

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-4					R-1 ITEM NOMENCLATURE 0603713N/Ocean Engineering Technology Development			
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost		24.585	17.977	26.232	18.712	9.969	6.710	6.845
0099/Deep Submergence Biomedical Development		3.755	2.996	3.280	3.375	4.077	4.160	4.244
0394/Shallow Depth Diving Equipment		20.830	14.981	22.952	15.337	5.892	2.550	2.601

Defense Emergency Response Funds (DERF) Funds: N/A.

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:
 Developments in this program will enable the U.S. Navy to overcome deficiencies that constrain underwater operations in the areas of search, location, rescue, recovery, salvage, construction, and protection of offshore assets. This program develops medical technology, diver life support equipment, and the vehicles, systems, tools and procedures to permit manned underwater operations.

R-1 SHOPPING LIST - Item No.

61

UNCLASSIFIED

Exhibit R-2, RDTEN Budget Item Justification
(Exhibit R-2, page 1 of 15)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603713N/Ocean Engineering Technology Development				PROJECT NUMBER AND NAME 0099/Deep Submergence Biomedical Development			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost		3.755	2.996	3.280	3.375	4.077	4.160	4.244
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Develops advanced biomedical and bioengineering technology for enhancing medical and life support for submarine escape and rescue; and for diver safety and effectiveness; supports deeper, longer, and more flexible dives. Deliverables for DISSUB (disabled submarine) include: medical procedures for submarine escape and rescue (including new Submarine Rescue Diving and Recompression System (SRDRS)), life support parameters, medical procedures for life support, exposure guidance for atmospheric contaminants, non-chemical CO2 scrubbing, prevention and treatment of decompression illness, and senior survivor expert decision system. Deliverables for diver enhancement include: exposure guidance for diver underwater continuous noise, impulse noise, and underwater blast, exposure guidance for oxygen breathing, collection of operational diving depth/time profiles to predict decompression risk, and enhanced underwater swimming efficiency. Requirements: NAPDD #587-873, Deep Submergence Biomedical Development, 23 November 1999.

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2004																																					
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603713N/Ocean Engineering Technology Development	PROJECT NUMBER AND NAME 0099/Deep Submergence Biomedical Development																																						
B. Accomplishments/Planned Program																																								
<table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%; text-align: center;">FY 03</td> <td style="width: 33%; text-align: center;">FY 04</td> <td style="width: 33%; text-align: center;">FY 05</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td style="text-align: center;">1.451</td> <td style="text-align: center;">1.440</td> <td style="text-align: center;">1.660</td> </tr> <tr> <td>RDT&E Articles Quantity</td> <td></td> <td></td> <td></td> </tr> </table> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Diver Health and Safety Research: Pulmonary oxygen toxicity risk algorithm. Procedures for assessing and mitigating risk for diving in contaminated water. Procedure to determine remaining CO2 scrubber duration. Development of advanced insulation garments for diver thermal protection. Develop final guidance for warm water diving. Continue collection of operational dive profiles for advanced modeling. Submarine ballast tank air quality survey. Novel methods for diver thermal protection. Improve resistance to O2 toxicity. Diver anthropometry. Chemical hardening of diving equipment. Predictive index of visual and auditory O2 toxicity. Guidelines for flying after diving. Guidelines for infra- and ultra-sound diver exposure. Develop an advanced diver thermal model. Guidelines for ballast tank diving. Protective gear for diver noise exposure. Electronic collection of operational dive data.</p> </div> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%; text-align: center;">FY 03</td> <td style="width: 33%; text-align: center;">FY 04</td> <td style="width: 33%; text-align: center;">FY 05</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td style="text-align: center;">2.287</td> <td style="text-align: center;">1.367</td> <td style="text-align: center;">1.423</td> </tr> <tr> <td>RDT&E Articles Quantity</td> <td></td> <td></td> <td></td> </tr> </table> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Submarine Rescue: Decompression procedures for pressurized SRDRS operators. Use of perfluorocarbons to accelerate decompression in submarine rescue. Adjunctive therapies for treating DISSUB survivors. Guidance for food, water, clothing, medical supplies to enhance survival of submarine crews awaiting rescue. Flexible computer generated decompression schedules for wide range of conditions in a DISSUB. Develop DISSUB triage procedures. DISSUB survival trial. Develop oxygen metabolizer for closed vehicles. Accelerate decompression by negative pressure breathing. Treatment guidance for decompression sickness and arterial gas embolism in submarine escape and rescue. Interventions for toxicological problems with rescued submariners. Minimizing decompression sickness and arterial gas embolism with Submarine Escape and Immersion Suit (SEIS) training. Use of pharmacologic agents to reduce decompression risk in submarine rescues.</p> </div> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%; text-align: center;">FY 03</td> <td style="width: 33%; text-align: center;">FY 04</td> <td style="width: 33%; text-align: center;">FY 05</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td style="text-align: center;">0.017</td> <td style="text-align: center;">0.189</td> <td style="text-align: center;">0.197</td> </tr> <tr> <td>RDT&E Articles Quantity</td> <td></td> <td></td> <td></td> </tr> </table> <div style="border: 1px solid black; padding: 5px; min-height: 80px;"> <p>Used for cancelled accounts (19K) and RDA (74K).</p> </div>						FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	1.451	1.440	1.660	RDT&E Articles Quantity					FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	2.287	1.367	1.423	RDT&E Articles Quantity					FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	0.017	0.189	0.197	RDT&E Articles Quantity			
	FY 03	FY 04	FY 05																																					
Accomplishments/Effort/Subtotal Cost	1.451	1.440	1.660																																					
RDT&E Articles Quantity																																								
	FY 03	FY 04	FY 05																																					
Accomplishments/Effort/Subtotal Cost	2.287	1.367	1.423																																					
RDT&E Articles Quantity																																								
	FY 03	FY 04	FY 05																																					
Accomplishments/Effort/Subtotal Cost	0.017	0.189	0.197																																					
RDT&E Articles Quantity																																								

