

<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>					
<b>EXHIBIT R-2, RDT&amp;E BUDGET ITEM JUSTIFICATION</b>						<b>DATE</b> February 2008	
<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RDTEN/BA 4</b>			<b>R-1 ITEM NOMENCLATURE</b> <b>0603542N/RADIOLOGICAL CONTROL</b>				
COST (In Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	1.845	1.522	1.094	0.891	0.944	0.965	0.987
1830 / RADIAC DEVELOPMENT	1.845	1.522	1.094	0.891	0.944	0.965	0.987

**A. MISSION DESCRIPTION:**

Mission: The Radiation Detection, Indication and Computation (RADIAC) Program is responsible for providing radiation monitoring instruments that detect and measure radiation in accordance with the provisions of Title 10 of the Code of Federal Regulations (10CFR). These instruments are used on all vessels afloat and at every shore installation in order to ensure the safety of personnel and the environment. RADIACs are also required after an act of terrorism or war that involves nuclear material in order to enable continuing warfighting ability.

Justification: Many RADIAC instruments and dosimetry systems are decades old and approaching the end of their useful lives. In some cases the equipment and replacement parts are no longer manufactured, making the equipment logistically unsupportable. In other cases increasing failure rates due to age make replacements an economic efficiency improvement. In all cases a technology refresh will make both economic sense and provide increased operational capabilities. Naval Nuclear Propulsion Program (NNPP): Instruments are developed to support the safe operation and maintenance of nuclear powered vessels and at nuclear maintenance facilities. Non-NNPP: Instruments are developed to support other than NNPP end users, such as Explosive Ordnance Disposal, Weapons, Medical, Industrial Radiography and Training. Expanded Maritime Intercept Operations (EMIO): The Navy has been tasked to intercept and board vessels at sea to search for nuclear or radiological materials that could be used for terrorist attacks. These instruments would have different characteristics than those used for NNPP and non-NNPP purposes and prototypes must be developed and/or tested and evaluated. The AN/PDR-65 Ship Board Monitoring System is obsolescent and will be replaced. The IM-239/WDQ Air Particle Detector (APD) and the HD-732, HD-1150 and HD-1151 Air Particle Samplers (APS) are obsolescent and will be replaced.

**B. PROGRAM CHANGE SUMMARY:**

Funding:	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 08 Pres Bud Controls)	1.894	1.546	1.096
Current Budget (FY 09 Pres Bud Controls)	1.845	1.522	1.094
SBIR	-0.049	0.000	0.000
Contractor Efficiencies		-0.003	
Revised Economic Assumptions		-0.007	
Exec Realign SB Issue		-0.014	
61593 NWCF Rate Adjustment			0.001
71178 NWCF Rate Adjustment			-0.003

**CLASSIFICATION:****UNCLASSIFIED****EXHIBIT R-2, RDT&E BUDGET ITEM JUSTIFICATION (CONTINUATION)**

DATE

February 2008

APPROPRIATION/BUDGET ACTIVITY

**RDTEN/BA 4**

R-1 ITEM NOMENCLATURE

**0603542N/RADIOLOGICAL CONTROL****C. OTHER PROGRAM FUNDING SUMMARY:**

Line Item No. and Name	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Complete	Total Cost
OPN BLI 292000 RADIAC	12.671	10.121	9.84	9.062	9.269	9.44	9.645	CONT	CONT

**D. ACQUISITION STRATEGY:**

Development efforts are being focused on evaluation, modification (as required to meet operational requirements) and adaptation of commercial-off-the-shelf (COTS) technology in order to minimize total ownership costs. To the maximum extent possible new contracts are targeted for fixed price efforts to control development cost.

**E. MAJOR PERFORMERS:**

NSWC Carderock. Science & Technology Agent, Technical Direction Agent and Primary Contracting Officer.

Orbis, Inc. In Service Engineering Agent (ISEA) services.

DoE Remote Sensing Laboratory. Development of Next Generation Air Particle Detector.

