000		0.000	0.000	1.596	Continuing
		Subtotal	13.962	6.054		0.000		0.000		0.000	0.000	20.016	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0603725N: *Facilities Improvement*	PROJECT 9999: *Congressional Adds*	

Product Development ($ 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

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	13.962	6.054		0.000		0.000		0.000	0.000	20.016	

Remarks