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2004
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603713N/Ocean Engineering Technology Development	PROJECT NUMBER AND NAME 0099/Deep Submergence Biomedical Development

C. PROGRAM CHANGE SUMMARY:

	FY 2003	FY 2004	FY 2005
Funding:			
Previous President's Budget: (FY 04/05 Pres Controls)	3.766	3.030	3.291
Current BES/President's Budget (FY05 President Controls)	3.755	2.996	3.280
Total Adjustments	-0.011	-0.034	-0.011
Summary of Adjustments			
66556 FY03 SBIR 5-May-03	-0.001		
66642 BSO ADJUSTMENTS	-0.010		
68041 Section 8094: Management Impr		-0.008	
68066 Sec. 8126: Efficiencies/Revis		-0.026	
69492 PBD-604 Inflation			-0.009
69512 PBD604 non purchase inflation			-0.002
Subtotal	-0.011	-0.034	-0.011

Schedule:

Not Applicable

Technical:

Not Applicable

R-1 SHOPPING LIST - Item No. 61

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2004			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4		PROGRAM ELEMENT NUMBER AND NAME 0603713N/Ocean Engineering Technology Development			PROJECT NUMBER AND NAME 0099/Deep Submergence Biomedical Development					
D. OTHER PROGRAM FUNDING SUMMARY:										
<u>Line Item No. & Name</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>To Complete</u>	<u>Total Cost</u>
Not Applicable										
E. ACQUISITION STRATEGY: *										
Integrated thrust area teams (e.g. decompression research) are established with university, commercial and in-house Navy lab to jointly execute biomedical R&D; peer review of research proposals accomplished by independent Technical Advisory Board; annual review of progress by Executive Review Board (CNO/NAVSEA/ONR/BUMED); program management by 0-6 Medical Dept Officer; contracting by competitive process using BAA and leveraging ONR capabilities.										
F. MAJOR PERFORMERS: **										
Navy Experimental Diving Unit (NEDU) (Oct/each FY) is the center for manned diving biomedical research and development for the Navy. All Navy manned diving research facilities were consolidated at NEDU during the last BRAC.										

R-1 SHOPPING LIST - Item No. 61

UNCLASSIFIED

UNCLASSIFIED

February 2004

Development Support											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	
Award Fees											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 6 of 15)