<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>					
<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION</b>					<b>DATE</b> February 2008		
<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RD TEN/BA 4</b>		<b>PROGRAM ELEMENT NUMBER AND NAME</b> <b>0603542N/RADIOLOGICAL CONTROL</b>			<b>PROJECT NUMBER AND NAME</b> <b>1830/RADIAC DEVELOPMENT</b>		
<b>COST (In Millions)</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>
Project Cost	1.845	1.522	1.094	0.891	0.944	0.965	0.987
RDT&E Articles Qty	75	51	17	2	2	0	0

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:**

Mission: The Radiation Detection, Indication and Computation (RADIAC) Program is responsible for providing radiation monitoring instruments that detect and measure radiation in accordance with the provisions of Title 10 of the Code of Federal Regulations (10CFR). These instruments are used on all vessels afloat and at every shore installation in order to ensure the safety of personnel and the environment. RADIACs are also required after an act of terrorism or war that involves nuclear material in order to enable continuing warfighting ability.

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<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION</b>				DATE February 2008
<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RD TEN/BA 4</b>		<b>PROGRAM ELEMENT NUMBER AND NAME</b> <b>0603542N/RADIOLOGICAL CONTROL</b>		<b>PROJECT NUMBER AND NAME</b> <b>1830/RADIAC DEVELOPMENT</b>
<b>B. ACCOMPLISHMENTS/PLANNED PROGRAM:</b>				
		FY 2007	FY 2008	FY 2009
<b>Accomplishments/Effort/Subtotal Cost</b>		0.351	0.216	0.183
RDT&E Articles Quantity		20	10	10
Develop and test calibration software, survey instruments, dosimeters and associated probes for non-NNPP end uses, to include Explosive Ordnance Disposal (EOD) and Radiological and Nuclear Defense (RND). Develop Next Generation Survey Meter. Articles are prototypes for evaluation.				
		FY 2007	FY 2008	FY 2009
<b>Accomplishments/Effort/Subtotal Cost</b>		0.250	0.206	0.000
RDT&E Articles Quantity		30	30	0
Develop and test instruments for Expanded Maritime Intercept Operations (EMIO). Articles are prototypes for evaluation.				
		FY 2007	FY 2008	FY 2009
<b>Accomplishments/Effort/Subtotal Cost</b>		0.194	0.200	0.000
RDT&E Articles Quantity		0	5	0
Develop replacement for mast-mounted AN/PDR-65. Articles are prototypes for evaluation.				
		FY 2007	FY 2008	FY 2009
<b>Accomplishments/Effort/Subtotal Cost</b>		0.500	0.500	0.511
RDT&E Articles Quantity		0	0	1
Air Particle Detector (APD) development. Articles are prototypes for evaluation.				
		FY 2007	FY 2008	FY 2009
<b>Accomplishments/Effort/Subtotal Cost</b>		0.550	0.400	0.400
RDT&E Articles Quantity		20	6	6
Continue Multi-Function RADIAC (MFR) development and testing of prototype units and probes for Neutron, Radiography, Transuranic X-ray, Underwater, and Training Simulators for the Naval Nuclear Propulsion Program (NNPP). Develop Next Generation Survey Meter. Articles are prototypes for evaluation.				

