EXHIBIT R-2, RDT&E Budget Item Justification							DATE: **January 2002**			
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA-4**					R-1 ITEM NOMENCLATURE Radiological Controls/0603542N					
COST ($ in Millions)		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Total PE Cost		**0.566**	**1.047**	**1.078**	**1.158**	**0.999**	**1.011**	**1.025**	**CONT.**	**CONT.**
RADIAC Development/S1830		**0.566**	**1.047**	**1.078**	**1.158**	**0.999**	**1.011**	**1.025**	**CONT.**	**CONT.**
Quantity of RDT&E Articles										

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. Project S1830 coordinates all Navy efforts for the development of nuclear radiation detection devices to replace obsolete equipment.

Budget Item Justification:

Multi-Function RADIAC (MFR). This instrument replaces 16 families of obsolescent equipment to provide increased capability at what will be significantly lower operating costs once the Control Unit and its entire complement of probes have been developed. The Control Unit and one probe are currently being fielded, but in order to achieve the full design functionality of the MFR, several probes that will detect various types of radiation (alpha, gamma, beta, neutron) must yet be developed.

Naval Dosimetry System (NDS). A Personnel Dosimetry System is being explored to support routine operations and maintenance of Navy systems involving occupational radiation exposure on nuclear ships, nuclear maintenance facilities, hospitals, weapons and in other radiological environments. A new system is needed to replace the CP 1112 and DT-526 system, which is approaching the end of its useful life due to increasing failure rates and parts non-availability. Despite ongoing restoration efforts to ensure asset availability, current projections indicate that the equipment will become unsupported by year 2004.

A Casualty Dosimetry System is needed to support contingencies after an act of terrorism or war involving nuclear materials in order to enable continuous warfighting capability. The current Casualty Dosimeter System consisting of the CP-95 reader with DT-60 dosimeter is at the end of its useful life. The readers are no longer logistically supported and only cannibalization is available to restore the very limited supply of non-operational units.

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APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA-4**	R-1 ITEM NOMENCLATURE Radiological Controls/0603542N

(U) Program Accomplishments and Plans.

FY 2001 ACCOMPLISHMENTS:

- (U) ($ .249) Complete the development of the Navy Dosimetry System.
- (U) ($ .253) Complete the extendable probe and frisker station and begin the development of neutron probe.
- (U) ($ .064) Resume development of the casualty dosimeter.

FY 2002 PLAN:

- (U) ($ .544) Continue development of the MFR neutron probe and begin development of the radiography probe.
- (U) ($ .257) Continue development of the casualty dosimeter.
- (U) ($ .246) Begin enhancements for the Navy Dosimetry System.

FY 2003 PLAN:

- (U) ($ .579) Continue development of the MFR neutron probe and continue development of the radiography probe.
- (U) ($ .250) Continue development of the casualty dosimeter.
- (U) ($ .249) Continue enhancements for the Navy Dosimetry System.

B. Program Change Summary.

	FY 2001	FY 2002	FY 2003
(U) FY 2002 President's Budget:	0.567	1.056	
(U) Appropriated Value:	0.572	1.056	
(U) Adjustments to FY 2001/2002 Appropriated Value/FY 2002 President's Budget:	-0.001	-0.009	-0.056
(U) FY 2003 Pres Budget Submit:	0.566	1.047	-0.056

EXHIBIT R-2, RDT&E Budget Item Justification	DATE: January 2002
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA-4**	R-1 ITEM NOMENCLATURE Radiological Controls/0603542N

B. Program Change Summary, cont.

Funding: The FY 01 net decrease of $.001 is for a minor pricing adjustment. The FY 02 net decrease of $.009M is due to minor pricing adjustments. The FY 03 net decrease of $.056M is due to PBD adjustments (-$.051M) and minor pricing adjustments (-$.005M).

Schedule: Not applicable.

Technical: Not applicable.

C. Other Program Funding Summary.

	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Complete
OPN BLI: 292000 RADIAC	7.879	7.806	8.015	8.797	8.666	8.821	9.008	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 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.

EXHIBIT R-2, RDT&E Budget Item Justification	DATE: **January 2002**
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA-4**	R-1 ITEM NOMENCLATURE Radiological Controls/0603542N

E. Schedule Profile.

Naval Dosimetry System:

- Delivery of Advance Development Systems – 2/00
- Completion of Testing – 6/00
- Milestone III Decision – 6/03
- Initial Operational Capability – 9/04

MFR Enhancements/Probe Development:

- Delivery of Prototypes for Extendable Probe (EP) – 1/99
- Completion of Testing for EP – 4/99
- Delivery of Revised Prototype - 3/01
- Completion of Testing of Revised Prototype- 7/01
- Production Contract Awarded for EP – 8/02
- Delivery of Prototypes for Directional Gamma Probe (DGP) – 11/99
- Completion of Testing for DGP – 4/00
- Production Contract Awarded for DGP – 6/01
- Award Contract for Frisker Station Development - 4/00
- Delivery of Frisker Station – 12/00
- Completion of Testing of Frisker Station – 5/01
- Production Contract Awarded for Frisker Station - 8/02

Casualty Dosimeter

- Complete SBIR Phase II Testing – 1/99
- Complete Testing of revised Casualty Dosimeter - 3/02

Exhibit R-3 Cost Analysis (page 1)

DATE: **January 2002**

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT	PROJECT NAME AND NUMBER
RDT&E, N/BA-4	**Radiological Control/0603542N**	RADIAC Development Project - S1830

Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Dev Dosimetry	C/FP	Various (See below)	8.697	0.000		0.000		0.000		CONT.	CONT.	
Primary Hardware Dev Miscellaneous	C/FP	Various	6.092	0.000		0.333	03/02	0.309	03/03	CONT.	CONT.	
Ancillary Hardware Development											0.000	
Systems Engineering	WR		0.380	0.370	10/00	0.352	10/01	0.381	10/02		1.483	
Licenses											0.000	
Tooling											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal Product Development			15.169	0.370		0.685		0.690		CONT.	CONT.	

Remarks:
Prior to 8/96 - International Sensor Technology, Pullman, Washington
12/96 - 7/98 - Keithley Radiation Measurements, Cleveland, Ohio
Follow-on contract will be competed

Development Support Equipment											0.000	
Software Development											0.000	
Training Development											0.000	
Integrated Logistics Support											0.000	
Configuration Management											0.000	
Technical Data											0.000	
GFE											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	

Remarks: Not applicable

Exhibit R-3 Cost Analysis (page 2) **January 2002**

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT	PROJECT NAME AND NUMBER
RDT&E, N/BA-4	**Radiological Control/0603542N**	RADIAC Development Project/S1830

Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	Various	3.518	0.186	10/00	0.352	10/01	0.378	10/02	CONT.	CONT.	
Operational Test & Evaluation			0.329								0.329	
Tooling											0.000	
GFE											0.000	
Subtotal T&E			3.847	0.186		0.352		0.378		CONT.	CONT.	
Remarks:												
Contractor Engineering Support											0.000	
Government Engineering Support	WR	Various	5.045							CONT.	CONT.	
Program Management Support	WR	Various	5.046							CONT.	CONT.	
Travel			0.020	0.010	10/00	0.010	10/01	0.010	10/02	CONT.	CONT.	
Labor (Research Personnel)			0.788								0.788	
Overhead											0.000	
Subtotal Management			10.899	0.010		0.010		0.010		CONT.	CONT.	
Remarks:												
Total Cost			29.915	0.566		1.047		1.078		CONT.	CONT.	
Remarks:												