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: February 2004		
APPROPRIATION/BUDGET ACTIVITY RD&E, N / BA-4			PROGRAM ELEMENT 0603713N/Ocean Engineering Technology Development				PROJECT NUMBER AND NAME 0099/Deep Submergence Biomedical Development					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WX	NEDU	18.293	2.552	12/02	2.785	10/03	3.059		Continuous	26.689	
	CPIF	OceanWorks		1.171	11/02						1.171	1.171
Operational Test & Evaluation											0.000	
Live Fire Test & Evaluation											0.000	
Test Assets											0.000	
Tooling											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal T&E			18.293	3.723		2.785		3.059		0.000	27.860	
Contractor Engineering Support											0.000	
Government Engineering Support											0.000	
Program Management Support	IPA		0.102								0.102	
Travel			0.018	0.015		0.022		0.024		Continuous	0.079	
Labor (Research Personnel)											0.000	
*SBIR Assessment			0.093	0.017		0.189		0.197			0.496	
Subtotal Management			0.213	0.032		0.211		0.221		0.000	0.677	
Remarks:*SBIR Assessment includes other extramural program assessments FY03-05.												
Total Cost			18.506	3.755		2.996		3.280		0.000	28.537	
Remarks:												

R-1 SHOPPING LIST - Item No. 61

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 7 of 15)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603713N/Ocean Engineering Technology Development				PROJECT NUMBER AND NAME 0394/Shallow Depth Diving Equipment			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost		20.830	14.981	22.952	15.337	5.892	2.550	2.601
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project is to develop systems to support submarine escape and rescue missions, and conventional diver operations. Diver operations include ship husbandry, salvage/recovery, and submarine rescue operations to support national, as well as, Navy needs around the world. Modern certifiable diving systems that ensure diver safety and allow maximum work efficiency will replace currently antiquated systems. Efforts are currently (through FY 07) focused on the Submarine Rescue Diving and Recompression System (SRDRS) to provide a new rapidly deployed emergency submarine rescue capability. SRDRS will fill the gap created by the decommissioning of USS PIGEON (ASR 21) and USS ORTOLAN (ASR 22) and provide a new capability of pressurized transportation of rescuees from a stricken submarine directly to the decompression system eliminating the requirement for Deep Submergence Rescue Vehicles, Mother Submarines and Submarine Rescue Chambers. SRDRS is to include an air transportable rapid assessment/underwater work system, a decompression chamber system and a pressurized rescue module. The SRDRS will provide a global rapid response capability to support submarine rescue missions with an increase in capability at a fraction of the cost of the currently available systems. FY04-07 budget as indicated above is solely for the SRDRS program acquisition.

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2004													
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603713N/Ocean Engineering Technology Development	PROJECT NUMBER AND NAME 0394/Shallow Depth Diving Equipment														
B. Accomplishments/Planned Program																
<table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"><tr><td style="width: 30%;"></td><td style="width: 30%; text-align: center;">FY 03</td><td style="width: 30%; text-align: center;">FY 04</td><td style="width: 30%; text-align: center;">FY 05</td></tr><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">20.830</td><td style="text-align: center;">14.981</td><td style="text-align: center;">22.952</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td></tr></table> <div style="border: 1px solid black; padding: 10px; min-height: 150px;"><p>Complete fabrication and acceptance testing of the prototype Submarine Decompression System and support equipment. Complete design, begin fabrication and acceptance testing of prototype Pressurized Rescue Module and support equipment. Begin integration and testing of all SRDRS components.</p></div>						FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	20.830	14.981	22.952	RDT&E Articles Quantity			
	FY 03	FY 04	FY 05													
Accomplishments/Effort/Subtotal Cost	20.830	14.981	22.952													
RDT&E Articles Quantity																

R-1 SHOPPING LIST - Item No.

61

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603713N/Ocean Engineering Technology Development	PROJECT NUMBER AND NAME 0394/Shallow Depth Diving Equipment		
C. PROGRAM CHANGE SUMMARY:				
Funding:	FY 2003	FY 2004	FY 2005	
Previous President's Budget: (FY 04/05 Pres Controls)	11.406	15.150	11.626	
Current BES/President's Budget (FY05 President Controls)	20.830	14.981	22.952	
Total Adjustments	9.424	-0.169	11.326	
Summary of Adjustments				
Programmatic Adjustments			11.400	
Economic Adjustments	0.120		-0.074	
Reprogrammings	9.600			
SBIR	-0.296			
Congressional Adjustments		-0.169		
	9.424	-0.169	11.326	
Schedule:				
Not Applicable				
Technical:				
Not Applicable				

R-1 SHOPPING LIST - Item No. 61

UNCLASSIFIED

Exhibit R-2a, RDTE Project Justification
(Exhibit R-2a, page 10 of 15)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RDTE, N / BA-4			PROGRAM ELEMENT NUMBER AND NAME 0603713N/Ocean Engineering Technology Development			PROJECT NUMBER AND NAME 0394/Shallow Depth Diving Equipment		