<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>										
<b>EXHIBIT R-3, RDT&amp;E PROJECT COST ANALYSIS</b>										DATE February 2008		
<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RDTEN/BA 4</b>		<b>PROGRAM ELEMENT NUMBER AND NAME</b> <b>0603542N/RADIOLOGICAL CONTROL</b>					<b>PROJECT NUMBER AND NAME</b> <b>1830/RADIAC DEVELOPMENT</b>					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY Cost (\$000)	FY 2007 Cost (\$000)	FY 2007 Award Date	FY 2008 Cost (\$000)	FY 2008 Award Date	FY 2009 Cost (\$000)	FY 2009 Award Date	Cost to Complete (\$000)	Total Cost (\$000)	Target Value of Contract
Primary Hardware Development	C/FP	Various	10.917	0.301	JUN-07	0.145	FEB-08	0.197	JAN-09	0.000	11.560	0.000
Systems Engineering			1.100	0.000		0.000		0.000		0.000	1.100	0.000
<b>Subtotal Product Development</b>			<b>12.017</b>	<b>0.301</b>		<b>0.145</b>		<b>0.197</b>		<b>0.000</b>	<b>12.660</b>	<b>0.000</b>
Remarks:												
Development Support	WX	NSWC Carderock	2.354	0.450	NOV-06	0.450	NOV-07	0.450	NOV-08	0.000	3.704	0.000
<b>Subtotal Support Costs</b>			<b>2.354</b>	<b>0.450</b>		<b>0.450</b>		<b>0.450</b>		<b>0.000</b>	<b>3.704</b>	<b>0.000</b>
Remarks:												
Developmental Test & Evaluation	WX	SPAWARSYSCEN Chasn.	4.570	0.000		0.000		0.000		0.000	4.570	0.000
Operational Test & Evaluation	WX	Various	0.347	0.141	DEC-06	0.150	JAN-08	0.150	JAN-09	0.000	0.788	0.000
<b>Subtotal Test and Evaluation</b>			<b>4.917</b>	<b>0.141</b>		<b>0.150</b>		<b>0.150</b>		<b>0.000</b>	<b>5.358</b>	<b>0.000</b>
Remarks:												
Contractor Engineering Support	C/FP	Orbis, Inc., Charleston, SC	0.790	0.593	DEC-06	0.461	NOV-07	0.225	NOV-08	0.000	2.069	0.000
Labor (Researach Personnel)	IPR	DoE, RSL, Nellis AFB, NV	0.250	0.350	NOV-06	0.306	NOV-07	0.062	NOV-08	0.000	0.968	0.000
Travel	PD	NAVSEA	0.355	0.010	NOV-06	0.010	NOV-07	0.010	NOV-08	0.000	0.385	0.000
Government Engineering Support	WX	Various	5.045	0.000		0.000		0.000		0.000	5.045	0.000
Program Management Support	C/FP	Eagan, McAllister Assoc.	5.376	0.000		0.000		0.000		0.000	5.376	0.000
<b>Subtotal Management Services</b>			<b>11.816</b>	<b>0.953</b>		<b>0.777</b>		<b>0.297</b>		<b>0.000</b>	<b>13.843</b>	<b>0.000</b>
Remarks:												
<b>Total Cost</b>			<b>31.104</b>	<b>1.845</b>		<b>1.522</b>		<b>1.094</b>		<b>0.000</b>	<b>35.565</b>	<b>0.000</b>

CLASSIFICATION: UNCLASSIFIED

EXHIBIT R-4, SCHEDULE PROFILE

DATE  
February 2008

APPROPRIATION/BUDGET ACTIVITY  
RDTEN/BA 4

PROGRAM ELEMENT NUMBER AND NAME  
0603542N/RADIOLOGICAL CONTROL

PROJECT NUMBER AND NAME  
1830/RADIAC DEVELOPMENT

Fiscal Year	FY2007				FY2008				FY2009			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
IM-239/WDQ Replacement										△	Test & Evaluation	
									Prototype			
AN/PDR-65 Replacement	System Development											
Vessel Boarding, Search & Seizure	Test & Evaluation			△		Deliveries						
			☆									

<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>						
<b>EXHIBIT R-4a, SCHEDULE DETAIL</b>						<b>DATE</b> February 2008		
<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RD TEN/BA 4</b>		<b>PROGRAM ELEMENT NUMBER AND NAME</b> <b>0603542N/RADIOLOGICAL CONTROL</b>			<b>PROJECT NUMBER AND NAME</b> <b>1830/RADIAC DEVELOPMENT</b>			
Schedule Profile		FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Technical Testing								
System Development				2-1Q				