D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost
Not Applicable									

E. ACQUISITION STRATEGY: *

The Submarine Rescue System (SRS) segment of the SRDRS is largely based on the use of Commercial-Off-the-Shelf (COTS) technology and maximum use of Non-Developmental Items (NDI). The SRS segment is being procured using performance based specifications. Many of the SRS contracts were awarded competitively and were based on technical capability and cost considerations (best value). Program Management of SRDRS is accomplished through the use of Program Executive Officer, Submarines (PEO SUB) leadership. This change was enacted in February 2003 realigning the responsibility from SEA00C to PEOSUB. The Prototype system will provide full operational capability and no additional procurement is planned. The system is designed to be Government Owned/Commercially Operated (GO/CO).

F. MAJOR PERFORMERS: **

Oceaneering International is providing systems engineering and integration support for the SRS through a Veterans Administration contract. Oceanworks, Inc. is the detailed designer and fabrication of the Pressurized Rescue Module. Global Phillips Cartner is providing fabrication and integration of the SRDRS mission support equipment.

R-1 SHOPPING LIST - Item No. 61

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)							DATE: February 2004					
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4			PROGRAM ELEMENT 0603713N/Ocean Engineering Technology Development			PROJECT NUMBER AND NAME 0394/Shallow Depth Diving Equipment						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development												
Ancillary Hardware Development												
Design, System integration	CPAF	Oceaneering (remark 2)	6.638		N/A		N/A		N/A		6.638	
Decompression Chambers (SDC 1 and 2)	FFP	NFESC	3.240	0.077	Dec-02		N/A		N/A		3.317	
Various Mission Support Equip. (MSE)	CPAF	GPC	6.714	1.843	Various	1.678	Various	3.425	Various		13.660	
Pressurized Rescue Module Sys. (PRMS)	CPIF	Oceanworks	11.968	10.900	Various	6.070	Various	2.673	Various		31.611	
Various PRMS MSE	Various	Miscellaneous	2.435	4.055	Various	0.199	Various	5.395	Various		12.084	
Systems Engineering - Design, Integration	Various	Oceaneering	8.253	2.125	Various	3.495	Various	3.881	Various		17.754	
Systems Engineering - Technical	Various	Various	3.213	0.130	Various	0.302	Various	0.311	Various		3.956	
Licenses											0.000	
GFE											0.000	
Award Fees	CPAF	Oceaneering	1.234		N/A		N/A		N/A		1.234	
	CPAF	GPC	0.254	0.055	Nov-02	0.050	Various	0.103	Various		0.462	
											0.000	
Subtotal Product Development			43.949	19.185		11.794		15.788			90.716	
Remarks: 1. July 2003 Exhibit R-2 (2 pages) and R-4 (2 pages) restructured as part of SRDRS SRS program realignment within NAVSEA from SEA00C to PEOSUBs. OPNAV N773 sponsor is aware of realignment and ongoing rebaselining effort. 2. Prior year values adjusted to match Submarine Rescue System (SRS) portion only = \$451.596 FY98-02 RDT&E,N. Other PY costs are for the Assessment/Underwater Work System (AUWS) managed by PMS 395. Oceaneering CPAF contract not used FY03 and out. PY value reduced from \$9.078 to \$6.638 and NSWC/CSS value of \$20.089 zeroed from PY SEA00C exhibit submits. 3. SDC-1 and SDC-2 chambers under a FFP contract through NFESC. Contract completion date (CCD) remains 31 August 2003 and was missed. Liquidated damages are being assessed per the FAR. A significant Request for Equitable Adjustment (REA) has been submitted. Adjudication or financial liability to program is not included in controls.												
Development Support	Various	Miscellaneous	0.279		N/A		N/A		N/A		0.279	
Software Development	WR	NSWC CD	0.221		N/A		N/A		N/A		0.221	
Integrated Logistics Support	MIPR	DOI, Titan	2.114	0.160	Various		N/A		N/A		2.274	
Integrated Logistics Support	Various	Miscellaneous	0.000		N/A	0.600	Various	0.780	Various		1.380	
Configuration Management	Various	Various				0.450	Various	0.915	Various		1.365	
Technical Data											0.000	
GFE											0.000	
Award Fees	CPAF	Phoenix International	0.023		N/A		N/A		N/A		0.023	
Subtotal Support			2.637	0.160		1.050		1.695			5.542	
Remarks:												

R-1 SHOPPING LIST - Item No. 61

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 12 of 15)

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)							DATE: February 2004					
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4			PROGRAM ELEMENT 0603713N/Ocean Engineering Technology Development			PROJECT NUMBER AND NAME 0394/Shallow Depth Diving Equipment						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	Various	Miscellaneous	1.093	0.220	Various	0.181	Various	1.121	Various		2.615	
Operational Test & Evaluation	WX	COMOPTEVFOR	0.020	0.000	N/A	0.074	Various	0.053	Various		0.147	
Miscellaneous	Various	Various	0.000	0.000	N/A	0.025	Various	2.109	Various		2.134	
Tooling											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal T&E			1.113	0.220		0.280		3.283			4.896	
Remarks:												
Contractor Engineering Support	Various	Miscellaneous	1.225	0.095	Various		N/A		N/A		1.320	
Government Engineering Support	WX	NFESC	0.416	0.060	Dec-02		N/A		N/A		0.476	
Government Engineering Support	MIPR	DOI	1.161		N/A		N/A		N/A		1.161	
Government Engineering Support	WX	PSNSY, Various	0.000	0.011	Various		Various		Various		0.011	
Government Engineering Support	Various	Miscellaneous	0.347	0.603	Various	1.088	Various	1.017	Various		3.055	
Program Management Support	Various	Miscellaneous	0.329	0.100	Various	0.366	Various	0.371	Various		1.166	
Travel	Various	Various	0.365	0.100	Various	0.100	Various	0.100	Various		0.665	
SBIR Assessment (remark 1)			0.300	0.296	Various	0.303	Various	0.698	Various		1.597	
Subtotal Management			4.143	1.265		1.857		2.186			9.451	
Remarks:												
Total Cost			51.842	20.830		14.981		22.952			110.605	
Remarks: 1. SBIR Assessment includes other extramural program assessments FY 02-05. PY only includes some (\$300K) of the non-SBIR extramural program expenses from FY 02 still listed in program controls. 2. FY03 Control based on PBIS value of July 31, 2003 at \$20.374M. 3. FY04 shortfall of \$4.0M identified to N773 sponsor.												

R-1 SHOPPING LIST - Item No. 61

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 13 of 15)

UNCLASSIFIED

Exhibit R-4, Schedule Profile
(Exhibit R-4, page 14 of 15)

R-1 SHOPPING LIST - Item No. 61

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: February 2004		
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT				PROJECT NUMBER AND NAME			
RDT&BA-4	0603713N/Ocean Engineering Technology Development				0394/Shallow Depth Diving Equipment			
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Milestone II (MSII)								
Detail Design/Development and Fab (SDS - SDC, PFMS, I	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-3Q			
Detail Design/Devel. and Fab (PRMS - PRMS-1 and PRM-	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-2Q		
Critical Design Review (CDR) - PRMS			2Q					
Physical Configuration Audit - SDC			2Q					
Hardware Delivery - SDC-1 and SDC 2			2Q					
Functional Configuration Audit (FCA) - PRM				1Q				
Developmental Testing (DT-SDS)				1Q				
Operational Testing (OOC-SDS)				1Q				
Acquisition Capability Delivery - Recompression				4Q				
Physical Configuration Audit - PRM				4Q				
Hardware Delivery - PRM-1 and PRMS				4Q				
Developmental Testing (DT-PRMS)				4Q	1Q			
Operational Testing (OOC-PRMS)				4Q	1Q			
Acquisition Capability Delivery - Rescue Ready					2Q			
Hardware Delivery - DTL					3Q			
Developmental Testing (DT-TUP)					3Q			
Operational Testing (OOC-TUP)					3Q			
Acquisition Capability Delivery - TUP					4Q			
Physical Configuration Audit - PRM-2						2Q		
Hardware Delivery - PRM-2						2Q		
Operational Evaluation Full SRDRS						3Q-4Q		
Milestone C						4Q		
Acquisition Capability Delivery - Full Up SRDRS						4Q		
First Deployment (Rescue Ready (DSRV Equiv.)					2Q			
First Deployment (Fly Away Recompression w/ TUP)					4Q			
First Deployment Full -Up SRDRS						4Q		
Initial Operational Capability (IOC) of Full Up SRDRS						4Q		

R-1 SHOPPING LIST - Item No.

61

UNCLASSIFIED

Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 15 of 15)